(as amended and readopted July 2013)

Trade Waste

This part of the bylaw covers the discharge of trade waste to the Council's sewerage system and/or wastewater treatment plants. The purpose of this part of the bylaw is to:

- Protect public health and the security of the public sewerage system.
- Protect the health and safety of Council personnel and the Council's agents.
- Detail the responsibilities of both the Council and consumers with respect to the public sewerage system.
- Detail mechanisms for the recovery of the costs of arranging and treating trade wastes and provide an equitable share of costs between domestic and trade discharges.
- Assist the Council to meet its obligations under the Resource Management Act 1991 and the Health and Safety in Employment Act 1992.
- Protect the Council's investment in existing and future infrastructure, treatment plants and disposal facilities.
- Detail breaches and offences and provide a disputes procedure.

Introduction

1. Authority

1.1 This part is made under sections 145 and 146 of the Local Government Act 2002.

2. Purpose

2.1 The purpose of this part is to provide for**:**

a) Acceptance of long-term, or temporary discharge of trade waste to the public sewerage system.

b) Establishment of four grades of trade waste: permitted, controlled, conditional and prohibited.

b) Evaluation of individual trade waste discharges against specified criteria.

c) Correct storage of materials in order to protect the public sewerage system from spillage.

d) Installation of flow meters, samplers or other devices to measure flow and quality of the trade waste discharge.

e) Pre-treatment of trade waste before it is accepted for discharge to the public sewerage system.

f) Sampling and monitoring of trade waste discharges to ensure compliance with this part.

g) Acceptance or refusal of a trade waste discharge.

h) Charges to be set to cover the cost of conveying, treating and disposing of, or reusing trade waste and the associated costs of administration and monitoring.

i) Administrative mechanisms for the operation of this part.

3. Application of this part

3.1 This part also applies to any trade waste received from outside the district that an authorised officer may agree to receive. However, trade waste received from outside the district may, at the discretion of the authorised officer, be subject to a separate contractual agreement between the Council and discharger covering the cost of disposing of trade waste.

4. Interpretation

4.1 This part shall be in addition to the provisions of Part 1 Introductory and if this part is inconsistent with Part 1 Introductory then the provisions of this part shall prevail.

4.2 In this part unless the context otherwise requires: **Definitions**

Acceptable discharge means wastewater with physical and chemical characteristics which comply with the requirements of the Council standards as defined in Schedule 1A of this part.

Access point means a place where access may be made to a private drain for inspection (including sampling or measurement), cleaning or maintenance. The location of the access point shall be in accordance with the New Zealand Building Code.

Analyst means a testing laboratory approved by an authorised officer.

Biosolids means sewage sludge treated sufficiently to the extent that it is able to be safely and beneficially applied to land, as described in "*New Zealand Guidelines for the safe application of Biosolids to land in New Zealand*" (2003) or subsequent amendments.

Characteristic means any of the physical or chemical characteristics of a trade waste referred to in Schedules 1A and 1B of this part.

Cleaner production means the implementation on trade premises, of operations, methods and processes appropriate to the goal of reducing or eliminating the quantity and toxicity of wastes produced.

Condensing water or cooling water means any water used in any trade, industry, or commercial process or operation in such a manner that it does not take up matter into solution or suspension.

Conditional trade waste means trade waste derived from a trade activity and/or process of such complexity or size; or employing such chemicals, raw materials, or feed stock; that the risk and/or consequences of it exceeding acceptable discharge characteristics are considered significant by the Council to the extent that specific conditions are placed upon the consent holder by the Council. Such activities include temporary discharges.

Consent means consent in writing given by the Council authorising an occupier to discharge non-domestic wastewater to the sewerage system.

Consent holder means the person occupying trade premises who has obtained a consent to discharge or direct the manner of discharge of trade waste from any premises to the Council's sewerage system, and includes any person who does any act on behalf or with the express or implied consent of the consent holder (whether for reward or not) and any licensee of the consent holder.

Contaminant (as described in the Resource Management Act) includes any substance (including gases, odorous compounds, liquids, solids, and micro-organisms) or energy (excluding noise) or heat, that either by itself or in combination with the same, similar, or other substances, energy, or heat—
(a) when discharged into water, changes or is likely to change the physical, chemical, or biological condition of water; or
(b) when discharged onto or into land or into air, changes or is likely to change the physical, chemical, or biological condition of the land or air onto or into which it is discharged.

Controlled trade waste means a trade waste derived from a trade activity and/or process where the risks and/or consequences of it exceeding acceptable discharge characteristics are considered low by the Council.

Contingency management procedures means those procedures developed and used to avoid, remedy, or mitigate the actual and/or potential adverse effects of trade activities on the environment from an unexpected or unscheduled event resulting in discharge, or potential discharge of contaminants of concern into the sewerage system.

Customer means an occupier or owner of premises that discharges or wishes to discharge trade wastes into the sewerage system.

Disconnection means the physical cutting and sealing of any of the Council's wastewater services, utilities, drains or sewers for use by any person.

Domestic sewerage means foul water (with or without matter in solution or suspension therein) discharged from premises used solely for residential premises, or wastes of the same character discharged from other premises which has been approved by the Council.

Foul water means the discharge from any sanitary fixtures (any fixture which is intended to be used for sanitation – the term used to describe activities of washing and/or excretion carried out in a manner or condition such that the effect on health is minimised, with regard to dirt and infection) or sanitary appliance (an appliance which is intended to be used for sanitation which is not a sanitary fixture – included are machines for washing dishes and clothes).

Hazardous waste *defined in section 2 of the Hazardous Substances and New Organisms Act 1996, which exceed the minimum degree of hazard specified by the Hazardous Substances (classes 1 to 5) (Controls) Regulations 2001, and may present some degree of physical, chemical or biological hazard to people or the environment when discharged into the sewerage system.*

Management plan means the plan for management of operations on premises from which trade wastes originate, and may include the provision for cleaner production, waste minimisation, discharge, contingency management procedures, and any relevant industry code of practice.

Mass limit means the total mass of any characteristic that may be discharged to the Council sewerage system over any 24-hour period from any single point of discharge or collectively from several points of discharge.

Maximum concentration means the instantaneous peak concentration that may be discharged at any instant in time.

Permitted trade waste means a trade waste derived from a trade activity and/or process that has been assessed to have less than minor effects on the sewage system and whereby the customer is permitted to discharge trade wastes without holding a controlled trade waste consent or a conditional trade waste consent.

Point of discharge means the boundary between the public sewer and a private drain but for the purposes of monitoring, sampling and testing, shall be designated in the trade waste consent.

Pre-treatment means any processing of trade waste designed to reduce or vary any characteristic in a trade waste before discharge to the sewerage system in order to comply with a trade waste consent.

Private drain means that section of drain between the premises and the point of connection to the wastewater sewerage system.

Prohibited trade waste means a trade waste that has prohibited characteristics as defined in Schedule 1A and does not meet the conditions of Schedule 1B. The trade waste is not acceptable for discharge into the Council's system unless specifically approved by the Council as a conditional trade waste.

Prohibited characteristics means any characteristics described in Schedule 1B of this part.

Schedule of fees and charges means the list of items, terms and prices for services and consents associated with the discharge of trade waste as approved by the Council.

Sewage means foul water and may include trade wastes.

Sewage sludge means the solid material settled out and removed from sewage during the wastewater treatment process.

Sewer means any pipework drainage that conveys sewage.

Sewerage system means the collection, treatment and disposal of sewage and trade wastes, including all sewers, pumping stations, storage tanks, sewage treatment plants, outfalls, and other related structures operated by the Council and used for the reception, treatment and disposal of sewage and trade wastes.

Significant industry means the relative size of a given industry compared to the capacity of the sewage system (including sewage treatment plant) which services that industry. Industry size relates to volume and/or loads discharging into the sewerage system. Loads can be the conventional loadings of BOD5 and SS or some particular contaminant (e.g. boron, chromium) which will have an effect, or has the propensity to have an effect, on the sizing of the sewerage system, the on-going system operation and/or the quality of the treated effluent that is discharged.

Standard methods for the examination of water and wastewater means the 22nd edition 2005 (including the Supplement) as published by the American Water Works Association (AWWA)/American Public Health Association, or the most current subsequent edition of this publication.

Stormwater means surface water run-off resulting from precipitation.

Tanker waste means any waste which will be transported to and disposed of into the sewerage system, including trade waste matter in solution or suspension, which is conveyed by vehicle for disposal.

Temporary discharge means any discharge that is intermittent and occurs for less than 12 months. Such discharges include the short-term discharge of an unusual trade waste from premises subject to an existing trade waste consent.

Toxic pollutants means any substances which may impact on health or the environment and includes but is not limited to those substances listed in Table 1A.2 of Schedule 1A of this part.

Trade waste means any liquid, with or without matter in suspension or solution that is or may be discharged from a trade premises in the course of any trade or industrial process or operation, or in the course of any activity or operation of a like nature, but does not include condensing or cooling water, stormwater, or domestic sewage. Condensing or cooling waters and stormwater that cannot practically be separated from wastewater may be included subject to specific approval.

Compliance with this part

5. Control of discharges

No unauthorised discharge

5.1 No person shall:

a) Discharge, or allow to be discharged, any trade waste to the sewerage system;

b) Discharge, or allow to be discharged, any tanker waste or components of tanker waste after a separation process to the sewerage system;

c) Add or permit the addition of condensing or cooling water to any trade waste which discharges into the sewerage system;

d) Add or permit the addition of stormwater to any trade waste which discharges into the sewerage system;

e) Unless authorised by an authorised officer, add, or permit the addition of, any water whatsoever to any waste stream solely in order to vary the level of any characteristic of the trade waste;

except in accordance with the provisions of this part or unless specific approval is given in a consent.

5.2 No person shall discharge, or allow to be discharged, a prohibited trade waste into the sewerage system.

6. Trade waste acceptance

6.1 The Council is not obliged to accept any trade waste.

7. Storage, transport handling and use of hazardous materials

Responsibilities of trade premises

7.1 All persons on trade premises shall take all reasonable steps to prevent the accidental entry of any of the materials listed in clause 7.3 from entry into the sewerage system as a result of leakage, spillage or other mishap.

Responsibilities when transport waste

7.2 No person shall store, transport, handle or use, or cause to be stored, transported, handled or used any hazardous substance below in clause 7.3 in a manner that may cause the material to enter the sewerage system and cause harmful effects.

7.3 Materials referred to in clauses 7.1 and 7.2 are those products or wastes containing corrosive, toxic, biocides, radioactive, flammable or explosive materials likely to:

Hazardous materials

a) Generate toxic, flammable, explosive or corrosive materials in quantities likely to be hazardous, when mixed with the wastewater stream.

b) Be detrimental to the health and safety of the Waste Water Treatment Plant staff, approved contractors and the public or be harmful to the sewerage system.

7.4 An authorised officer reserves the right to refuse the granting of a consent or cancel an existing consent where there are reasonable grounds to believe that incorrect storage of hazardous substances on site poses a threat to the sewerage system in accordance with clauses 7.1 to 7.2.

8. Accidents and non compliance

8.1 The occupier shall inform the Council immediately by phone, fax or email on discovery of any occurrence, accident, spill or process mishap which may alter the quality or quantity of the final effluent discharging to the Council's sewer and which may cause a breach of their trade waste consent in particular, or this part in general.

Accidents to be reported immediately

Trade waste categories

9. Classification of trade waste discharges

9.1 Trade waste discharges shall be classified as permitted, controlled, conditional or prohibited and each classification shall be subject to the following action:

Classification

a) Permitted trade wastes. The authorised officer may register a discharge as a permitted trade waste discharge subject to the customer complying with all general requirements of this part. Should a discharge after appropriate pre treatment be found to be non compliant with Schedule 1A.2.4 of this part, the discharge will require a controlled trade waste consent.

b) Controlled trade wastes. The authorised officer shall grant a controlled consent to discharge subject to the general conditions contained in this part. It may also contain specific conditions in addition to the general conditions.

c) Conditional trade wastes. The authorised officer may grant a conditional consent to discharge subject to specific conditions additional to the general conditions. The authorised officer reserves discretion to decline consent to discharge.

d) Prohibited trade wastes. The authorised officer must not grant consent for such discharge.

10. Requirement for trade waste consent

10.1 The Council may from time to time by resolution publicly notified adopt guidelines concerning types of trade activities and processes to be covered by this part.

Guidelines to be made by resolution

10.2 Every person or trade premises who does, proposes to, or is likely to:

Intention to dispose of trade must be notified

a) Discharge into the sewer system any trade waste; or

b) Vary the characteristics of a consent to discharge that has previously been granted; or

c) Vary the conditions of a consent to discharge that has previously been granted; or

d) Significantly change the method or means of pre-treatment for discharge under an existing consent;

shall notify an authorised officer of their intention, and if required make an application for consent to the discharge of that trade waste, or to the proposed variations.

10.2A Where the trade waste is of such a nature that it could be categorised as a permitted trade waste, the customer must complete an application form in order for an authorised officer to determine whether or not to register the trade waste as a permitted trade waste.

Forms

10.3 Any application under clause 10.2 or 10.3 must be on the application forms provided by the Council for trade waste customers.

10.4 Any application under clause 10.2 or 10.3 will be accompanied by the relevant fee in accordance with the Council's schedule of fees and charges.

Fees

10.5 An authorised officer may determine the nature and content of the application forms, which may be altered and amended at any time.

Content of forms

10.6 The Council reserves the right to deal with the owner of a premise instead of the occupier.

11. Consideration of application

11.1 On receipt of any application for a trade waste consent (including an application for registration of a permitted trade waste) to discharge from any premises or to alter an existing discharge, the authorised officer may require the applicant to submit:

Application procedure

a) Any additional information which it considers necessary to reach an informed decision; and

b) An independent report/statement completed by a suitably experienced and external auditor to verify any or all information supplied by the applicant, and this may include a management plan; and

whenever appropriate to have the discharge investigated and analysed as provided for in clause 5.

11.2 The authorised officer shall use all reasonable efforts to notify the applicant of any requirement under clause 11.1 within 10 working days of receipt of the application.

11.3 Within 20 working days of receipt of an application which meets all requirements of this part, or 20 working days after all requirements under clause 11.1 have been addressed, whichever is the later, the authorised officer shall, after considering the matters in clause 11.1 do one of the following:

a) Decline the application and notify the applicant of the decision giving a statement of the reasons for refusal; or

b) Register the application as a permitted trade waste and inform the applicant of the decision by issuing the appropriate notice of registration; or

c) Grant the application as a controlled trade waste consent and inform the applicant of the decision by issuing the appropriate notice of trade waste consent; or

d) Grant the application as a conditional trade waste consent and inform the applicant of the decision and the conditions imposed on the discharge by issuing a draft consent for consideration by the applicant and entering into consultation with the applicant as to the final form of the conditions to be applied.

11.4 Notwithstanding clauses 12.1, 14.2 and 15 the authorised officer reserves the right to make the final decision on what additional conditions shall be imposed.

12. Consideration criteria

Criteria

12.1 In considering any application for consent the authorised officer shall take into consideration the quality, volume, and rate of discharge of the trade waste in relation to:

a) The health and safety of the Waste Water Treatment Plant staff, approved contractors and the public;

b) The limits and/or maximum values for characteristics of trade waste as specified in Schedules 1A and 1B of this part;

c) The extent to which the trade waste may react with other trade waste or domestic wastewater to produce an undesirable effect, e.g. settlement of solids, production of odours, accelerated corrosion and deterioration of the sewerage system etc;

d) The flows and velocities in the sewer, or sewers, and the material or construction of the sewer or sewers;

e) The capacity of the sewer or sewers and the capacity of any wastewater treatment works;

f) The nature of any wastewater treatment process and the degree to which the trade waste is capable of being treated in the wastewater treatment works;

g) The timing and balancing of flows into the sewerage system;

h) Any statutory requirements relating to the discharge of raw or treated wastewater to receiving waters, the disposal of sewage sludges, the use or disposal of biosolids, and any discharge to air (including the necessity for compliance with any regional plan or any proposed regional plans, resource consent, discharge permit or water classification);

i) The effect of the trade waste discharge on the ultimate receiving environment;

j) The conditions of resource consents for the sewerage system and the residuals from it;

k) The possibility of unscheduled, unexpected or accidental events and the degree of risk these could cause to humans, the sewerage system and the environment;

l) Consideration of other existing or future discharges;

m) Amenability of the trade waste to pre-treatment;

n) Existing pre-treatment works on the premises and the potential for their future use;

o) Cleaner production techniques and waste minimisation practices;

p) Requirements and limitations related to sewage sludge disposal and reuse;

q) Control of stormwater;

r) Any management plan;

s) Tankered waste being discharged at an approved location/s; and

t) The Resource Management Act 1991 and any relevant requirements of the Taranaki Regional Council.

13. General conditions

Conditions

13.1 Any trade waste consent may be subject to conditions including, but not limited to:

a) The particular public sewer or sewers to which the discharge must be made;

b) The maximum daily volume of the discharge and the maximum rate of discharge, and the duration of maximum discharge;

c) The maximum limit or permissible range of any specified characteristics of the discharge, including concentrations and/or mass limits determined in accordance with Schedule 1A of this part;

d) The period or periods of the day during which the discharge, or a particular concentration, or volume of discharge may be made;

e) The degree of acidity, or alkalinity of the discharge at the time of discharge;

f) The temperature of the trade waste at the time of discharge;

g) The provision by the consent holder, at the consent holder's expense, of screens, grease traps, silt traps or other pre-treatment works to prevent or control trade waste discharge characteristics to the consented levels;

h) The provision and maintenance at the consent holder's expense of inspection chambers, manholes or other apparatus or devices to provide reasonable access to drains for sampling and inspection;

i) The provision and maintenance of a sampling, analysis and testing programme and flow measurement requirements, at the consent holder's expense;

j) The methods set out in clauses 21.1 to 22.3 of this part are to be used for measuring flow rates and taking samples of the discharge for use in determining the amount of any trade waste charges applicable to that discharge;

k) The provision and maintenance by, and at the expense of, the consent holder of such meters or devices as may be required to measure the volume or flow rate of any trade waste being discharged from the premises, and for the testing of such meters;

l) The provision and maintenance, at the consent holder's expense, of such services, (whether electricity, water or compressed air or otherwise), which may be required, in order to operate meters and similar devices;

m) The provision by the consent holder to an authorised officer of all flow and/or volume records, results of analyses and chain of custody records of disposal to third parties of by-product (e.g. spent electroplating solutions and sludges);

n) A risk assessment of damage to the environment due to an accidental discharge of a chemical;

o) Trade waste minimisation and management;

p) The provision and implementation of a "Cleaner Production Programme" to reduce and improve the trade waste quality or quantity;

q) The provision and implementation of a "Trade Waste Management Plan" designed to ensure proper control is maintained over all processes and facilities contributing or likely to contribute to the trade waste stream; and

r) Remote control of discharges;

s) Third party treatment, carriage, discharge or disposal or by-products of pre-treatment of trade waste (including sewage sludge disposal); and

t) A requirement to provide a bond or insurance in favour of the Council where failure to comply with the consent could result in damage to the Council's sewerage system, its treatment plants, or could result in the Council being in breach of any statutory obligation; and

u) Remote monitoring of discharges.

13.2 The authorised officer may require as a condition of a discharge consent that the consent holder operates under the New Zealand Waste Tracking system Waste, TRACK.

14. Tanker trade waste consents – specific conditions

14.1 The Council will only accept tanker waste for discharge at an approved location.

Tanker trade waste

14.2 In addition to any general conditions imposed under clause 13.1, the following specific conditions will apply to all trade waste consents related to tankered waste:

a) The Council may require all trucked trade waste operators discharging directly or indirectly into the Council sewerage system to be compliant with the most up to date of the Liquid and Hazardous Code of Practice 2012;

b) Must be accompanied by a completed "Trucked Trade Waste Discharge Manifest" or alternative Council adopted tracking system, which includes:

i) Description of waste stream, source and type; and

ii) Generator of waste stream; and

iii) Hauler of waste stream and relevant consent number;

c) Have safety data sheets (SDS) supplied to an authorised officer detailing the characteristics of the trade waste;

d) Requirement for the tanker waste to be tested to determine their characteristics prior to disposal if the contents of the waste are not known. Specialist advice on pre-treatment or acceptance may be required. The cost of all testing and advice shall be borne by the applicant;

e) Tanker waste is not to be picked up and transported to the disposal site until appropriate arrangements and method for disposal have been determined by an authorised officer;

f) To prevent cross-contamination between tanker loads, the tanker shall be thoroughly washed prior to collecting a load for disposal into the sewerage system; and

g) Twenty-four hours notice shall be given to the waste water treatment plant personnel prior to disposal of all trade wastes to the New Plymouth sewerage system.

15. Tanker trade waste disposal

15.1 No person shall:

Rules for tanker trade waste disposal

a) Falsely disclose the characteristics and or amount of tankered trade waste; or

b) Discharge tanker waste disposals to the sewerage system in a diluted or undiluted form without a controlled waste consent; or

c) Dispose of tanker trade waste into the sewerage system at any place other than at the prescribed location.

d) Dispose of tanker trade waste in contravention of a consent.

16. Pre-treatment and mass limits – specific conditions

Conditions

16.1 An authorised officer may grant a trade waste discharge consent subject to the provision and maintenance by the occupier, at the occupier's expense, of screens, grease traps, silt traps or other partial or preliminary treatment processes, equipment or storage facilities as the authorised officer deems appropriate, to regulate the quality, quantity and rate of discharge or other characteristic prior to the point of discharge.

16.2 Refuse or garbage grinder and macerators shall not be used to dispose of solid waste from trade premises to the sewerage system unless approved in writing by a trade waste consent.

16.3 The minimum grease trap size shall be no less than 200 litres for existing trade discharges, unless specific written approval is granted by an authorised officer to operate a grease trap of lesser capacity.

16.3A For any new trade waste discharges or an upgrade to existing premises where the trade discharge may change pre-treatment will be sized appropriately and no grease trap shall be less than 500 litres unless specific written approval is granted by an authorised officer.

16.4 A trade waste consent may impose controls on a trade waste discharge by specifying mass limits for any characteristic.

16.5 Mass limits may be imposed for any characteristic. Any characteristic controlled by mass limit shall also have its maximum concentration limited to the value scheduled in the consent unless approved otherwise.

Criteria.

16.6 When setting mass limit allocations for a particular characteristic, consideration of the following factors shall be given by an authorised officer:

a) The operational requirements of, and risk to, the sewerage system, and risks to occupational health and safety, public health, and the ultimate receiving environment.

b) Whether or not the levels proposed pose a threat to the planned or actual beneficial reuse of biosolids or sewerage sludge.

c) Conditions in the sewerage system near the trade waste point of discharge and elsewhere in the sewerage system.

d) The extent to which the available industrial capacity was used in the last financial period and is expected to be used in the forthcoming period.

e) Whether or not the applicant implements cleaner production techniques within a period satisfactory to an authorised officer.

f) Whether or not there is any net benefit to be gained by the increase of one characteristic concurrently with the decrease of another to justify any increased application for industrial capacity.

g) Any requirements on the Council to reduce the pollutant discharge of the sewerage system.

h) How great a proportion the mass flow of a characteristic of the discharge will be of the total mass flow of that characteristic in the sewerage system.

i) The total mass of the characteristic allowable in the sewerage system, and the proportion (if any) to be reserved for future allocations.

j) Whether or not there is an interaction with other characteristics which increases or decreases the effect of either characteristic on the sewer reticulation, treatment process, or receiving water (or land).

17. Water used in the repair and construction of water mains - consent conditions

Consent required

17.1 No person shall dispose of any water used during the repair and construction of water mains into the sewerage system without:

a) Receiving approval for a temporary trade waste consent; and

b) Ensuring that such water is de-chlorinated prior to disposal.

18. Duration of consent

5 year terms

18.1 Trade waste consents shall not exceed five years, unless a discharge is determined by the authorised officer to be of extremely low risk, in which case the consent may be extended for a further five years at the end of the five year period

Conditions for a ten year terms

18.2 Trade waste consents may be given for a further five years, for a term not exceeding 10 years to a customer who at the time satisfies the authorised officer that:

a) The nature of the trade activity, or the process design and/or management of the premises are such that the occupier has a demonstrated ability to meet the conditions of the trade waste consent during its term.

b) Cleaner production techniques are successfully being utilised, or that significant investment in cleaner production equipment or techniques is being made.

c) Significant investment in pre-treatment facilities has been made, such that a long period of certainty for the amortising of this investment is considered reasonable.

18.3 Permitted trade waste discharges shall remain in force for as long as the activity for which the permitted trade waste discharge is granted is operational and there are no non compliances or breaches.

19. Technical review and variation of consent

Authorised officer may review consent to meet new conditions or

19.1 The authorised officer may at any time during the term of a trade waste consent, by written notice to the customer (following consultation) vary any condition to such extent as the authorised officer considers necessary to:

a) Meet any new resource consent conditions imposed on the discharge from the Council's treatment plants, or with any other legal requirements imposed on the Council; and

information

b) Take account of new information that has become available following a review of the technical issues considered when setting conditions of consent.

19.2 The holder of a trade waste consent may at any time during the term of the consent, by written application to the authorised officer, seek to vary any condition of the consent, as provided for in clause 11.1 of this part.

20. Cancellation of consent or right to discharge

20.1 Any trade waste consent or right to discharge may at any time be cancelled summarily by the authorised officer on giving to the customer written notice when:

Cancellation procedure

a) The Council is lawfully directed to withdraw or otherwise to terminate the trade waste consent immediately; or

b) The occupier discharges any prohibited substance or characteristic (as defined in Schedule 1B); or

c) The occupier discharges any trade waste unlawfully; or

d) If the continuance of discharge is, in the opinion of the authorised officer, a threat to the environment or public health; or

e) If the continuance of discharge may, in the opinion of the authorised officer, result in a breach of a resource consent held by the Council; or

f) In the opinion of the authorised officer the continuance of the discharge puts at risk the ability of the Council to comply with the conditions of a resource consent and/or requires identified treatment measures or costs to seek to avoid a breach of any such resource consent.

20.2 Further to clause 20.1.1, the authorised officer may cancel any trade waste consent at any time following 20 working days notice to the occupier for:

Circumstances where consent may be cancelled

a) Failure to comply with any condition of the consent; or

b) Failure to maintain effective control over the discharge, in the opinion of an authorised officer; or

c) Failure to limit in accordance with the requirements of a consent the volume, nature, or composition of trade waste being discharged; or

d) Any negligence of the occupier which, in the opinion of an authorised officer, threatens the safety of, or threatens to cause damage to any part of the sewerage system or the treatment plant or threatens the health or safety of any person; or

e) If any occurrence happens that, in the opinion of an authorised officer, poses a serious threat to the environment; or

f) In the event of any breach of a resource consent held by the Council issued under the Resource Management Act 1991; or

g) Failure to provide and, when appropriate, update a management plan as required for a conditional consent; or

h) Failure to follow the management plan provisions at the time of an unexpected, unscheduled or accidental occurrence; or

i) Failure to pay any due charges under this part; or

j) If any other circumstances arise which, in the opinion of an authorised officer, render it necessary in the public interest to cancel the right to discharge.

20.3 The authorised officer has the discretion to grant a longer notice period where, in his or her opinion, 20 working days is insufficient for the occupier to remedy any non-compliance set out in clause 20.2

Sampling, testing and monitoring

21. Flow metering

When flow metering is required

21.1 Flow metering shall be required:

a) On conditional discharges when there is not a reasonable relationship between a metered water supply to the premises, and the discharge of trade waste; or

b) When the customer and the authorised officer cannot agree on a suitable method of flow estimation; or

c) When the discharge represents a significant proportion of the total flow/load received by the Wastewater Treatment Plant.

Occupier's responsibilities

21.2 The occupier shall be responsible for the supply, installation and maintenance of any meter required by the Council for the measurement of the rate or quantity of discharge of trade waste. These devices shall be subject to the approval of the authorised officer, but shall remain the property of the occupier. Measurement of flow shall be carried out by the occupier in accordance with BS 3680: Part 11A, BS 3680: Part 11B and BS 5728: Part 3.

Records to be available at all times

21.3 Records of flow and/or volume shall be available for viewing at any time by the authorised officer, and shall be submitted to the authorised officer intervals prescribed in the consent.

Meters to be accessible

21.4 Meters shall be located in a position which is readily accessible for reading and maintenance, and as close as practicable to the point of discharge. The meters shall be located in the correct position according to the manufacturer's installation instructions.

21.5 The occupier shall arrange for confirmation of the flow metering equipment and instrumentation by a company with appropriate accreditation in accordance with NZS 10012: upon installation and at least once a year thereafter to ensure performance within ±10 % of its reading. A copy of independent certification of each calibration result shall be submitted to the authorised officer.

21.6 Should any meter, after being calibrated, be found to register a greater or lesser discharge than the quantity of wastewater actually passed, the authorised officer may make an adjustment in accordance with the results shown by such tests backdated for a period at the discretion of the authorised officer but not exceeding twelve (12) months, and the occupier shall pay a greater or lesser amount according to such adjustment.

Incorrectly calibrated meters

21.7 Where no meter or similar apparatus is warranted the authorised officer may require that a percentage of the water supplied to the premises, or other such basis as seems reasonable, be used for estimating the rate or quantity of flow for the purposes of charging.

When no meter is warranted

21.8 Should any meter be out of repair or cease to register, or be removed, the authorised officer shall estimate the discharge for the period since the previous reading of such meter (based on the average of the previous four billing periods charged to the occupier) and the occupier shall pay according to such an estimate. Provided that when by reason of a large variation of discharge due to seasonal or other causes, the average of the previous four billing periods would be an unreasonable estimate of the discharge, the authorised officer may take into consideration other evidence for the purpose of arriving at a reasonable estimate, and the occupier shall pay according to such estimate.

Faulty meters

21.9 Where a meter has been tampered with the authorised officer (without prejudice to the other remedies available) may declare the reading void and estimate discharge as provided in 21.8.

Tampering

22. Sampling and monitoring

22.1 An authorised officer is entitled to monitor, sample and audit any trade waste discharge in accordance with this part and the Local Government Act 2002.

22.2 Sampling and monitoring will entail the following:

Sampling and monitoring procedures

a) The authorised officer will take the sample and arrange for this sample to be analysed.

b) Any analysis shall use methods or procedures in accordance with, or validated against, the AWWA standard, as specified in Schedule 1 methods for the examination of water and wastewater by a laboratory accredited for the purpose, or a laboratory approved in writing by the authorised officer.

c) The sampling procedure will be appropriate to the trade waste and the analysis. Sampling shall be in accordance with the procedure contained in Schedule 1C of this part or some other procedure designed in accordance with BS 6068: Section 6.10.

d) An authorised officer will audit the sampling and analysis carried out by an analyst. Analysis will be performed by an approved laboratory. Inter-laboratory checks are to be part of this process.

e) An authorised officer will audit the trade waste consent conditions including any management plans.

22.3 At the discretion of the authorised officer all costs of monitoring shall be met by the customer either through direct payment to the Council.

Costs

Administration

23. Disputes

23.1 Where a dispute arises as to the validity of the methods or procedures used for sampling or analysis, the dispute may be submitted to a mutually agreed independent arbitrator. The arbitrator's ruling shall be final.

Arbitration

23.2 If any person is dissatisfied with any decision of an authorised officer made under this part, that person may, by notice delivered to the chief executive not later than 20 working days after the decision of the authorised officer is served upon that person, request the chief executive to review any such decision and such a decision shall be final.

23.3 On the receipt of such a notice, the decision of an authorised officer shall be suspended provided that the occupier complies with the provisions of this part at all times. A decision relating to the matter in the request shall be made within 20 working days by the chief executive in accordance with the relevant provisions of this part. Where a decision which is the subject of a request for a review imposes a time limit, the time shall not begin to run until such time (if any) as the chief executive notifies the occupier of his or her decision.

23.4 Notwithstanding clause 23.3, following a summary cancellation of a trade waste consent in accordance with clause 20.1, the consent shall remain suspended, on receipt by the Council of a notice to review cancellation under clause 23.2 until such time as notified by the chief executive under 23.3.

23.5 Nothing in this clause limits the powers of the Council to bring enforcement action under this bylaw or any enactment as it considers appropriate in the circumstances.

24. Fees and charges

24.1 The consent holder shall be liable to pay for the discharge of trade wastes and any related material as set out in this clause and Schedule 1D.

24.2 The Council shall by special consultative procedure adopt its schedule of fees and charges concerning:

Special consultative procedure

a) Trade waste consent application processes.

b) Administration of the consent.

c) Conveyance, treatment and disposal of trade wastes.

24.3 The amount of trade waste charges payable under clause 24.2(c) shall be calculated according to the considerations and method outlined in Schedule 1D of this part.

Charges

24.4 The charge payable under clause 24.3 shall be less a portion of the sum paid as uniform annual drainage charge in the case of combined domestic and trade waste discharges. This may alternatively be deducted using a set daily volume allowance, or a percentage allowance as agreed between the authorised officer and occupier.

Liability

24.5 The owner and / or occupier shall be liable for all charges, until such time as the occupier gives notice of disconnection in accordance with clause 26.2.

24.6 All sums payable for charges and rates for wastewater services under this part shall be recoverable as a debt. If the person discharging fails to pay any fees and charges under this part an authorised officer may cancel the right to discharge in accordance with this part.

25. Enforcement officers

25.1 Nothing in this part limits the power of an enforcement officer under section 172 of the Local Government Act 2002 to enter any premises.

26. Transfer of termination of rights and responsibilities

Permission required before transferring rights

26.1 Unless approval in writing is obtained from the authorised officer no consent holder shall:

a) Transfer to any other party the rights and responsibilities of their consent.

b) Allow a point of discharge to serve another premises, or the private drain to that point to extend by pipe or any other means to serve another premises.

c) Allow wastewater from any other party to be discharged at their point of discharge.

26.2 The consent holder shall give two working days notice in writing to the Council of a requirement for disconnection of the discharge connection and/or termination of the discharge consent, except where demolition or relaying of the discharge drain is required, in which case the notice shall be seven working days.

26.3 The consent holder must notify the Council of any new address details for final invoicing.

27. Transitional provisions

Consents and applications to remain in force

27.1 Any application for a consent to discharge trade waste made under the New Plymouth District Council Consolidated Bylaw 2000 Part 13 Trade Waste for which a consent has not been granted at the time of coming into force of this part shall be deemed to be an application made under clause 10.2 of this part.

27.2 Any application for a consent to discharge trade waste made under the New Plymouth District Council Bylaw 2008 Part 11 Trade Waste (prior to the 2013 amendment of this part) for which a consent has not been granted at the time of coming into force of this part shall be deemed to be an application made under clause 10.2 of this part.

27.3 Applications under 10.2 of this part from existing customers for a permitted trade waste for shall be made within two years of this part coming into force.

SCHEDULE 1A

Acceptable Discharge Characteristics

1A.1 Introduction

The nature and levels of the characteristics of any wastewater discharged to the Council's sewerage system shall comply at all times with the following requirements, except where the nature and levels of such characteristics are varied by the authorised officer as part of an approval to discharge a wastewater.

The authorised officer shall take into consideration the combined effects of wastewater discharges and may make any modifications to the following acceptable characteristics for individual discharges the authorised officer believes are appropriate.

The nature and levels of any characteristic may be varied to meet any new resource consents or other legal requirements imposed on the Council - refer clause 19.1 of this part.

1A.2 Physical characteristics	Explanation
1A.2.1 Flow a) The 24 hour flow volume shall be less than $5m^3$.	Flows larger than $5m^3$ shall be a "controlled" or "conditional" trade waste consent.
b) The maximum instantaneous flow rate shall be less than 2.0 l/s.	
1A.2.2 Temperature The temperature shall not exceed 50^oC.	Higher temperatures: - Cause increased damage to sewer structures. - Increase the potential for anaerobic conditions to form in the wastewater. - Promote the release of gases such as H_2S and NH_3. - Can adversely affect the safety of operations and maintenance personnel. A lower maximum temperature may be required for large volume discharges.
1A.2.3 Solids a) Non-faecal gross solids shall have a maximum dimension which shall not exceed 15mm and gross solids shall have acquiescent settling velocity which shall not exceed 50mm/minute.	Gross solids can cause sewer blockages.
b) The suspended solids content of any wastewater shall have a maximum concentration which shall not exceed $2000g/m^3$. For significant industry this may be reduced to $600g/m^3$.	High suspended solids contents can cause sewer blockages and overload the treatment processes.
c) The settleable solids content of any wastewater shall not exceed 50mL/L.	

d) The total dissolved solids concentration in any wastewater shall be subject to the approval of the authorised officer having regard to the volume of the waste to be discharged, and the suitability of the drainage system and the treatment plant to accept such waste. In general any discharge with a total dissolved solids concentration of 10,000g/m^3 will not be accepted.

High total dissolved solids reduce effluent disposal options and may contribute to soil salinity.

e) Fibrous, woven, or sheet film or any other materials which may adversely interfere with the free flow of wastewater in the drainage system or treatment plant shall not be present.

1A.2.4 Oil and grease

a) There shall be no free or floating layer.

b) Trade Waste containing fat, oil or grease of animal or vegetable origin, shall not exceed 500 g/m^3.

c) Trade Waste containing fat, oil or grease of other than animal and vegetable origin, shall not exceed 200 g/m3.

Oils and greases can cause sewer blockages, may adversely affect the treatment process, and may impair the aesthetics of the receiving water.

If quick break detergents are being used, it will be a requirement that proper separation systems are being used by the occupier. If not, oil will reappear in drainage systems as a free layer.

d) Emulsified oil, fat or grease must not exceed 100g/m^3 as petroleum ether extractable matter when the emulsion is unstable at a temperature of 15^{o}C and when the emulsion is in contact with and diluted by a factor of 10 by raw sewage throughout the range pH 4.5 to pH 10.0.

1A.2.5 Solvents and other organic liquids

There must be no free layer (whether floating or settled) of solvents or organic liquids.

Refer Table 1A.2 of this part for information on dissolved solvents and other organic liquids.

Some organic liquids are denser than water and will settle in sewers and traps.

1A.2.6 Emulsions of paint, latex, adhesive, rubber, plastic

For the purposes of this sub-clause:

'Emulsion' means an emulsion containing paint, adhesive, rubber, plastic, or similar material.

'Treatable' in relation to emulsion wastewater, means the total organic carbon content of the waste decreases by 90% or more when the wastewater is subjected to a simulated wastewater treatment process which matches the Council's treatment system.

a) Where such emulsions are not treatable these may be discharged into the sewer subject to the total suspended solids not exceeding 1000g/m^3 or the concentration agreed by the authorised officer.

b) The Council may require pre-treatment of such emulsions if the emulsion wastewater unreasonably interferes with the operation of the Council's treatment plant.

Emulsions vary considerably in their properties and local treatment works may need additional restrictions depending on the experience of the specific treatment plant and the quantity of latex to be treated.

c) Such emulsions, of both treatable and non treatable types, shall be discharged to the sewer only at a concentration and pH range that prevents coagulation and blockage at the mixing zone in the public sewer.

Emulsions will coagulate when unstable and can sometimes cause sewer blockage. Latex emulsions are stable when dilute or in the correct pH range.

1A.2.7 Radioactivity

Radioactivity levels shall not exceed National Radiation Laboratory guidelines.

Refer National Radiation Laboratory *Code of safe practice for the use of unsealed radioactive materials* NRL. C1.

1A.2.8 Colour

No waste shall have colour or colouring substance that causes the discharge to be coloured to the extent that it impairs wastewater treatment processes or compromises the final effluent discharge consent.

Colour may cause aesthetic impairment of receiving waters, and adverse affects on the treatment processes.

1A.3 Chemical characteristics

In the setting of restrictions for chemical characteristics the Council is mindful of the production of harmful or noxious waste streams from some tests, such as chemical oxygen demand and total Kjeldahl nitrogen. The need to set such restrictions and therefore the requirement to undertake the associated testing will be determined by the authorised officer.

1A.3.1 pH value

All trade waste discharged shall not exceed the pH range of between 6.0 and 10.0 at all times.
Grease trap waste discharged may at the discretion of the Council have a pH range of between 4.5 and 10.0.

Extremes of pH:

- Can adversely affect biological treatment processes.
- Can adversely affect the safety of operations and/or maintenance personnel.
- Cause corrosion of sewer structures.
- Increase the potential for the release of toxic gases such as H_2S and HCN.- The grease trap process encourages acidic bacteria; therefore they commonly discharge a low pH.

1A.3.2 *Organic strength*

The Biochemical Oxygen Demand (BOD_5) of any waste may need to be restricted where the capacity for receiving and treating BOD_5 is limited. A BOD_5 restriction may be related to mass limits.

The loading on a treatment plant is affected by Biochemical Oxygen Demand (BOD) rather than Chemical Oxygen Demand (COD). For any particular waste type there is a fixed ratio between COD and BOD. For domestic wastewater it is about 2.5:1 (COD : BOD), but can range from 1:1 to 100:1 for trade waste. Therefore BOD is important for the treatment process and charging, but because of the time taken for testing, it is often preferable to use COD for monitoring. However, the use of COD testing must be balanced by the possible environmental effects of undertaking such tests due to the production of chromium and mercury wastes.

Where a consistent relationship between BOD and COD can be established the discharge may be monitored using the COD test with the approval of the Council.

If the treatment plant BOD_5 capacity is not limited and sulphides are unlikely to cause problems, there may be no need to limit BOD_5.

1A.3.3 *Maximum concentrations*

Introduction
The maximum concentrations permissible for the chemical characteristics of an acceptable discharge are set out in the following tables:

Table 1A.1 - General chemical characteristics

Characteristic	Maximum concentration	
MBAS (Methylene blue active substances)	500 g/m^3	MBAS is a measure of anionic surfactants. High MBAS can: - Adversely affect the efficiency of activated sludge plants. - Impair the aesthetics of receiving waters.
Ammonia (measured as N) - free ammonia - ammonium salts	 50 g/m^3 200 g/m^3	High ammonia: - May adversely affect the safety of operations and maintenance personnel. - May significantly contribute to the nutrient load to the receiving environment.
Kjeldahl nitrogen 500 g/m^3	Waitara and New Plymouth	High Kjeldahl nitrogen may significantly contribute to the nutrient load of the receiving environment.
Total phosphorus (as P) 150 g/m^3	Waitara and New Plymouth	High phosphorus may significantly contribute to the nutrient loading of the receiving environment.
Sulphate (measured as SO_4)	500 g/m^3	Sulphate: - May adversely affect sewer structures. - May increase the potential for the generation of sulfide in the wastewater if the sewer is prone to become anaerobic.
Sulphite (measured as SO_2)	15 g/m^3	Sulphite has potential to release SO_2 gas and thus adversely affect the safety of operations and maintenance personnel. It is a strong reducing agent and removes dissolved oxygen thereby increasing the potential for anaerobic conditions to form in the wastewater.
Sulphide - as H_2S on acidification	5 g/m^3	Sulphide in wastewater may: - Cause corrosion of sewer structures, particularly the top non-wetted part of a sewer. - Generate odours in sewers which could cause public nuisance. - Release the toxic H_2S gas which could adversely affect the safety of operations and maintenance personnel.

Chlorine (measured as Cl_2) - free chlorine - hypochlorite	 3 g/m^3 30 g/m^3	Chlorine: - Can adversely affect the safety of operations and maintenance personnel. - Can cause corrosion of sewer structures.
Dissolved aluminium	300 g/m^3	Aluminium compounds, particularly in the presence of calcium salts, have the potential to precipitate as a scale which may cause a sewer blockage.
Dissolved iron	300 g/m^3	Iron salts may precipitate and cause a sewer blockage. High concentrations of ferric iron may also present colour problems depending on local conditions.
Boron (as B)	25 g/m^3	Boron is not removed by conventional treatment.
Bromine (as Br_2)	5 g/m^3	High concentrations of bromine may adversely affect the safety of operations and maintenance personnel.
Fluoride (as F)	30 g/m^3	Fluoride is not removed by conventional wastewater treatment, however pre-treatment can easily and economically reduce concentrations to below 20 g/m^3.
Cyanide - weak acid dissociable (as CN)	5 g/m^3	Cyanide may produce toxic atmospheres in the sewer and adversely affect the safety of operations and maintenance personnel.

Table 1A.2 - Toxic Pollutants

Toxic Pollutant	Maximum Concentration g/m^3)	
Antimony as Sb	10	**Inhibitory chemicals** At the choice of the Council no waste being diluted at a fixed ratio to wastewater, nominated by the Council, shall inhibit the performance of the wastewater treatment process such that the Council is significantly at risk or prevented from achieving its environmental statutory requirements.
Arsenic as As	5	
Barium as Ba	10	
Beryllium as Be	0.005	
Cadmium as Cd	0.05	
Chromium as Cr	5	
Cobalt as Co	10	
Copper as Cu	10	
Lead as Pb	10	
Manganese as Mn	20	
Mercury as Hg	0.01	
Molybdenum as Mo	10	
Silver as Ag	2	
Nickel as Ni	10	
Selenium as Se	10	
Thallium as Th	10	
Tin as Sn	20	
Zinc Zn	10	
Formaldehyde (as HCHO)	50	
Phenolic compounds (as phenol)	50	
Petroleum hydrocarbons	30	
Monocyclic aromatic hydrocarbons	5	
Polycyclic aromatic hydrocarbons	0.05	
Halogenated aliphatic compounds	1	
Chlorinated phenols	0.02	
Halogenated aromatic hydrocarbons (HAHs)	0.002	
Polychlorinated biphenyls (PCBs)	0.002	
Polybrominated biphenyls (PBBs)	0.002	
Pesticides, general (includes insecticides, herbicides, fungicides and excludes organophosphate, organochlorine and any pesticide not registered for use in New Zealand)	0.2 in total	
Organophosphate pesticides	0.1	

SCHEDULE 1B

Prohibited Characteristics

1B.1 Introduction

Prohibited characteristics are present if their concentration exceeds background levels. The background level in relation to any substance means the extent to which that substance is present (if at all) in the municipal water supply used on the trade premises, or in any other water supply that is approved by the Council for the purpose of discharging waste.

1B.2 Prohibited characteristics

1B.2.1 Any discharge has prohibited characteristics if it has any solid liquid or gaseous matters or any combination or mixture of such matters which by themselves or in combination with any other matters will immediately or in the course of time:

a) Interfere with the free flow of sewage in the wastewater system; or

b) Damage any part of the wastewater system; or

c) In any way, directly or indirectly, cause the quality of the effluent or residual biosolids and other solids from any wastewater treatment plant in the catchments to which the waste was discharged to breach the conditions of a consent issued under the Resource Management Act 1991, or water right, permit or other governing legislation; or

d) Prejudice the occupational health and safety risks faced by sewerage workers; or

e) After treatment be toxic to fish, animals or plant life in the receiving waters; or

f) Cause malodorous gases or substances to form which are of a nature or sufficient quantity to create a public nuisance; or

g) Have a colour or colouring substance that causes the discharge of any wastewater treatment plant to receiving waters to be coloured.

1B.2.2 A discharge has prohibited characteristics if it has any characteristic which exceeds the concentration or other limits specified in Schedule 1A unless specifically approved for that particular consent.

1B.2.3 A discharge has a prohibited characteristic if it has any amount of:

a) Harmful solids, including dry solid wastes and materials which combine with water to form a cemented mass;

b) Liquid, solid or gas which could be flammable or explosive in the wastes, including oil, fuel, solvents (except as allowed for in Schedule 1A of this part), calcium carbide, and any other material which is capable of giving rise to fire or explosion hazards either spontaneously or in combination with sewage;

c) Asbestos;

d) The following organo-metallic compounds:

- Mercury (as organic compounds)
- Cadmium (as organic compounds)
- Tin (as tributyl and other organotin compounds)
- Chromium (as organic compounds)

e) Any organochlorine pesticides;

f) Genetic wastes, as follows:

- All wastes that contain or are likely to contain genetically altered material from a genetically modified organism that is not in accordance with an approval under the Hazardous Substances and New Organisms Act 1996. The material concerned may be from Premises where the genetic modification of any organism is conducted or where a genetically modified organism is processed;

g) Any health care waste prohibited for discharge to a sewerage system by NZS 4304:2002 (Management of Healthcare Waste) or any pathological or histological wastes; or

h) Radioactivity levels in excess of national radiation laboratory guidelines.

SCHEDULE 1C

Sampling Procedure

1C.1 Sampling equipment

1C.1.1 Sample containers

The laboratory responsible for analysing the samples should be consulted about the type of container that should be used for sample collection and subsequent sample, storage and transportation.

Plastic containers are recommended for most characteristics. Some exceptions exist where glass containers only should be used, when for example the following analyses are to be made:

i) Oil and grease;

ii) Hydrocarbons;

iii) Detergents;

iv) Pesticides.

1C.1.2 Apparatus

Both manual and automatic sampling equipment should be made of inert materials which will not influence the analyses that will be carried out on the samples later.

Before starting sampling, the equipment should be cleaned with detergent and water, or as directed by the equipment manufacturer, and finally rinsed with water. The sampling equipment may be washed before use in the wastewater stream from which the sample is taken in order to minimise the risk of contamination. Special attention should be paid to rinsing after cleaning, if the analyses under study are detergents. The sampling equipment cannot be washed in the waste stream where this will influence the analysis carried out later (e.g. analysis of oil and grease, and microbiological analysis).

1C.2 Sampling location

1C.2.1 Safety precautions

In all cases when selecting sampling locations health and safety aspects should be considered.

1C.2.2 The sampling location shall be as specified in the occupier's trade waste consent. This will normally be the first manhole or other access point upstream of the point of discharge, unless, because of poor mixing or some other reason, a location giving more representative samples can be found.

1C.2.3 The sampling location should be kept clean, e.g. removing scale, sludge, bacterial film etc from the walls.

1C.2.4 If turbulent flow conditions do not exist at the sampling location they shall be induced by restricting the flow, e.g. with a baffle or weir. The restriction should be made in such a way that sedimentation upstream of the restriction does not occur. The sampling intake point should always be located downstream of the restriction. The inlet of the sampling equipment should preferably face the direction of flow, but may face downstream if too many blockages result. If mixing is good just upstream of the obstacle, then the intake can be located there, taking care that sediment is not sampled and ensuring that the intake remains below liquid level.

1C.2.5 As a general rule, the sampling point should be one-third of the wastewater depth below the surface.

1C.2.6 It may be necessary to sample the surface by skimming, in order that qualitative information about emulsified and floating material can be obtained. Guidance on the choice of suitable containers for this sampling technique should be sought from the receiving laboratory.

1C.3 Choice of sampling method

1C.3.1 Types of sample

It is common to distinguish between two sample types:

a) Spot (or grab) samples;

b) Composite samples; or

c) Instantaneous composite sample which is a combination of both spot and composite samples.

1C.3.2 Spot sample

In a spot sample, the whole sample volume is taken at one time. Spot samples are useful for determining the wastewater composition at a certain time. In cases with small variations in the volume and composition of the waste stream, a spot sample can be representative of the composition during a longer period.

Spot samples are essential where the objective of a sampling programme is to estimate the compliance with standards not related to average quality. In cases where quality compliance is judged on the basis of average effluent quality, composite samples should always be used.

For certain determinations, only spot samples can be used. For example, this is the case with oil and grease, dissolved oxygen, chlorine and sulfide. Here the result will differ if the analyses are not carried out (or started) immediately after collection of the sample, and if the whole sample volume is not used at a time. Spot samples are usually taken manually, but may also be taken by automatic sampling equipment.

1C.3.3 Composite sample

Composite samples are prepared by mixing a number of spot samples or by collection of a continuous fraction of the waste stream. There are two types of composite samples:

a) Time-weighted samples;

b) Flow-weighted samples.

Time-weighted composite samples consist of spot samples of equal volume taken at constant intervals during the sampling period.

Time-weighted composite samples are appropriate where the average sewage or effluent quality is of interest (e.g. when determining compliance with a standard based on average quality or when determining the average strength of waste water for process design purposes, and in cases with a constant wastewater flow).

Flow-weighted composite samples consist of spot samples taken and mixed in such a way that the sample volume is proportional to the effluent flow or volume during the sampling period. Flow-weighted composite samples should be used when the determination of loadings of pollutants is the objective of the sampling, e.g. biochemical-oxygen-demand (BOD) load to a wastewater treatment plant, percentage removal of solids, loading of nutrients and other determinants to the environment.

A flow-weighted composite sample can be taken either at constant intervals, but with varying sample volumes that are proportional to the flow at the sampling time, or as spot samples of equal volume that are taken at the time when fixed amounts of effluent have passed the sampling point.

In both flow-weighted and time-weighted sampling, each of the spot samples should be greater than 50ml in volume. Often it is advisable that spot samples are 200ml to 300ml in volume, in order to be able to collect representative samples.

1C.3.4 Instantaneous composite sample

An instantaneous sample is a composite sample taken using the following method:

Three spot samples of the discharge shall be taken at intervals of not less than one minute but more than five minutes. The three spot samples must be combined using equal volumes of all three samples to obtain the instantaneous sample.

An instantaneous sample shall be used for all routine compliance monitoring unless otherwise specified.

1C.4 Frequency, number and timing for samples

1C.4.1 Frequency and number of samples

Analyses will be based on samples taken at regular intervals over the control period at the frequency and in the manner specified in the occupiers consent to discharge trade waste.

1C.4.2 Sampling programme

The objective of a sampling programme often dictates when and how a sample is collected.

When sampling trade waste, allowance should be made for the following sources of variation in quality:

a) Diurnal variations (i.e. within-day variability).

b) Variations between days of the week.

c) Variations between seasons (if applicable).

If the identification of the nature and magnitude of peak load are important, sampling should be restricted to those periods when peak loads are known to occur.

The most appropriate type of sampling method (grab or composite) may be dependent on the magnitude of the variation in quality.

Relating the times of sampling to the particular process being monitored may be very important when considering discharges that are either seasonal or operated on a batch basis. In either case, the discharge will not be continuous and the sampling programme will need to take this fact into account.

If taking more than one sample, the samples should normally be taken at fixed intervals during the whole control period. The control period shall normally be one quarter.

It should be ensured that the sampling does not lead to any risk of systematic error, for example by always taking samples on one particular day, or by systematically omitting particular working days.

1C.4.3 Sampling period

The overall sampling period may vary from a few hours, where tracing studies on volatile organics are being monitored, to several days, where stable inorganic species are being monitored.

This subclause deals with the selection of the period over which a composite sample has to be taken. When selecting the period, the following two factors should be considered:

a) The objective of the sampling. For example, it may be necessary to assess the average organic load in a flow over several 24 hour periods, in which case diurnal flow proportional composite samples will be adequate.

b) The stability of the sample. In the example given in (a), it would not necessarily be practical to extend the compositing period for longer than 24 hours, since the organic component in the sample under study may deteriorate.

The stability of the sample may often limit the duration of the sampling period. In such cases, reference should be made to the specific analytical techniques to be employed and the receiving laboratory should be consulted, in order that correct preservative measures can be used. BS 6068: Section 6.3 (see Schedule1 of this part) gives further details on the preservation and storage of samples.

1C.5 Sample preservation, transportation and storage

The most common way of preserving wastewater samples is to cool to a temperature between 0^{o}C and 4^{o}C. When cooled to this temperature and stored in the dark, most samples are normally stable for up to 24 hours. For some determinants, long-term stability may be obtained by deep freezing (below -18^{o}C).

When collecting composite samples during extended periods, preservation should be an integral part of the sampling operation.

It may be necessary to use more than one sampling device, to allow both preserved and unpreserved samples to be taken.

The laboratory responsible for analysing the samples should always be consulted with regard to the selection of the preservation method and subsequent transport and storage.

Note: Further details may be found in BS 6068: Section 6.3 (see Schedule 1 of this part).

1C.6 Sample identification and records

The laboratory sampling report should include the following information:

a) Name of the trade premises;

b) Sample identification number;

c) Sampling point;

d) Date, start and stop of sampling;

e) Time, start and stop of sampling;

f) Duration of the sampling period;

g) Details of the sampling method;

h) Preservation method;

i) Details of any field tests; and

j) Name of the person who carried out the sampling.

1C.7 Sample splitting

If required by the occupier, all independent samples made by an enforcement officer shall be split as follows:

a) On completion of sampling each of the samples or the composite sample(s) as the case may be, shall be divided into three equal parts; and

b) The first portion of each sample or composite sample shall be delivered to the occupier; and

c) The second and third portions of each sample or composite sample shall be delivered to an authorised officer.

Where any portion of a sample or composite sample is to be delivered in accordance with this part, it shall be delivered within four hours of the sampling being completed.

The third portion of any sample or composite sample delivered to an authorised officer in accordance with this part, shall be retained in the custody of the Council for a period of not less than 20 working days from the date of receipt, and in such a manner which preserves as far as is reasonably possible the characteristics of the sample being tested.

SCHEDULE 1D

Trade Waste Fees and Charges

1D.1 Charging formula

1D.1.1 *Types of charges*

Fair and equitable charging for trade waste premises means charges no more nor less than that paid by domestic users. Domestic charges are calculated based on the quantities of volume, suspended solids, biochemical oxygen demand and toxic pollutant treatment charges. Because trade waste premises are not as homogenous as domestic households consideration must be given to individual waste streams.

Trade waste charges are calculated the same way domestic charges are calculated. The total wastewater treatment system costs are divided by the total quantities of volume (V), suspended solids (SS), biochemical oxygen demand (BOD_5), and toxic pollutant (TP) treatment. Thus a unit cost is known for each quantity ; $\$/m^3_{volume}$, $\$/kg_{\text{-SS}}$, $\$/kg_{\text{-BOD}}$, plus $\$/kg_{\text{-TP.}}$

Trade waste charge = $VC_v + kg_{\text{-SS}}\, C_{ss} + kg\text{-}_{BOD}\, C_{BOD} + kg_{\text{-TP}i}, C_{TPi}$

Where the domestic and trade waste discharges are unable to be separated a portion of the targeted sewerage rates will be subtracted from trade waste charges to ensure the occupier is not double charged for the domestic portion of their discharge.

1D.1.2 *Monitoring costs*

A general power under the Local Government Act 2002 to prescribe fees by way of bylaw mandates recovery of no more than reasonable costs incurred by the Council in respect of the matters for which the fee is charged. Therefore Trade Waste Premises will be charged at cost for sample collection, analyses, and data reporting. Upon request all copies of laboratory analysis will be provided in accordance with the Local Government Official Information and Meetings Act 1987.

1D.2 Charge items and terms

1D.2.1 *Item*		*Terms*
Drainage		
a)	Connection fee	Payable on application for connection to discharge.
b)	Reinspection fee	A fee payable for each reinspection visit by an authorised or enforcement officer where a previously issued default notice has not been remedied by the occupier.
c)	Disconnection fee	Payable on disconnection from collection system following occupier request for disconnection.
1D.2.2 Trade wastes		
a)	Temporary discharge fee	A fee payable prior to receipt of temporary discharge.
b)	Trade waste application fee	A fee payable on an application for a trade waste discharge.
c)	Annual trade waste licence fee	An annual management fee for holders of trade waste consents to cover the Council's's costs associated with: - Administration; and - Inspection of the premises.
c)	Compliance monitoring	A fee payable for monitoring

d)	Non compliance reinspection fee	Payable for each reinspection visit by an enforcement officer where a notice served under this part has not been complied with by the Trade Waste discharger.
e)	Volume charge rate	A unit charge of $\$/m^3$ discharged for capital and operational costs for the reticulation, treatment and disposal of wastewater.
f)	SS charge rate	A unit charge of $\$/kg_{SS}$ discharged for capital and operational costs for the treatment and disposal of suspended solids.
g)	BOD_5 charge rate	A unit charge of $\$/kg_{BOD}$ discharged for capital and operational costs for the treatment and disposal of biochemical oxygen demand.
h)	Toxic Pollutants charge rate	A unit charge of $\$/kg_{TP}$ discharged for capital and operational costs for the treatment and disposal of biosolids contaminated with toxic pollutants designated by applicable standards such as the Department of Health guidelines or described in resource consent conditions. The specific toxic pollutants (TPi) for which it is intended to charge shall be nominated at the time of setting trade waste charges.

1D.3 Method of determining characteristics of a trade waste discharge

Volume charges are calculated using the following formula:

V = m^3 of water measured by flow meter or by any other method as agreed with the occupier of a trade premise. If a potable water meter is used then allowance shall be made for the quantity of water consumed in the process and/or product and therefore not discharged to sewer. An allowance of 50 litres per full time equivalent employee per shift may also be made in the case where the trade waste and domestic discharge are separate.

Biochemical oxygen demand charges are calculated using the following formula:

$$kg_{BOD} = V[BOD_5]/1000$$

Suspended solids charges are calculated using the formula:

$$kg_{SS} = V[SS]/1000$$

Toxic pollutant treatment charges are calculated using the formula:

$$kg_{TP1} = V[TP_1]/1000$$
$$+$$
$$kg_{TP2} = V[TP_2]/1000$$
$$+$$
$$kg_{TP3} = V[TP_3]/1000$$
$$+ \ldots$$
$$kg_{TPn} = V[TP_n]/1000$$

where 1, 2, 3...n are toxic pollutants such as arsenic, lead, and mercury etc as published in applicable standards such as Department of Health guidelines or described in resource consent conditions. The specific toxic pollutants (TPi) for which it is intended to charge shall be nominated at the time of setting trade waste charges.

1D.4 Method of calculating charges

The volume reception and disposal charge (volume charge) is calculated using the formula:

$$\text{volume charge} = V C_v$$

The biochemical oxygen treatment charge (BOD charge) is calculated using the formula:

$$BOD_5 \text{ charge} = kg_{BOD5} C_{BOD5}$$

The suspended solids treatment charge (SS charge) is calculated using the formula:

SS charge = $kg_{SS}\ C_{SS}$

The toxic pollutant treatment charge (TP charge) is calculated using the formula:

TP charge = $kg_{TP1}\ C_{TP1} + kg_{TP2}\ C_{TP2} + kg_{TP3}\ C_{TP3} + ... kg_{TPn}\ C_{TPn}$

The total trade waste charges due is the sum of:

a) Volume charge;

b) BOD_5 charge;

c) SS charge; and

d) TP charge;

less a portion of the sum paid as targeted sewerage rates in the case of a combined trade waste and domestic discharge.

Items in the above formulae are defined and their method of calculation are set out in 1D.6 of this part.

1D.5 Method of setting the charge rates

The volume charge rate is calculated using the following formula:

volume charge rate $C_V = \$V / Q$

The Biochemical Oxygen Demand treatment charge rate is calculated using the following formula:

BOD treatment charge rate $C_{BOD5} = \$B / T_{BOD5}$

The suspended solids treatment charge rate is calculated using the following formula:

SS treatment charge rate $C_{SS} = \$S / T_{SS}$

The toxic pollutant treatment charge rates are calculated using the following formula:

TP treatment charge rate

$C_{TP1} = \$TP_1 / T_{TP1}$

$C_{TP2} = \$TP_2 / T_{TP2}$

$C_{TP3} = \$TP_3 / T_{TP3}$ . . .

$C_{TPn} = \$TP_n / T_{TPn}$

The items in the above formulae are defined and their method of calculation is set out in 1D.6 of this part.

1D.6 Charging for Characteristics (Quality)

Quality charging shall be based on results from monitoring as detailed Clause 1C.3 of this part
The monitoring results may cover a period extending prior to the current quarterly period. The amount of monitoring results used will be determined by the authorised officer with the agreement between parties as per the draft trade waste consent process.

1D.7 Definition and means of calculation of the items used in calculating trade waste charges

Item	Units	Definition (see also 1D.5, Tables 1D.1 and 1D.2 of this part)
V	m^3	Volume.
$[BOD_5]$	g/m^3	Biochemical Oxygen Demand concentration.
[SS]	g/m^3	Suspended Solids concentration.
[TP]	g/m^3	Toxic Pollutant concentration.
kg_{BOD5}	kg	Biochemical oxygen demand mass.
kg_{SS}	kg	Suspended solids mass.

kg_{TPi}	kg	Of toxic pollutant ***i*** mass.
C_V	$\$/m^3$	Volume charge rate.
C_{BOD5}	$\$/kg_{BOD5}$	Biochemical oxygen demand treatment charge rate.
C_{SS}	$\$/kg_{SS}$	Suspended solid treatment charge rate.
C_{TPi}	$\$/kg_{TPi}$	Toxic pollutant i^{th} treatment charge rate.
$WWTP	$	Previous three year average cost of providing, financing, operating and maintaining the Council's wastewater treatment plant and the outfall.
$R	$	Previous three year average cost of providing, financing, operating and maintaining the wastewater drainage network including the wastewater pumping stations.
$V	$	Previous three year average reception and disposal costs for all wastewater in the district calculated as $V = (a) $WWTP+$R.
a	ratio	Proportion of WWTP cost attributed to volume.
Q	m^3	Average waste water volume during the period for which $V was calculated.
$B	$	Previous three year average BOD treatment costs for all wastewater from the district calculated as $B = (b) $WWTP.
b	ratio	Proportion of WWTP cost attributed to BOD.
T_{BOD5}	kg	Average biochemical oxygen demand mass during period for which $B was calculated.
$S	$	Previous three year average SS treatment cost for all wastewater in the district calculated as $S = (c) $WWTP.
c	ratio	Proportion of WWTP cost attributed to SS.
T_{ss}	kg	Average suspended solids mass during period for which $S was calculated.
d	ratio	Proportion of WWTP costs attributed to toxic pollutants.
$TP	$	The annual toxic pollutant cost for all waste water in the district calculated as $TP=(d)$WWTP.
$TP_{s\,i}$	mg/kg	Actual level i^{th} toxic pollutant in dry sewerage sludge for period over which calculation applies.
$TP_{max\,i}$	mg/kg	Maximum level set for the i^{th} toxic pollutant disposal. Units as dry wt.
$TP_{var\,i}$	%	Percentage variation from $TP_{max\,i}$ for i^{th} toxic pollutant.
		$TPvari = TP_{s\,i}/TP_{max\,i} \times 100/1$.
TPT	%	Sum of $TP_{var\,i}$ for all applicable toxic pollutants.
		$TPT = TP_{var\,i} + TP_{var\,2} + TP_{var\,3} \ldots + TP_{var\,n.}$
NTP_i	%	Normalised % variation for the i^{th} toxic pollutant.
		$NTP_i = 100/TPT \,.\, TP_{var\,i.}$
$\$TP_i$	$	Total disposal cost for i^{th} toxic pollutant. $\$TP_i = \$TP \times (NTP_i/100)$.
TTP_i	kg	Total mass of i^{th} toxic pollutant for period over which calculation applies.

Note: The toxic pollutant treatment charge is determined by dividing the annual proportioned disposal cost plus a risk factor for the toxin as determined by compliance issues related to the application of biosolids to land "Guidelines for the safe application of biosolids to land, 2003" by the proportion of total mass of the i^{th} toxic pollutant received at the WWTP on an annual basis Where possible the disposal costs will be averaged over a three year period. However, should the method of disposal of sludge be changed then the Council reserves the right to change the term over which disposal costs are calculated.

Table 1D - Trade waste charge rates ***(charge rates are set by the Council)***

Symbol	Description	Charge Units
C_V	Volume charge rate	$/m^3
C_{BOD}	Biochemical oxygen demand treatment charge rate	$/kg
C_{SS}	Suspended solids treatment charge rate	$/kg
C_{TPi}	Toxic pollutant individual treatment charge rate	$/kg

APPENDIX 1

Related Documents

NEW ZEALAND STANDARDS

NZS 4304:1990	Health care waste management
NZS 9201:Part23:2004	Model general bylaws Part 23: 2004 Trade Waste
NZS 10012	Quality assurance requirements for measuring equipment
Part 1:1993	Meteorological confirmation system for measuring equipment

BRITISH STANDARDS

BS 3680	Measurement of liquid flow in open channels
Part 11A:1992	Free surface flow in closed conduits - methods of measurement
Part 11B:1992	Free surface flow in closed conduits - specification for performance and installation of equipment for measurement of free surface flow in closed conduits
BS 5728	Measurement of flow of cold potable water in closed conduits
Part 3:1984	Methods for determining principal characteristics of meters
BS 6068	Water quality
Part 6	Sampling
Section 6.1:1981	Guidance on the design of sampling programs
Section 6.2:1991	Guidance on sampling techniques
Section 6.3:1986	Guidance on the preservation and handling of samples
Section 6.10:1993	Guidance on sampling of waste waters

NEW ZEALAND LEGISLATION

Dangerous Goods Regulation 1980 (Class 2 gases) and 1985 (Class 3 flammable liquids)

Local Government Act 2002

Local Government Act 1974

Resource Management Act 1991

Hazardous Substances and New Organisms Act 1996

OTHER PUBLICATIONS

AWWA Standard methods for the examination of water and wastewater.

Code of safe practice for the use of unsealed radioactive materials, NRL.C1; National Radiation Laboratory.

Public Health Committees for the safe use of sewage effluent and sewage sludge on land. Department of Health, New Zealand 1992.

Guidelines for the Safe Application of Biosolids to Land in New Zealand, 2003.

Liquid and Hazardous Code of Practice 2012