

## **1.0 Policy Introduction**

Maranoa Regional Council provides a sewerage system for the transport and treatment of domestic sewage, in the towns of Amby, Injune, Mitchell, Mungallala, Roma and Surat. Trade waste is waterborne waste generated from businesses, trade or manufacturing premises which may also be accepted into the sewerage system for an additional charge.

Domestic sewage consists mainly of water which, after treatment to reduce biodegradable material, suspended solids and nutrients, will be reused or discharged in accordance with Maranoa Regional Council's Environmental Authority requirements. However, trade waste may have an organic strength many times that of domestic sewage and may overload the treatment facility. Trade waste may contain a variety of exotic substances such as heavy metals, organic solvents and chlorinated organics which sewerage treatment plants are not designed to treat and which may have an adverse impact on Maranoa Regional Council's reuse schemes. Trade waste substances may:

- cause sewerage system blockages;
- pose a serious risk to the safety and health of sewerage workers
- damage and corrode the sewerage system;
- inhibit biological treatment process;
- cause odours;
- accumulate in sludges;
- pass through the plant untreated resulting in environmental contamination; or
- render treated wastewater and biosolids unusable.

Maranoa Regional Council's basic policy is to accept biodegradable waste into the sewerage system provided that the system is of adequate capacity to effectively collect, transport and treat the waste.

Maranoa Regional Council may consider the acceptance of trade waste containing toxic or hazardous substances and non- degradable pollutants to sewerage system only after the waste has been pre-treated on site to ensure Sewer Admission Limits are not exceeded. This policy provides further details where a waste is deemed to be unsuitable for discharge to the sewerage system, an approval will not be issued and alternative arrangements for trade waste disposal will have to be made.

## **2.0 Policy Purpose**

To regulate trade waste produced from industrial businesses and manufacturing premises that enter into Council's sewerage system.

## **3.0 Policy Scope**

This policy applies to all industrial businesses, trade and manufacturing premises generating and disposing trade waste through Council's sewerage system, where prior assessment and approval has been granted by Council. Trade waste is not allowed in Amby and Mungallala.

The objectives of Maranoa Regional Council in controlling the discharge of trade waste to the sewerage system are:

- To safeguard public health and the environment
- To prevent harm or injury to sewerage employees.
- To safeguard the sewerage system against damage, blockage or surcharging.
- To exclude non-biodegradable and potentially harmful substances that may:
  - lead to non-compliance with the conditions of Maranoa Regional Council's Environmental Authority issued by the Department of Environment & Resource Management;
  - cause the sewerage treatment process to fail;
  - render effluent or sludges unacceptable for re-use or disposal;
  - cause any other detriment to the environment; cause odours;
  - cause physical damage to infrastructure;
- To equitably recover the cost of services to commerce and industry including the cost of conveyance, treatment and damage to the sewerage systems.
- To provide operational data on the volume and composition of industrial effluent to assist in the operation of the sewerage system and the design of augmentations or new sewerage systems
- To encourage waste minimisation and cleaner production, including waste prevention and recycling
- To promote water conservation
- To assist Maranoa Regional Council meet its statutory obligations

#### 4.0 Definitions

Term	Definition
<b>Authorised Agent</b>	Person or firm appointed by the Owner to act on their behalf. Notification of such appointment is to be lodged in writing with Maranoa Regional Council (MRC).
<b>Domestic Sewage</b>	Faecal matter and urine of human origin and liquid household wastes from water closet pans, sinks, baths, basins and similar fixtures designed for use in private dwellings.
<b>Generator</b>	Any person, owner, occupier, company or body whose activity produces or has the potential to produce trade waste.
<b>Owner</b>	The person, who for the time being is entitled to receive rent of any land, or who, if the same were let to a tenant at a rack rent, would be entitled to receive the rent thereof: The term includes any lessee from the crown and any superintendent, overseer, or manager for such lessee.
<b>Premise</b>	Includes messuages, buildings, lands, easements and tenements of any tenure.
<b>Trade Waste</b>	The waterborne wastes from any industry, business, trade or manufacturing premises, other than: <ul style="list-style-type: none"> <li>a) waste that is a prohibited substance; or</li> <li>b) human waste; or</li> <li>c) stormwater (see Queensland Water Supply (Safety Reliability) Act 2008)</li> </ul>
<b>Trade Waste Approval</b>	Trade waste must not be discharged into Maranoa Regional Council's sewerage system unless a prior agreement with Council has been made.
<b>Trade Waste Officer</b>	A person appointed by Maranoa Regional Council to oversee the disposal of trade waste in accordance with Maranoa Regional Council's Trade Waste Policy and Management Guidelines and provide advice on acceptable methods of disposal of trade waste. The term includes a person appointed in an acting capacity to carry out the duties of a Trade Waste Officer.

## 5.0 Policy Details

### 5.1 Control of trade waste/breaches of relevant acts and bylaws

This policy is made pursuant to the Queensland Water Supply (Safety Reliability) Act 2011.

It is an offence under Section 193 (Discharging Particular Materials) of the above Act to discharge trade waste to the sewerage system without a Trade Waste Approval given under Section 180 (Trade Waste Approvals) of the above Act.

Any person wishing to discharge trade waste to the sewerage system shall apply to Maranoa Regional Council for Trade Waste Approval. This approval states the requirements, and conditions under which discharge is allowed.

It is illegal to discharge waste (including trade waste) other than uncontaminated stormwater to stormwater drainage.

A summary of legislation relevant to trade waste discharge to sewer is given in Appendix 1. This is not, nor is it intended to be, a complete listing of all legislation pertaining to the discharge of trade waste.

### 5.2 Penalties

Maranoa Regional Council may prosecute any person who commits a breach of the Queensland Water Supply (Safety Reliability) Act 2008 or the Environmental Protection Act 1994 and its subordinate legislation, or who refuses or neglects to comply with any direction or requirement of Maranoa Regional Council pursuant to the legislation. Penalties are set out in the legislation, and include substantial fines.

Maranoa Regional Council may recover the cost of repairing damage to the sewerage system from a person causing damage by discharging a prohibited substance or in excess of the Sewer Admission Limits.

### 5.3 Discharge Categories & Approvals

All trade waste accepted to the sewerage system will be classified according to the following four categories for the purposes of approval, control and charging:

#### **Category 0      Negligible or Potential Trade Waste Discharge**

Includes food premise with only tea/coffee/microwave preparation and premise with infrequent discharge to sewerage system (e.g. community clubs). Judgment of the classification of businesses in this category is at Maranoa Regional Council's discretion. Category 0 premise must use less than 300kL of water per annum.

**Category 1 Low Strength/Low Volume Discharges**

Parameter	Requirement
BOD <sub>5</sub>	<300 mg/l
Suspended Solids	<300 mg/l
COD	<600 mg/l
pH	Between 6.0 – 10.0
Volume	<500 kL/annum

Charge – flat fee

Also includes Category 0 premises using more than 300 kL/annum.

**Category 2 Low Strength/High Volume Discharges**

Parameter	Requirement
BOD <sub>5</sub>	<300 mg/l
Suspended Solids	<300 mg/l
COD	<600 mg/l
pH	Between 6.0 – 10.0
Volume	>500 kL/annum

Charge – flat free and Quantity charge on total annual flow

**Category 3 High Strength Discharges**

Parameter	Requirement
BOD <sub>5</sub>	>300 mg/l
Suspended Solids	>300 mg/l
COD	>600 mg/l
pH	Between 6.0 – 10.0
Volume	Any volume

Charge - flat fee and Quantity and Quality charge on total annual load

Acceptance of waste under any category is conditional on the trade waste meeting the Sewer Admission Limits (see Appendix 2) unless otherwise specified in the Trade Waste Approval. It is the responsibility of the Owner/Authorised Agent/Generator to install, operate and maintain best practice pre-treatment devices or processes to ensure Sewer Admission Limits are not exceeded.

In the event of a significant change in the strength or volume of a waste Approved under Category 1 or Category 2, the waste will be treated as a Category 3 waste for the purposes of charging and monitoring.

For a list of example Category 1 and 2 premises, and the common pre-treatment requirements, refer to Appendix 6. For a list of example Category 3 premises, refer to Appendix 7 of the Maranoa Regional Council Trade Waste Policy.

### 5.3.1 Category 1 and 2 approvals

Trade Waste Approvals are not transferable.

Both the Owner or Authorised Agent and the trade waste Generator (where the Owner is not the trade waste Generator) of a premise from which waste classified as Category 1 or Category 2 is being discharged, shall be issued with a written approval which shall remain in force for the specified period unless cancelled sooner.

The Trade Waste Approval states the terms and conditions the Owner or duly Authorised Agent and the Generator must observe to discharge trade waste into Maranoa Regional Council's sewerage system. These include, but are not limited to:

- the location of the premise and nature of the occupancy;
- the type and composition of trade waste that may be discharged (Sewer Admission Limits); the quantity of trade waste that may be discharged;
- the rate of discharge, including maximum rate of discharge;
- the time when trade waste may be discharged;
- the period for which trade waste may be discharged;
- the method for the estimation or measurement of discharge volume;
- provisions for measurement and sampling of discharge prior to entry to sewer;
- details of any pre-treatment required;
- conditions for maintenance of and removal of waste from pre-treatment equipment, including the:
  - frequency of cleaning and the waste transporter to be used;
  - records to be kept concerning the cleaning and maintenance of pre-treatment equipment;
- the powers of Maranoa Regional Council to enter premises in relation to any matter with regard to trade waste control;
- penalties for non-compliance;
- any other conditions considered by Maranoa Regional Council to be appropriate.

### 5.3.2 Category 3 Approvals

Both the Owner or Authorised Agent and the trade waste Generator, (where the Owner is not the Generator), of a premise from which waste classified as Category 3 is being discharged shall be required to negotiate a written approval with Maranoa Regional Council. The approval will remain in force until negotiated or cancelled.

The Trade Waste Approval states the terms and conditions the Owner or Authorised Agent and the Generator must observe to discharge trade waste to Maranoa Regional Council's sewerage system. These include but are not limited to:

- the location of the premises and nature of the occupancy;
- quality of waste that may be discharged (Sewer Admission Limits);
- quantity of waste that may be discharged;
- rate of discharge - maximum instantaneous, maximum daily;
- hours of day, days of week discharge is allowed;
- details of self regulation monitoring program;
- sampling point;

- frequency of sampling;
- method of sample collection and type of sample to be collected;
- analyses required;
- methods of analyses;
- laboratory to be used;
- data transfer and availability to Maranoa Regional Council;
- type, design and location of flow measuring equipment and requirements for calibration;
- methods to be used for estimation of data lost due to failure of sampling program or flow measurement instrumentation;
- provision for measurement and sampling of discharge priority to entry to sewer;
- pre-treatment processes to be used;
- conditions for maintenance of and removal of waste from treatment equipment;
- records to be kept concerning the cleaning and maintenance of treatment equipment and disposal of waste
- the powers of Maranoa Regional Council to enter premises in relation to any matter with regard to trade waste control;
- the obligation of the Owner or Authorised Agent and the Generator concerning any variations to operation or treatment processes that may affect discharge quantity or quality including change of business type;
- the obligation of the Owner or Authorised Agent and the Generator on termination of approval by expiry, discontinuance of discharges, change of ownership or occupier, or non-compliance with approval conditions;
- the obligation of the Owner or Authorised Agent and the Generator with respect to payment of charges, fees and penalties;
- penalties for non-compliance;
- any other conditions relevant to the particular discharge as agreed to.

### 5.3.3 Change to the Premise

The Owner of the premise subject to a Trade Waste Approval shall notify Maranoa Regional Council in writing within 14 days of any change to the premises that affects the Trade Waste Approval.

On cessation of business, the Owner of the premise shall also give Maranoa Regional Council verification that any pre- treatment apparatus, no longer being used, has been cleaned out or serviced.

On sale of the business, the Trade Waste Approval holder shall notify Maranoa Regional Council to ensure that current pre- treatment device's adequately treat the trade waste discharge. If they do not, upgrades must be made at this time.

### 5.3.4 Termination of Approval

A failure by the Owner/Authorised Agent and/or Generator to comply with conditions of their approval or the requirements of any written notices issued pursuant to this approval may result in the approval being terminated by Maranoa Regional Council.

Terms and conditions of the approval in respect of any matter occurring before the termination, including the payment of charges owing, shall continue to have force and effect after the termination of the approval.

## 5.4 Sewer Admission Limits

Any waste discharged to Maranoa Regional Council's sewerage system shall at all times comply with the Sewer Admission Limits as set out in Appendix 2 unless otherwise specified in the approval. These Limits are subject to periodic review. Untreated wastes can have undesirable impacts on the sewerage system. For more detailed information regarding these undesirable impacts refer to Appendix 3.

Maranoa Regional Council may, at its discretion, negotiate with a Generator to accept the discharge of Trade Waste to the sewerage system that exceeds the general limit parameters of the Sewer Admission Limits. Additional charges will apply for such parameters.

The Sewer Admission Limits, unless otherwise specified in the approval, are absolute maximums.

The dilution of trade waste with water to achieve compliance with the Sewer Admission Limits is prohibited.

The trade waste stream and domestic waste stream should, where ever practicable, discharge separately to the sewerage system. Where there is a common discharge pipe, allowance for the domestic component will be made to estimate the actual trade waste component strength.

### 5.4.1 Effluent Improvement Programs

It is the responsibility of the trade waste generator to install, operate and maintain "best practice" pre-treatment devices or processes to ensure sewer admission limits as approved are not exceeded. For Category 1 waste, MRC encourages the installation of a properly sized, approved best practice pre-treatment device together with an acceptable maintenance program.

Council may, at its discretion, negotiate with a Category 2 trade waste generator for the acceptance of waste to sewerage that exceeds the Sewer Admission Limit(s) for certain General Limit Parameter(s). Additional charges may apply for such parameters.

Where such an agreement is made, Council may require the trade waste generator to prepare, to the satisfaction of Council, an effluent improvement program. This program will include:

- a description of the effluent quantity and quality;
- provision for monitoring and reporting waste quantity and quality;
- an examination of waste prevention and recycling options;
- an examination of options for the conservation of water;
- a program involving the development of waste reduction and pre-treatment aimed at reducing contaminant levels over a period of not more than three years to the prescribed admission limits. An action program must be provided, including expected outcomes, timelines and milestones;
- preparation of a report for MRC , including a summary of achievements and options.

Where Council requires an existing Category 2 trade waste generator to develop an effluent improvement program they will be advised of this requirement in writing. If, at the time the trade waste approval falls due for renewal and the holder of the approval has not completed a satisfactory effluent improvement program, the approval holder is required to write to

Council requesting an extension of time with reasons. Council may issue a new trade waste approval, subject to conditions that:

- a satisfactory effluent improvement program be submitted within sixty (60) days; and
- that the trade waste approval may be varied after submission of the effluent improvement program as necessary to enforce the implementation of the program.

## 5.5 Trade Waste Fees and Charges

Charges to be levied in respect of trade waste will be determined by a Maranoa Regional Council resolution passed before or at the same time as the Budget in any financial year.

Trade waste charges and fees for the current financial year are available from Maranoa Regional Council on request, or can be accessed through Council's website.

Accounts for trade waste discharge may be issued annually, half yearly or quarterly. Accounts for the trade waste charges shall be a debt due by the Owner of the premises, and if not paid within the prescribed time after service of the demand, shall thereafter bear interest at such rate per centum per annum as shall be fixed by Maranoa Regional Council by resolution. The amount owing, including interest, shall be recoverable in the same manner as general rates and shall until paid be a charge on the land, and in addition may be recovered as a debt from any subsequent Owner.

### 5.5.1 Trade Waste Charges

Trade waste is divided into four categories for charging purposes.

Charges are based on actual quality and quantity of discharge for the period, not on figures described in the approval.

Non-compliance charges will be applied for premises that fail to meet the Sewer Admission Limits. Charges will be levied as follows:

**Category 0:** No charge if less than 300kL is used per annum.

**Category 1:** Flat fee to cover administration and scheduled inspections.

**Category 2:** Flat fee to cover administration and scheduled inspections. Quantity charge on total annual volume of trade waste discharged to the sewerage system to be calculated as follows:

$C = Qk$  where:

C is the annual charge(\$)

Q is the annual volume(kL)

k is the unit charge rate (\$/kL).

The unit charge, k, is based on the cost of providing and maintaining the sewerage system for the total annual wastewater flow to the sewerage treatment plant(s) including administration, scheduled inspections and compliance testing for trade waste control.

**Category 3:** Flat fee to cover administration, scheduled inspections and compliance testing. A Quantity and Quality charge on the total annual discharge of trade waste to the sewer to be calculated as follows:



$C = Qa + (Qxl \text{ nl} / 1000) + \dots$  where:

C is the total annual charge (\$)

Q is the total annual discharge volume (kL)

a is the unit charge for volume (\$/kL)

x1 and x2 are the average concentrations for pollutant n1, n2 (mg/L)

n1 and n2 are the unit charges for pollutants n1, n2 (\$/Kg) n1, n2 are the pollutant to be charged for.

Charges shall be made for BOD5, (or COD), suspended solids, oil/grease, and any other pollutant as determined by Maranoa Regional Council.

### 5.5.2 Inspection & Analysis Fees

The flat fees allow for routine inspections and sampling/testing of the trade waste by Maranoa Regional Council.

Additional inspection and testing fees, to be paid by the Owner/Authorised Agent or Generator on a sundry debtor basis, shall apply in all categories where more than the number of Maranoa Regional Council inspections and quality compliance tests and covered by the minimum fee are required because of non-compliance.

Samples for analysis may be collected as part of a contractual arrangement with the holder of a Trade Waste Approval. The full cost of all analytical fees shall be paid by the Owner/Authorised Agent or Generator.

### 5.5.3 Application Fees

Application for an approval to discharge under Categories 1, 2 and 3 shall be charged an application fee to cover the cost of processing the application, inspecting the premise and drawing up the approval.

This fee must accompany the application.

### 5.5.4 Septic & Other Liquid Waste Fees

Liquid waste transporters disposing of septic, portable toilet or other approved liquid waste to the sewerage system or sewage treatment plant under approved conditions shall be charged on a calculated volume basis (\$/kL) which takes account of both volume and strength of waste. This fee for the current financial year is available from Maranoa Regional Council on request.

### 5.5.5 Additional Charges

Where Maranoa Regional Council agrees to accept to the sewerage system waste which has properties in excess of those defined in the Sewer Admission Limits, an additional charge will apply for each agreed non-complying parameter.

The formula for calculation shall be:

Charge = (Actual/approved) d x charge rate (\$/kg) x kg pollutant where:

- D is a constant to be determined by Maranoa Regional Council Corporation in its annual budget
- The minimum ratio for (actual/approved) is 1.0; and
- Approved means the Sewer Admission Limit value or the other negotiated value defined in the Trade Waste Approval.

The period of the charge will be the time period over which the limit is considered to have been exceeded, based on sampling frequency. Exceeding the approved limit is an offence under the Queensland Water Supply (Safety Reliability) Act 2008.

In the event that a pre-treatment device is not adequately cleaned and/or maintained or the Sewer Admission Limits are breached, any damage (e.g. sewerage system blockages, corrosion, sewerage treatment plant malfunction) caused by this neglect, on Maranoa Regional Council's infrastructure, will be charged to the trade waste premise. Pre-treatment device cleaning and maintenance fees and charges are issued by an Authorised Contractor and are not included in the property trade waste/wastewater fees and charges.

## 5.6 Inspection & Monitoring

Maranoa Regional Council Officers shall be permitted entry to the premise at all reasonable times and not obstructed for the purpose of carrying out inspections, collection of samples or prevention of illegal discharge of trade waste.

### 5.6.1 Inspection & Monitoring

For the purpose of monitoring and auditing the conditions of Trade Waste Approval, Maranoa Regional Council may inspect the premise the subject of Trade Waste Approval. The frequency of inspections depends on the category the premise falls into, and can generally be considered to be:

- Category 1: Inspections at least annually
- Category 2: Inspections at least twice a year
- Category 3: Inspections as deemed necessary

Inspections may include, but are not limited to the following:

- Checking chemical storage areas to ensure that they are properly banded and are not improperly connected to the sewerage system; and
- Checking that there are no illegal stormwater connections to the trade waste system or the sewerage system and that the stormwater is excluded from entering the sewerage system; and
- Checking that there are no illegal trade waste connections to the sewerage system or stormwater drainage and that there is no potential for trade waste to overflow improperly to the sewerage system, stormwater drainage or waterways; and
- Checking that pre-treatment facilities are regularly and properly serviced and standby equipment is available where necessary; and
- Assessing work practices to ensure that they do not result in a breach of the Trade Waste Approval or legislation;
- Collecting wastewater samples for:
  - waste type reclassification account calculation audit process pre-treatment and equipment evaluation

### 5.6.2 Inspection & Sampling Points

Grease arrestor trap installations discharging trade waste under Category 1 or Category 2 approved conditions shall be fitted with sample points or inspection outlets with 100mm diameter brass access covers on the inlet and outlet of the arrestor. The sample points must be provided externally to the building at ground level.

Category 3 wastes shall be discharged to Maranoa Regional Council's sewerage system via an open channel inspection chamber and/or gauging facility. The inspection chamber and/or gauging facility shall be located on the trade waste discharge line in an area which is accessible at all times by Maranoa Regional Council's Officers, thus allowing for sampling and/or monitoring equipment to be installed and operated.

For new Category 2 and 3 installations, the trade waste discharge line shall be separate from the domestic waste discharge line. For existing installations retrofitting is not required except where it may be done during any proposed upgrading or alterations to the installation.

## 5.7 Determination of Discharge Quantity

### 5.7.1 Category 1 & 2

The volume of trade waste discharged shall be estimated from total metered water consumption, less an allowance for domestic waste based on 100 kL/annum per pedestal and an allowance for water consumed on the property.

Investigations have established a basis for estimation of the proportion of water consumption discharged as trade waste by various types of trade and manufacturing processes. These will form the basis of the initial fraction applied when an approval is issued. Where there is no fraction available, 100% discharge will be assumed.

Where individual Generators have information, which would indicate a departure from these bases, application may be made for reconstruction of the fraction used.

High volume Category 2 Generators may, and are encouraged to, install an Approved flow measurement device calibrated as specified in the approval conditions.

### 5.7.2 Category 3

Volume of trade waste discharged to the sewerage system shall be measured by an Approved flow measurement device calibrated as specified in the approval. This should be located on the trade waste discharge stream, which should be separate from the domestic waste discharge stream.

Where the flow measured includes domestic waste, an allowance of 100 kL/annum per pedestal shall be made. Generators exempt from installing a flow measurement device shall have the volume of discharge estimated.

## 5.8 Determination of Discharge Quality

### 5.8.1 Category 1 & 2

Quality measurements for Category 1 and 2 discharges are required for compliance monitoring only. This shall be done by Maranoa Regional Council as part of the random Inspection and Monitoring program. The cost shall be covered by the annual trade waste flat fee except where additional inspection and testing is required because of non-compliance.

### 5.8.2 Category 3

Quality measurements for Category 3 discharges are required for both charging and compliance purposes. For charging purposes, a system of monitoring by the discharger shall be used to collect sufficient data to enable the average mass load for the designated charging period to be calculated. Where pre-treatment is required to meet Sewer Admission Limits for specified parameters, monitoring will be required for those parameters to confirm satisfactory pre-treatment.

Where additional inspection and testing is required to be done by Maranoa Regional Council as a result of non-compliance, Maranoa Regional Council shall charge the Owner for this.

## 5.9 Installation of Pre-Treatment Devices

Where arrestors are used to pre-treat waste before discharge to sewer they will be of a design and capacity approved by Maranoa Regional Council. Appendix 4 outlines different methods for estimating the size of grease arrestors. The final determination of adequate capacity will be done by a Maranoa Regional Council Officer. Appendix 5 lists common pre-treatment devices and gives a brief explanation of each.

### 5.9.1 Specifications for Pre-Treatment Devices

In a situation where an arrestor is required for pre-treatment but cannot be installed because of specific site constraints, additional charges will apply.

Where an arrestor is required to pre-treat waste before its discharge to the sewerage system the arrestor shall be of an approved design and capacity. Unless otherwise approved, all arrestors shall:

- Not be less than 550 litres in capacity; and
- Not be more than 2000 litres in capacity, and
- Be vented with a 100mm diameter vent; and
- Have gas tight lids; and
- Be fitted with sample points with 100mm diameter brass access covers on the inlet and outlet of the arrestor; and
- Have a capacity below the invert of the outlet of the arrestor at least twice that total capacity of all the appliances and fixtures connected to the arrestor or, a larger capacity if required by Maranoa Regional Council; and
- Have a distance from the top of the arrestor to the outlet that is at least half the depth of the arrestor below the outlet invert; and
- Have an outlet invert level of the arrestor at least 50mm below the inlet invert level; and
- Have a cold water tap located within 5 meters to aid in cleaning and servicing of the pre-treatment

### 5.9.2 Grease Arrestors (Grease Traps)

The use of solvents, enzymes, odour control agents or pesticides in grease arrestors is prohibited unless specifically approved by Maranoa Regional Council. Conditional approval may be given to allow the Generator to demonstrate to Council that the product to be used does not adversely impact on the sewerage system.

Where it is intended that several trade waste Generators share the use of a single grease arrestor, the following information is required to be clearly tabled on the plan submitted with the application for approval:

- The size of the grease arrestor; and
- Details of the loading to be discharged by each trade waste Generator;
- The names of the businesses and shop numbers sharing the grease arrestor; and
- The names of the businesses/agent responsible for managing the maintenance and cleaning of the grease arrestor.

Location of the grease arrestor shall be:

- as close as possible to the location, and fixtures/fittings discharging waste into such trap,
- be easily accessible,
- be located externally to the building so that inspection, maintenance and or cleaning can be carried out without causing a nuisance,
- have a cold water tap installed within 5 meters with protection by an approved backflow prevention device. This tap is to allow for efficient cleaning and maintenance of the grease arrestor.

Maintenance cleaning of grease arrestor trap shall be carried out on a regular basis in accordance with conditions of the approval by a Maranoa Regional Council Approved Industrial Liquid Removal Contractor.

### 5.9.3 Oil Arrestors (Oil Interceptors)

A mineral (petroleum) oil arrestor for the treatment of oily wastewater must be appropriately sized. Acceptable methods of oil arrestor installations include:

- Coalescing plate separators; and
- Membrane technology; and
- Dissolved air floatation (DAF); and
- Chemical precipitation; and
- Triple stage interceptors.

Only 'Quick Break Detergents' may be used on oil arrestor installations.

Each application will be assessed on the nature of the oily waste to be treated, the proposed treatment method and the site location.

All water supplies to washdown bays must be protected with an approved backflow prevention device.

Maintenance cleaning of grease interceptor trap shall be carried out on a regular basis in accordance with conditions of the approval by a Maranoa Regional Council Approved Industrial Liquid Removal Contractor.

Removal of oily waste shall be done by a waste transporter licensed under the Environmental Protection Act 1994 and Environmental Protection Regulation 2008.

### **5.10 Operation of Pre-Treatment Devices**

Pre-treatment devices are installed to assist in ensuring that the discharged trade waste meets Sewer Emission Limits. Pre-treatment devices must be maintained in accordance with manufactures specifications and routinely cleaned and maintained. Cleaning of pre-treatment devices must be undertaken by an Environmental Protection Agency (EPA) licensed waste transporter and waste must be disposed of at an Environmental Protection Agency approved site.

#### **5.10.1 Grease Arrestors**

##### **Determining the Pump-Out Frequency of Grease Arrestor**

Maranoa Regional Council's Trade Waste Officer will determine the pump-out frequency of the premise grease arrestor based on the following maximum thickness levels:

- the surface layer of the trap is thicker than 10% of the total depth of the trap at the measured position
- the bottom of the trap has a solids layer thicker than 20% of the total depth of the trap at the measured position
- the bottom of the trap has a solids layer thicker than 400mm
- the combined surface layer and solids layer depth exceeds 25% of the total depth of the trap

Cleaning must be scheduled before these levels are reached. Maranoa Regional Council has developed a special device to measure grease, oil and solids layers.

The surface layer consists of oil, solid grease or floating loose material on the surface of the arrestor. If the surface layer is graduated, it is measured from the point where the density increases significantly.

The solids layer is found at the bottom of the arrestor. If the solids layer is graduated, it is measure from the point where the density increases significantly.

### **5.11 Food Waste Disposal Units**

Food waste disposal units (garbage grinders/insinkorators) may be approved by specific application to Maranoa Regional Council. Where installation is approved charges will be applied based on the power of the motor and sampling of trade waste may be required.

### **5.12 Medical, Clinical, Veterinary and Infectious Wastes**

Solid wastes from any hospital, clinic, office or surgery of a medical or veterinary facility or laboratory, convalescent or nursing home or health transport facility; including, but not limited to, hypodermic needles, syringes, instruments, utensils, swabs, dressings, bandages, or any paper or plastic item of a disposable nature, or any portions of human or animal anatomy; shall not be discharged to the sewerage system.

Infectious or hazardous wastes deemed to pose a threat to public health and safety may not be discharged to the sewerage system without approval of Maranoa Regional Council. Such

wastes shall require treatment to render them non-infectious or non-hazardous prior to discharge. When approved for discharge, trade waste charges will apply.

Discharging liquid wastes including faeces and body fluids to sewer from any hospital, clinic, officer or surgery of a medical or veterinary facility or laboratory, convalescent or nursing home or health transport facility is permitted in accordance with the National Guidelines for Waste Management in the Health Industry 1999, National Health and Medical Research Council.

### **5.13 Containment of Toxic/Hazardous Substances**

Any potentially toxic or hazardous substances shall be stored in areas where leaks, spillages, or overflows cannot be drained by gravity or by an automated mechanical means to the sewerage system or the stormwater system.

### **5.14 Removal of Industrial Liquid Waste from Premises**

No person shall discharge or cause to be discharged directly or indirectly to the sewerage system, wastes from any liquid transport vehicle without receiving an approval from Maranoa Regional Council.

Removal of any regulated wastes from a premise shall only be carried out by waste transporters licensed in accordance with the Environment Protection Act 1994 and transported, stored, treated or disposed of in accordance with the requirements of the Environmental Protection Regulation 2008 and the Environmental Protection (Waste Management) Regulation 2000. All Contractors shall be required to maintain records as prescribed by Maranoa Regional Council to account for all waste collected and disposed of within or outside the local council area.

Oil interceptor and oil separator holding tanks and pits waste shall not be disposed of into the sewerage system. Such wastes shall be disposed of in a manner and/or at a site approved of in accordance with the requirements of the Environment Protection Act 1994 and Environmental Protection Regulation 2008, and operated in accordance with the requirements of the Environmental Protection (Waste Management) Regulation 2000.

Removal and disposal of sewage and septic tank sludges shall only be done by a Maranoa Regional Council approved waste transporter. Such waste shall be disposed of into the sewerage system in accordance with approval conditions.

All waste transporters may be required to maintain records as prescribed by Maranoa Regional Council to account for all waste collected and disposed of within Maranoa Regional Council boundaries.

Trade waste charges will apply to all transported liquid and sludge waste approved for discharge to the sewerage system.

Advice on the disposal of liquid waste may be obtained by contacting Maranoa Regional Council on 1300 007 662.

### **5.15 Discharge of Liquid Wastes from Buses, Mobile Homes and Caravans**

The discharge of toilet water from buses, or other recreational vehicles may be permitted at approved discharge locations such as bus or transport depots, terminals, and caravan parks. The Owner of the premises on which such facilities are located must hold an approval and discharge must be in accordance with the approval conditions.

## 5.16 Stormwater Discharge from Open Areas and Commercial Swimming Pools

The discharge of stormwater to the sewerage system is strictly prohibited.

The ingress of surface water from a potentially contaminated open area or overfull swimming pool to the sewerage system can cause severe operational problems to Maranoa Regional Council causing sewage overflows.

Trade waste generating areas must be covered by an adequate roof and be bunded adequately to exclude stormwater from entering the sewerage system. A 10 degree overhang must cover open-sided structures. The bunds must be adequate to maintain separation of trade waste and stormwater surfaces, or trade waste generating areas must be fitted with a working first flush system.

The first flush system must:

- pump all such water to sewer at a rate acceptable to Maranoa Regional Council;
- include measures to ensure the discharge to sewerage system ceases automatically after a predetermined level of rainfall volume (mm) and/or intensity (mm/hr);
- include measures to collect, segregate and treat the "first flush" volume equivalent to 10mm x open area (m<sup>2</sup>), during wet weather with additional runoff directed to the stormwater system; and
- have a suitable device for the determination of sewer discharge volume to be installed.

All conditions will be specified in the approval.

Trade Waste charges in accordance with the discharge category will apply.

### 5.16.1 Commercial Swimming Pools

Backwash water from commercial swimming pools is trade waste and a Trade Waste Approval is required for discharge into the sewerage system. Beneficial re-use of backwash water must be considered prior to applying for a Trade Waste Approval. Backwash systems with a pumping rate of > 500 L/min must install a holding tank which has a capacity of at least 115% of maximum backwash volume and must only discharge to the sewerage system when approved.

## 5.17 Landfill Leachate

Leachate from landfill sites and wastewater from waste treatment/disposal facilities constitutes a trade waste and may not be discharged to sewer without approval from Maranoa Regional Council.

Trade waste charges in accordance with the discharge category will apply.

## 5.18 Discretionary Power

Notwithstanding the provisions of these management guidelines, given the complexity of many industrial wastes and the need to protect Maranoa Regional Council's sewerage system, staff and the environment, acceptance of any given trade waste to sewerage system shall always be at the discretion of Maranoa Regional Council.



### **5.19 Reference to Maranoa Regional Council**

In these management guidelines, reference to Maranoa Regional Council means any person appointed or authorised by Maranoa Regional Council to act on behalf of Maranoa Regional Council as the case may require.

### **6.0 Special Provisions**

Nil

### **7.0 Related Policies and Legislation**

Local Government Act 2009  
Local Government Regulation 2012

### **8.0 Associated Documents**

Trade Waste Guidelines (D13/34950)  
Trade Waste Application (13/34949)

## 9.0 Appendices

### Appendix 1: Selected Legislation Relevant to Trade Waste

Water Supply (Safety Reliability) Act 2008

Plumbing and Drainage Act 2018

Plumbing and Drainage Regulation 2017

Standard Plumbing and Drainage Regulation 2003

Environmental Protection Act 1994

Environmental Protection Regulation 2008

Environmental Protection (Waste Management) Regulations 2000

Environmental Protection (Waste Management) Policy 2000

Environmental Protection (Water) Policy 2009

Local Government Act 2009

Sustainable Planning Act 2009

Radiation Safety Act 1999

Radiation Safety Regulation 2010

Gene Technology Act 2016 (Queensland Legislation)

Gene Technology Act 2000 (Commonwealth Legislation)

## Appendix 2

### 1. Sewer Admission Limits

The upper limits for the quality of trade waste discharged to the sewer for all categories are set out below. These Admission standards shall apply from 1 July 2010. They are subject to periodic review.

Parameter	Concentration mg/L except*
Temperature	38 degrees
pH*	6-10
Biological Oxygen Demand (BOD5)+	Biological Oxygen Demand (BOD5)+
Oxygen Demand (COD5)+	Oxygen Demand (COD5)+
Total Organic Carbon (TOC)+	Total Organic Carbon (TOC)+
Suspended Solids+	Suspended Solids+
Total Dissolved Solids (TDS)	Total Dissolved Solids (TDS)
Total oil/grease	Total oil/grease
Gross Solids	*Non-faecal gross solids shall have a Maximum linear dimension of less than 20 mm and a quiescent settling volume of less than 3m / hr
Colour*	Limited such as not to give any Discernible colour in treatment works discharge
Odour*	Not detectable in 1% dilution or causing an odour in Maranoa Regional Council's sewerage systems
Chlorine (as Cl <sub>2</sub> )	10
Sulphate (as SO <sub>4</sub> )#	2000
Sulphite (as SO <sub>2</sub> )	100
Surfactants - Amnionic (MDAS)	500
Aluminium (as Al)#	100
Iron (as Fe)#	100
Ammonia plus ammonium ion (as N)#	100
Total Kjeldahl (Total P)#	50
Manganese (as Mn)	100

+ This total mass load and the capacity of the sewerage system to accept the load shall be considered for each application.

# Maranoa Regional Council may in some circumstances accept waste containing higher concentrations of these substances. Additional charges for treatment will apply.

### 2. Prohibited Discharges

The following are prohibited discharges:

- Flammable/explosive substances
- Radioactive substances
- Pathological and infectious waste and cytotoxic waste
- Genetically engineered organisms

- Floodwater, rainwater and stormwater, and roof water, seepage water, subsoil water and surface water
- Solid or viscous substances in a quantity or size that can obstruct sewerage (e.g. ash, sand, mud, metal, plastics, paper and rags)

**3. Specific Prohibitions – Inorganic**

Parameter	Concentration mg/L
Boron (B)	100
Bromine (Br <sub>2</sub> )	10
Fluoride (F)	30
Cyanide (CN)	5
Sulphide (S)	5

**4. Specific Prohibitions – Metal**

Parameter	Concentration mg/L except*
Arsenic (As)	5
Cadmium (Cd)	2
Chromium (Cr) - Total - Hexavalent	20
Cobalt (Co)	10
Copper (Cu)	10
Lead (Pb)	10
Mercury (Hg)	0.05
Nickel (Ni)	10
Selenium (Se)	5
Silver (Ag)	5
Tin (Sn)	10
Zinc (Zn)	10

The concentration values apply to dischargers having daily mass load between the Lower Daily Mass Load (LDML) and the Upper Daily Mass Load (UDML). For smaller discharges with a daily mass load below the LDML, no concentration limits apply. Dischargers who exceed Maranoa Regional Council's UDML limits will be required to take measures to meet the UDML. This may involve treating to a lower concentration than indicated above.

\* For discharges below the Lower Daily Assessment Load, hexavalent Cr must be reduced to trivalent Cr.

**5. Specific Prohibitions – Organic**

Maranoa Regional Council may request specific demonstrable evidence based on degradability and toxicity concerning substances listed below.

Parameter	Maximum Concentration mg/L
Formaldehyde (HCHO)	50
Phenolic compounds (as Phenol)	100
Pentachlorophenol	5
Petroleum hydrocarbon (non-flammable)	30
Chlorinated hydrocarbons	5
Halogenated Aromatic Hydrocarbons (HAHs)	0.002
Polychlorinated biphenyls (PCB)	0.002
Polybrominated biphenyls (PBB)	0.002
Polynuclear Aromatic Hydrocarbons (PAH)	5
Pesticides	
- General (inspections/herbicides/fungicides)+	
- Organophosphates	1.0
- Organochlorines	0.1

+ This category covers all pesticides other than those specifically listed under organophosphate and organochlorine pesticides.

## 6. Other

Any substance not listed in the above tables is a prohibited discharge and may not be discharged without prior approval of Maranoa Regional Council. Maranoa Regional Council may request specific demonstrable evidence based on degradability and toxicity for any substance when assessing acceptance to sewerage system.

### Appendix 3: Effects of Trade Waste on Sewers

#### High Biological Oxygen Demand (BOD)

- Overload treatment units at the sewage treatment plant
- May accelerate the generation of sulphides in sewer mains and consequently odours and corrosion problems

#### Suspended Solids

- Form deposits (in the sewers) which reduce the capacity of sewers and can lead to overflow conditions
- Accumulate in wet wells and pumping stations resulting in increased maintenance
- Cause blockages and sewage overflows in the drains of commercial and industrial properties
- Can deteriorate mechanical equipment (pumps and valves) by abrasion
- Overload treatment units at the sewage treatment plant

#### Grease and Oil

- Cause the formation of deposits of greasy solids along the water line of sewers thereby reducing the sewer capacity. These deposits can lead to the breakaway of accumulated grease at times of high or very low flow
- Accumulate in wet wells and pumping stations and cause blockages and failure of the pumps
- Deposit in bends of the sewer and cause restrictions and blockages
- Cause overflows in the drains of commercial and industrial properties
- Accumulate on screens at treatment facilities causing blockages and repairs
- Reduce the efficiency of sewage treatment
- May cause non-compliance of the sewerage treatment plant effluent with license conditions

#### Low pH

- Causes corrosion of sewer structures
- May cause the release of toxic hydrogen sulphide gas

#### High pH

- Encourages volatile materials to be given off from the sewage into the atmosphere
- Increases the rates of reaction within sewer mains resulting in consumption of oxygen and increasing odours
- Causes damage to sewer structures

#### Heavy Metals

- Potentially toxic to treatment processes
- Accumulate in biosolids and therefore limit its beneficial reuse

#### Nutrients

- Small increase in levels of nutrients can cause nuisance algal growth in river systems. These algae consume the oxygen in waterways and therefore threaten fish and plant life
- High levels of ammonia may cause unsafe conditions in sewer mains and pumping stations
- Increase operational costs of sewage treatment plants

#### Sulphur Compounds

- Sulphates can be reduced to sulphides and then cause odour and corrosion problems

- Sulphites consume oxygen and may cause anaerobic conditions
- Sulphides may result in the release of hydrogen sulphide gas and affect the safety of the personnel

Flammable Substances

- Can cause fires and explosions in the system

Cyanide

- Toxic to living organisms
- May produce toxic gas in sewer

Phenols

- Potentially toxic to biological treatment processes

Chlorinated Solvents

- Potentially toxic to treatment processes
- Toxic to people working in and around the sewer system

Pesticides

- Limit the beneficial reuse of the sewerage treatment plant effluent and sludge

#### Appendix 4: Guidelines for Sizing Grease Arrestors

1. The capacity of a grease interceptor trap may be calculated from the following capacity allowances for various fixtures and fittings in Commercial Premises.

Fixture/Fitting	Capacity (litres)
Commercial Kitchen Sink	140
Double Bowl or Pit Sink	280
Basin	30
Water Heated Bain-Marie	40
Dishwasher	
- Small (under bench)	400
- Medium (upright)	800
- Large (more than one outlet)	1200
Potato Peeler	
- Small (bench)	100
- Medium (upright)	200
- Large	400
Steamer/Hydrotherm/Boiling Pots/Stock Pots	100
Work Burner	140
Mixing Bowl	140
Glass Washers (not in liquid sales area)	200

Or II: If a restaurant, coffee shop, hotel, motel, hostel, nursing home etc. does not have fixtures or fittings in excess of 250 litres capacity the following criteria shall apply:

Serving capacity	Minimum size grease
0 – 40 persons	550L
40 – 90	1000L



## Appendix 5

### Common Pre-Treatment Devices Balancing Pit/Mixing Tank

A pit or tank used to balance high strength discharge "peaks". Prevents "shock" loads of toxic substances discharged to the plant. Mixing of slightly acidic and alkaline wastes may bring the pH to a level acceptable for sewer discharge. Useful where small volumes of waste may be mixed to produce an acceptable effluent, e.g. photographic processing.

### Cooling Pit/Tank

A pit or tank used to cool wastewater to 38°C or less prior to discharge to the sewer. Prevents high temperature discharges, e.g. boiler blowdown.

### Dry Basket Arrestor (various types)

A pit or tank which is fitted with a fixed screen and removable mesh basket to capture large solids and fibrous material. Different types are available for different processes, e.g. laundry, food processing, car/truck wash.

### General Purpose Pit

A pit which allows solids to sink and grease/oil to float, thereby removing them from wastewater.

### Grease Trap

An above ground tank or in ground pit which allows kitchen wastewater to cool and the grease to separate from the wastewater. When sizing the unit, due consideration should be given to the temperature and frequency of discharges. Minimum size is 550litres. For example: all non-residential premises engaged in the cooking and preparation of food.

### Oil Interceptor

A system designed to separate non emulsified oil and solids from the water. These systems are available in a variety of forms and are sized on an individual basis, e.g. service stations, engine and parts wash, mechanical repairs.

### pH Correction

The pH correction of acidic or alkaline waste is a step often required before discharge into the sewer or before treatment by biological means. pH correction is normally carried out in a tank or a pit, where mixing is provided. It can be achieved either in a batch or in a continuous flow through system. A pH control system basically measures the pH of the solution and controls the addition of a neutralising agent on demand to maintain the effluent within acceptable pH Limits.

### Screen

A device used to catch solids before the waste discharges to sewer.

### Settling Tank

A tank used to settle solids prior to wastewater discharging to sewer. Tanks suitable for under sink use but may be enlarged for in-ground application, e.g. plaster sinks, soil labs.

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### **Solvent and Oil Interceptor**

A pit, which allows solids to sink and grease/oil to float, thereby removing them from wastewater, e.g. laboratory sinks, small degreasing troughs for parts washing, silk screen-printing.

## Appendix 6

General Pre-Treatment Guidelines for Minor Trade Waste (will be satisfactory for most)

Generator/Source	Characteristics of Waste	Minimum Required Pre-Treatment
<b>Automotive/Engineering Industries:</b>		
Wreckers	Oil, grease, solids	Oil interceptor <sup>1</sup>
Detailing	Grease, oil, solids, detergents	Oil interceptor <sup>1</sup>
Engine/gear box reconditioning (small operation)	Lead, grease, oil, solids, detergents, oil, kerosene	Interceptor <sup>1</sup>
Equipment hire company	Oil, grease, kerosene, solids, detergents	Oil interceptor <sup>1</sup>
Lawn mower repairs	Oil, grease, grass, solids, detergents	Oil interceptor <sup>1</sup>
Mechanical workshop	Oil, grease, kerosene, solids, detergents	Oil interceptor <sup>1</sup>
Panel beating/spray painting	Suspended solids, oil and grease	General purpose pit, oil interceptor <sup>1</sup>
<b>Service Stations:</b>		
Workshops (only)	Oil and grease	Oil interceptor <sup>1</sup>
Covered forecourt	Oil and grease	Oil interceptor <sup>1</sup>
<b>Car Wash Areas – Residential:</b>		
Open areas	Oil, grease solids, rain	silt trap, 550L minimum capacity
Roofed and bunded (to prevent stormwater ingress)	Oil, grease, solids	silt trap, 550L minimum capacity
<b>Car Wash Areas – Commercial:</b>		
Open areas	Oil, grease, solids, rain	Stormwater diversion pit, first flush collection pit "first 10mm of rain", oil separator <sup>1</sup> , rainwater controls, measurement.
The whole of the intended washdown area is to be roofed and bunded with 10 degree overhang to ensure no ingress of stormwater (rainfall)	Oil, grease, solids	Oil interceptor <sup>1</sup>
Radiator repair (small operation)	Suspended solids, pH, toxic metals	pH adjustment prior solid settlement and pH adjustment before discharge to sewer; may require oil separation and metal precipitate removal.
<b>Commercial Food Outlets</b>		
Hot bread, bakery, pies, cakes, pastries	Flour products, grease	Dry arrestor or removable basket in-floor waste collection; grease interceptor <sup>2</sup>
Butcher, small, retail	Grease (washing floors and utensils)	Fixed mesh screen and basket in sink and basins; grease interceptor <sup>2</sup>
Chicken (fresh) retail Meat cutting and preparation	Grease	Fixed mesh screens and baskets in-floor waste

		collection, mesh sinks and basins, grease interceptor <sup>2</sup>
Fish - fresh (no cooking)	Scales, fish gut	Fixed mesh screen and basket in floor waste; dry arrestor pit
Fish shop retail and cooking on site	Scales, grease	Fixed mesh screen and basket in floor waste; screens in sink and basin; grease interceptor <sup>2</sup>
Canteen/cafeteria (with hot food preparation)	Grease	Grease interceptor <sup>2</sup>
Caterer	Grease	Grease interceptor <sup>2</sup>
Community halls (food preparation)	Grease	Grease interceptor <sup>2</sup>
Sandwich/coffee shop - no hot foods prepared	Grease	Grease interceptor <sup>2</sup>
Coffee shop (hot food prepared and served)	Grease	Grease interceptor <sup>2</sup>
Take-away food outlets (small)	Grease	Grease interceptor <sup>2</sup>
Take-away food outlets (large) e.g. McDonalds, Pizza Hut, BBQ and Charcoal Chicken etc.	Grease	Grease interceptor <sup>2</sup>
Commercial kitchen	Grease	Grease interceptor <sup>2</sup>
Hospital kitchens	Grease and oil, high temperatures	Grease interceptor, capacity to cool hot discharge water to less than 38 degrees
Nursing homes/kitchen	Grease/solids	Grease interceptor <sup>2</sup>
Restaurant	Grease	Grease interceptor <sup>2</sup>
Hotel with counter lunches/restaurant	Grease	Grease interceptor <sup>2</sup>
Motel kitchen/restaurants	Grease	Grease interceptor <sup>2</sup>
Boarding houses/kitchen	Grease	Grease interceptor <sup>2</sup>
Bistro	Grease/oil	Grease interceptor <sup>2</sup>
Ice-cream parlour - with hot food, take away	Grease	Grease interceptor <sup>2</sup>
Shopping centres preparation	Grease and solids	Grease interceptor <sup>2</sup>
Supermarkets incorporating butcher and/or bakery	Grease and solids Grease and flour	Grease interceptor <sup>2</sup> , ase grease interceptor and basket traps; dry arrestor pit or basket in-floor waste collection
<b>Other Commercial/Services Industries:</b>		
Garbage bin cleaning units/hotels/restaurants	Grease/solids	Fixed screen over floor waste, if grease interceptor installed, waste to pass via interceptor
Hairdressing salon	No threat	Pre-treatment, avoid discharge through grease interceptor
<b>Hobby Clubs:</b>		
< 200L per day	Suspended solids	No pre-treatment
200L-1000L per day	Suspended solids	Plaster arrestor

> 1000L per day	Suspended solids	Solids settlement pit 1000L min of 1 hour retention
<b>Dental/Medical/Veterinary Surgeries:</b>		
No plaster casts	Solids	Bottle trap
Plaster casts	Solids	Plaster arrestor
X-rays	Rinse water and spent solutions	To sewer via balancing tank after silver recovery
Photographic waste		
Fast photo X-ray	Rinse water and spent solutions	To sewer via balancing tank after silver recovery
<b>School:</b>		
Tuckshop (hot food)	Grease	Grease interceptor <sup>2</sup>
Home Science, laboratory	Acid/alkali, chemicals	Sediment and neutralising trap
Optical (>200L/day)	Suspended solids	Bottle trap under sink
Laundromat	Lint, temperature	Lint screens 1mm mesh: cooling if temperature 38 degrees (washing machine internal screens acceptable)
Kennels	Solids	Dry arrestor pit; open area controls
Commercial swimming pools	Suspended solids, wastewater, chemicals	

**NOTE**

<sup>1</sup> Oil interceptors should be of the coalescing plate type minimum capacity 1 kL/hour; use only quick break detergents (detergent used for cleaning by emulsifying oils and grease then quickly breaking the emulsion formed in less than 1 hour to allow separation of the oil from the water).

<sup>2</sup> Minimum size for grease arrestors is 550litres. For guidelines for sizing of grease arrestors refer to Appendix 4.

## Appendix 7

### Potential Category 3 Premise List

#### Food/Beverage Industries

- Fruit/vegetable processing (canning, freezing, juicing)
- Meat processing/small goods manufacturing
- Abattoirs - meat/poultry
- Rendering
- Sea foods
- Dairy products
- Large restaurants
- Wineries/distilleries
- Soft drink/cordial manufacturing
- Confectionary
- Large scale baking (bread, biscuits, pastries etc)
- Grain milling
- Oil seek/oil extraction
- Fermentation/yeast

#### Chemical Related Industries

- Chemical manufacturing - general (organic and inorganic)
- Soap, detergent and associated product manufacturing/formulating
- Explosives
- Pharmaceutical/cosmetics
- Fertilisers
- Pesticides/herbicides
- Plastics
- Resins, adhesives/latex
- Paints/varnishes/lacquers
- Fibreglass
- Rubber-natural/synthetic

#### Apparel/Textile

- Tanneries
- Textiles (wool, cotton, synthetics)
- Industrial/commercial laundries

#### Services

- Laboratories - scientific and pathology
- Electrical manufacturing/processing
- Electronics
- Industrial/commercial wash areas - car, bus, truck, stables, garbage collection, power generation
- Repackaging activities
- Industrial/commercial storage areas/warehouses
- Recyclers

Materials

- Paper and cardboard processing/manufacturing
- Printing/publications, graphic arts/photographic (large scale)
- Cement
- Asphalt/bitumen
- Glass/ceramics manufacturing

Metals

- Mining/minerals industries smelting/refining foundries
- Electroplaters/galvanisers
- Metal finishing
- Fabrication and powder coating

Automotive/Engineering/Petroleum

- Petroleum refining
- Waste oil refining

## Appendix 8: Trade Waste Money Saving Tips

Keep water supply and cleaning costs to a minimum with the following tips:

Save water:

- Use dry or waterless cleaning methods such as wiping or sweeping spills rather than hosing.
- Turn off taps if they are not being used.
- Avoid running the tap continuously during rinsing.
- Where sinks are used for rinsing, install spring loaded foot operated taps or electronic sensor operated taps.
- Ensure the dishwasher unit is full each time it is used.

Reduce solid waste in grease traps:

- Scrape and wipe leftover food from plates and cooking utensils into the garbage before washing up. Never put solid waste such as coffee grounds or tea leaves down the sink.
- Provide appropriate scrapers for staff to use. In-sink garbage disposal units are not allowed.
- Use sink strainers.

Recycle cooking oil:

- Collect used cooking oil so that it can be recycled and never pour cooking oil into grease traps.
- Store cooking oil in a bunded area so that any leaks or spills cannot drain into the sewer or stormwater system. Maranoa Regional Council can supply a list of companies that recycle used cooking oil.

Use less cleaning products:

- Detergents dissolve grease, allowing it to pass through the grease trap and cause blockages in the sewerage system. Avoid using strong cleaning products such as bleach or caustic soda.
- Do not use solvents, bacteria, enzymes or other substances in your grease trap without permission from Maranoa Regional Council.

Educate staff:

- Train kitchen staff about what they can and cannot put down the sink.
- Place signs or stickers around the kitchen to remind staff of proper practices.



## Appendix 8: Oil Separators

### Tips for Maintaining Pre-treatment Equipment

Oil arrestors or oil water separation systems remove oil-based pollutants from wastewater. Typical pre-treatment includes coalescing plate separators (CPS), hydro-cyclone separation systems (HSS) and vertical gravity separators (VGS).

The following tips will help maintain oil water separation system and protect the sewerage system and the environment. **Remember:** Only install pre-treatment equipment that has been authorised by Maranoa Regional Council.

- Degreasing bays, vehicle washing areas and workshop floors should pump to an oil arrestor.
- Oil arrestors cannot process large amounts of liquid and chemicals such as oil, chemicals, petrol, kerosene, radiator fluids, brake fluids, non quick break degreasers and solvents.
- Store all liquids adequately so any spills are easily captured and removed off site. Collect all spills and do not discharge them to the separator.
- Follow the manufacturer's instructions and maintain equipment regularly so that wastewater remains within an acceptable standard. Pre-treated wastewater should be clear, not milky.
- The period between scheduled maintenance should not exceed 13 weeks. Train at least 2 people in your workshop to manage the equipment in case it needs cleaning or servicing at short notice.
- Install a dry basket arrestor or bucket trap to collect all nuts, bolts and other loose material that can damage the pump.
- Ensure the pump well has a sloping bottom, a sump and a working capacity of at least 550 litres. If you are using an existing pre-treatment pit as a pump well, install a sloping bottom and sump. Pump wells with sealed lids should be vented.
- The shape of the pump well and lid placement must allow periodic cleaning of the whole pump well. Clean out any sand collected in the sump.
- Install a robust, rust-proof basket with 6-8mm evenly spaced holes around the pump suction line to protect the pump from solid items such as nuts and bolts.

### Coalescing Plate Separators (CPS)

- Follow the manufacturer's instructions and maintain CPS equipment regularly, including the total pump out and cleaning of plates and hopper and removing sludge from the bottom of the hopper.
- The CPS collection well must hold a minimum volume of 550 litres.
- If the CPS does not have a screen, install a basket to capture large solid items and make sure any perforations are no larger than 10mm.
- Only the pump authorised by Maranoa Regional Council as part of the pre-treatment authorisation process may be installed.

### Hydrocyclone Separation Systems (HSS)

Follow the manufacturer's instructions and maintain hydrocyclone separation systems regularly, including:

- pump out and cleaning of the influent pit
- cleaning the floating suction device and filter screen
- emptying and cleaning the line filter
- cleaning the 'reject orifice'
- cleaning and checking the pump level control devices.

### Vertical Gravity Separator Systems (VGS)

Follow the manufacturer's instructions and maintain vertical gravity separator systems regularly, including breaking-up encrusted surface sludge in the top of the unit, removing any sludge attached to the continuous spiral pack, and removing settled sludge from the bottom of the unit.

- The VGS collection well must hold at least 550litres.
- The VGS must have a screen, or basket to capture large solid items with perforations no larger than 10mm.
- A skimmer may be fitted to the pump suction line.

### Cleaning Compounds

- Aerosol and solvent degreasers may contain flammable materials and may not allow the oil and water to separate.
- Traditional cleaning compounds such as solvent-based degreasers create an oil-water suspension that lasts for several hours, allowing oil to pass through the pre-treatment equipment and into the sewer. Try different products to find one that suits your work.
- Ask your cleaning product supplier to specify a cleaner that allows the oil and water to separate soon after use. These products are known as 'quick-break' detergents.
- Quick-break cleaning products separate oil and water within several minutes, enabling your separation system to work as an efficient oil arrestor. Milky wastewater from the pre-treatment equipment indicates the presence of emulsified oil. If this occurs, you may require a better quick-break detergent.
- When using a cleaning product only use the specified amount. Using more only wastes product and increases operating costs.
- Alternatively, a hot water pressure cleaner will use less degreaser and give you a really clean job.
- You may need to work with pre-treatment equipment and cleaning compound suppliers to ensure the equipment works satisfactorily and the treated wastewater meets Maranoa Regional Council's Trade Waste Management guidelines and Sewer Admission Limits.
- Do not use petrol, kerosene or diesel to clean parts. Flammable substances can cause fire and explosions in the sewer.