



6.1 Issues

POINT and NON POINT DISCHARGES OF LIQUID CONTAMINANTS CAN ADVERSELY AFFECT THE ENVIRONMENT

Point-source discharges of liquids come from a single confined source. Examples include industrial discharges, sewage discharges, and piped stormwater discharges.

Non-point or diffuse source discharges occur over a wider area, and typically come from runoff of rainwater. As it passes over land, rainwater can pick up contaminants. Examples include sediment, nutrient, agricultural chemicals, faecal bacteria from stock, and oil-based products from roads. Non-point discharges may also result from the widespread irrigation of effluent to land.

There are a number of adverse effects on receiving waters from non-point discharges of contaminants. These include abrasive or smothering effects on aquatic life, excessive algal growth (nutrient enrichment), toxicity (pesticides, herbicides), visual and odour problems and public health effects.

Piped sewerage systems are only available in Gisborne City, Te Karaka and some Te Puia Springs properties. These discharge sewage into Poverty Bay, Waipaoa River via oxidation ponds, and Ratahi Lagoon. The Poverty Bay discharge is milliscreened but is otherwise untreated. This arrangement is likely to be substantially modified or abandoned by the year 2000. The other

sewage discharges have the potential to discharge contaminants into the water bodies concerned.

In all other locations properties dispose of sewage on site. These systems produce septage, semi-solid waste that accumulates in septic tanks. It is generally collected by commercial operators and disposed of either into a piped system or onto land. Land disposal can cause problems of land and water contamination, odour, breeding of rodents and insects, and the transmission of faecal bacteria.

Industry can be an important source of both point and non-point contamination.

Septic tanks can cause localised problems if they malfunction. This is usually due to unsuitable design for the site, the tank not being adequately maintained or the need to relocate the effluent drain.

Animal waste from dairy, pig or poultry farming can benefit the soil as a natural fertiliser but can cause harmful discharges to land and water if applied inappropriately. Similarly leachate from maize waste or silage stored as stock feed can have similar effects.

"Freedom camping" and campervans are popular in the district. It is important to dispose of the waste from these appropriately.

Stock trucks are a source of effluent. These usually have effluent holding tanks. There is a need for facilities for emptying these tanks.

6.2 Objectives

1. The adverse environmental effects of contaminants entering surface, coastal and groundwater from point and non-point sources are avoided, remedied or mitigated.

Principal Reason

This objective is needed to implement the purpose and principles of part two of the Resource Management Act and focuses in particular, on avoiding remedying or mitigating the adverse effects that may arise from the discharges of liquid contaminants in the Gisborne Region.

2. Where existing point source and non-point discharges have adverse effects on the environment the quality of those existing discharges to water is progressively upgraded.

Principal Reason

There is significant concern for the adverse effects caused by existing discharges. However the Council recognises that realistically improvements need to be staged. There is evidence that the community want to see a real commitment and progress to attaining improved water quality.

3. There is minimal threat to human health from the collection and disposal of liquid waste.

Principal Reason

This activity can result in the transmission of diseases and infections if not carried out carefully.

6.3 Policies

1. All point-source discharges of contaminants to water shall avoid creating significant adverse effects on the life supporting capacity of ecosystems and habitats including breeding sites and feeding grounds by:
 - a) Not locating where locally important habitats feeding grounds; or ecosystems are likely to be adversely affected by the contaminant.
 - b) Not having physical properties which are likely to cause fish mortality, a failure of fish spawning or passage or significant changes in the abundance, distribution and composition of aquatic flora and fauna in the receiving environment. Such physical properties include temperature, pH, turbidity and suspended solids, nutrient content, heavy metals adsorbed into particulate matter and high Biochemical Oxygen Demand (B.O.D.).

These properties may act alone or in combination with other discharge properties, unless it can be demonstrated with a high level of certainty that the effects of these contaminants on the environment will be minor.

Principal Reason

This policy sets a descriptive standard for discharges of contaminants. It will protect ecosystems and habitats such as breeding and feeding grounds from the adverse effects of discharges.

2. Particular regard will be given to avoiding the adverse effects of discharges that:
 - ▶ Do not degrade readily into harmless forms.
 - ▶ Have the potential to be transformed into a more toxic form.
 - ▶ When combined with other contaminants, have serious synergistic effects.
 - ▶ Have poorly understood effects.

Principal Reason

Such contaminants can have serious and long term effects. Extra caution is needed when considering applications for discharges involving these contaminants.

3. Avoid, remedy or mitigate the adverse effects of discharges on the amenity of the environment, having particular regard to the amenity values in the following locations:
 - (a) Locations with a high public interest or public use of water.
 - (b) Locations with a particular tangata whenua interest in the water.
 - (c) Places where food is regularly gathered.
 - (d) Places which can be demonstrated to be regionally important in respect of the amenity they provide and which may include:
 - (i) Important scenic sites.
 - (ii) Important active recreation sites such as swimming or fishing sites.
 - (iii) Important passive recreation sites which are appreciated for their ease of access, scenic beauty or seclusion.

- (iv) Sites which contain a special mix of built and natural values which combine to enhance people's perception of amenity.

Principal Reason

Many people value the natural environment very highly. They also use it for recreation, leisure or pleasure. Any discharges in the areas described might damage what people value about the quality of the environment. This would be contrary to section 7 of the Resource Management Act. That requires particular regard be given to amenity and to the quality of the natural environment.

- 4. The discharge to land of liquid wastes which contain high levels of organic waste, contaminants that are likely to be toxic to organisms living in the receiving environment, or other wastes the effects of which are either uncertain or likely to be adverse to the receiving environment should be avoided in or adjacent to the following locations:
 - (a) Areas aquifers recharge from.
 - (b) The margins of lakes, rivers, streams or wetlands.
 - (c) Areas where contaminants are likely to pass readily into water

Principal Reason

The disposal of effluent to land is generally preferable to disposal in water. However, such disposal of waste should not have unnecessary adverse effects by distributing contaminants via surface or groundwater.

- 5. The adverse effects of the discharge of liquid wastes to land shall be avoided by:
 - a) Ensuring that the cumulative effects of discharges to land are fully assessed.
 - b) Requiring waste treatment facilities to contain adequate provisions to avoid the escape of untreated effluent during emergencies.
 - c) Ensuring that waste which contains toxic contaminants is adequately contained to prevent leakage into soils, or water bodies.
 - d) Avoiding locating discharges in areas of high amenity or natural character.
 - e) Avoiding locating waste disposal sites where they are prone to inundation or other natural hazard.
 - f) Requiring after-care of waste disposal sites at the end of their useful lives to ensure that the sites are secure and do not have an adverse effect on the local amenity.

Principal Reason

This policy establishes minimum requirements for land disposal of wastes (note: more general policies above address this area also).

- 6. In assessing a resource consent application for point source discharges, particular regard shall be paid to:
 - (a) Whether the proposals avoid, remedy or mitigate the effects of discharges;
 - (b) Whether the site is suitably located, having regard to alternatives;

- (c) Classification of receiving waters pursuant to section 69 of the Resource Management Act 1991.

Principal Reason

This policy is to ensure that point source discharges are permitted only after other options have been fully explored.

7. Effluent collection and treatment systems shall be appropriately designed, well maintained and managed.

Principal Reason

This policy is required to ensure that these systems are effective and to not create adverse effects of their own such as odours.

8. When considering applications for resource consents for point-source discharges of liquid waste to land or water, Council may require as a condition of consent specific Discharge Management Plans. These Management Plans shall deal with any relevant matters listed in Appendix 3 Schedule B Section 7 of the Plan. Conditions of consent should require that holders of such consents shall annually review the Discharge Management Plan and provide an annual report to the Council identifying the matters specified in Appendix 3 : Schedule C of this Plan that are relevant to the consent.

Principal Reason

This policy ensures that the effects of significant point-source discharges are considered at least annually. It provides a check that the resource consent is being complied with. It provides information to the Council about the nature and quantity of discharges.

6.4 Methods of Implementation

1. The Council will promote the adoption of cleaner production technologies in trade and agricultural premises.

Principal Reason

Minimising the quantities of contaminants produced and needing disposal will reduce the adverse effects of disposal.

2. The Council will further develop standards for agricultural liquid waste disposal in the first instance, and subsequently for other liquid waste disposal on production land. These standards will be used to define accepted practices for permitted activities and to guide discretionary decision-making on consents. These standards will include consideration of factors such as soil type, waste constituent loadings, hydraulic loadings and climatic conditions. Input from Government Departments and other interested parties will be sought during development of these standards.

Principal Reason

This will provide locally appropriate solutions to guide farmers to dispose of these wastes. It will enable the Council to reach appropriate decisions on consents. The Council has a primary role in regulating discharges of agricultural liquid waste.

However, this regulatory role can be considerably enhanced by the use of non-statutory guidelines, performance standards, and education. This method may result in the adoption of permitted use standards for some aspects. This would reduce costs to applicants and the Council.

3. The Council will use both education and enforcement to minimise the occurrence of unauthorised discharges. It will work with communities to identify the causes of unauthorised discharges and will educate the wider community and specific industries about the effects of illegal discharges.

Principal Reason

Education about the effects of discharges and how to avoid them will reduce the number of unauthorised discharges. Enforcement will provide an incentive to operators to avoid discharges.

4. The Council will identify areas where urban stormwater is having unacceptable effects on natural water, and over time develop the systems necessary to mitigate or overcome these problems.

Principal Reason

Contaminated urban stormwater degrades water quality in rivers, streams, estuaries and the sea. Where it is feasible such water should be treated before discharge. This may require separate collections or at source treatment such as oil separators and sediment traps in places where stormwater is likely to be contaminated or for problem activities.

5. The Council will promote land use practices that avoid, remedy or mitigate adverse effects on water quality, including:
 - ▶ The application of fertiliser in a manner consistent with the Fertiliser Code of Practice. (New Zealand Fertiliser Manufacturers Research Association, 1998).
 - ▶ Riparian planting and management to reduce the volume of contaminants entering surface waterways.
 - ▶ The proper use of agrichemicals.
 - ▶ Land development and restoration of disturbed land to reduce diffuse source discharge of contaminants to water.
 - ▶ Stock management procedures to prevent excessive stock entry to water bodies and their margins and reduce accelerated erosion from overgrazing.
 - ▶ Land management practices, including the discharge of contaminants to land, that avoid or reduce contamination of groundwater aquifers.
 - ▶ Land management practices that avoid the rendering of fresh water unsuitable for consumption by farm animals.

Principal Reason

Advocacy and education with rural land users will help to reduce the degradation of water from runoff.

6. The Council will encourage and promote better land management and land use practices to avoid diffuse source pollution of waterways, by a combination of education and non-statutory guidelines, service delivery and regulation. The Council will educate and advise landowners about how they can minimise run-off and leachate from agricultural waste, fertiliser, pesticides and herbicide applications by undertaking better land management practices, including riparian planting and management.

Principal Reason

Land use practices do much to contribute to degraded water quality. Improving the quality of run-off from land will improve the quality of the receiving water. The most effective way of reducing the level of contaminants contained in run-off and leachate from agricultural land is to educate landowners about management practices which reduce the concentrations of these contaminants.

7. The Council will provide information including information on codes of practice and government guidelines, and where appropriate develop guidelines relating to acceptable standards of effluent treatment and the alternative systems and management practices that will enable these standards to be met.

Principal Reason

This will provide locally appropriate solutions to guide operators to dispose of liquid wastes.

8. 'Minor adverse effects' will be determined by having particular regard to the Australian Water Quality Guidelines of Fresh and Marine Water, November 1992, Australian and New Zealand Environment and Conservation Council.

Principal Reason

These guidelines provide appropriate water quality indicators and information that has been used extensively in the Gisborne Region since 1992. They have proven robust enough to be applied to many situations and receiving environments.

9. The Council will continue to work with tangata whenua over waste disposal options and give particular consideration to any relevant lwi management plans or statements of tangata whenua views.

Principal Reason

Tangata whenua have particular views on appropriate waste disposal and the protection of water quality stemming from their culture. The Resource Management Act requires their views to be taken into account.

10. The Council will work with industry to ensure that sufficient facilities for cleaning of trucks are provided and that appropriate Codes related to truck wastes are actively promoted via the industry. This will include liaison with appropriate national agencies.

Principal Reason

Stock trucks collect significant quantities of agricultural effluent via their decks and wheels, and in holding tanks where fitted. These must be emptied and cleaned and the resulting effluent must be disposed of correctly. Otherwise it will quickly enter and contaminate waterways via the drainage system. This is a national issue and Council needs to be aware of approaches in other parts of the country. Some other trucks, notably in the logging industry collect large amounts of mud which can reach watercourse as sediment.

11. The Council will continue to investigate and monitor the performance and associated effects of the disposal of liquid waste from individual agricultural activities. It will also monitor the cumulative effects of agricultural waste disposal on a catchment basis.

Principal Reason

Monitoring increases knowledge of the effects of disposal. This enables informed decisions to be taken on applications and other management options.

12. By June 1998 the Council will develop a database of number, location and nature of known point source discharges of contaminants to the District's water bodies.

Principal Reason

This will identify the location and nature of point-source discharges. It will enable the Council to understand the scale of the issue. It will assist in setting priorities, allocating resources and adopting methods to avoid remedy or mitigate the effects of these discharges.

13. Council will upgrade and manage its sewerage reticulation in order to eliminate overflows to private property caused by stormwater infiltration and reduce such overflows to waterways to an average frequency of no more than once per year.

Principal Reason

Discharges have occurred from the Gisborne City sewerage reticulation system for many years in heavy rainfall events. Council is investigating the causes of these overflows and is progressively upgrading the system to reduce their frequency and effects. It does not consider it economically viable to totally eliminate overflows to waterways. Such events occur only when the rivers and streams are in high flood and adverse effects are therefore minimal.

6.5 Rules for Liquid Discharges

Permitted Activities

Rule 6.5.1 Point Source Discharges of Untreated Sewage Resulting from Overflows

Over flows of untreated sewage from sewerage reticulation shall be a **permitted activity** provided that the following terms and conditions are met:

- ▶ The overflow occurs only in periods of heavy rainfall events; and
- ▶ Regular monitoring of identified points of overflow is undertaken at determined points.

Principal Reason

Overflows of untreated sewerage to the environment are, in some cases, unavoidable. The rule applies to those discharges that are unavoidable and where the adverse environmental effects, on the receiving environments are seen as being no more than minor.

Note: See method 6.4.13 for an explanation of Council's current approach to sewerage system overflows.

Rule 6.5.2 Point Source Discharge of Seawater from Live Lobster Holding Tanks

The discharge of seawater from live lobster holding tanks located on Lot 1 DP 6690 (CT 4C/1268) to land in a manner that enters seawater of the Inner Harbour Basin at the port of Gisborne, shall be a **permitted activity** provided that the following terms and conditions are met:

1. The discharge shall not contain any contaminants (including chemical additives for the purpose of cleaning and/or maintaining the live lobster holding tanks and ancillary equipment) other than in accordance with clause (2) below:
2. The discharge onto the land shall not at any time exceed the following limits:
 - (a) pH between 6.7 and 8.5 or within the range of + or – 1 pH unit relative to the natural pH level in the receiving water.
 - (b) Ammonia 0.5g/m³ above the natural level in the receiving water.
3. The discharge shall have no toxic effects on terrestrial and aquatic ecosystems.
4. The discharge temperature shall not differ from the ambient temperature of the receiving water by more than 3° Celsius.
5. The discharge, after reasonable mixing, does not give rise to all or any of the following effects in the receiving water:
 - (a) The production of any conspicuous oil or grease films, scum or foam or floatable or suspended materials.
 - (b) Any conspicuous change in the colour or decrease in the visual clarity.
 - (c) The emission of objectionable odour.
6. The quantity and frequency of the discharge shall not exceed 40m³ per week.

Note: Discharges from activities such as washing ones car or watering the garden are permitted under the legal principle of 'de minimus'. This principle is applied to all activities whose effects on the environment will be less than minor and no person will be adversely affected.

Discretionary Activity

Rule 6.5.3 Other Liquid Discharges

Except as provided in these rules, the point source discharge of all liquids to land or water shall be a **discretionary activity**.

Principal Reason

There is uncertainty about the nature of most discharges and their effects. This rule enables the Council to assess applications against the Resource Management Act and the objectives and policies in this Plan.

Prohibited Activity

Rule 6.5.4 Point Source Discharges of Untreated Sewage or Agricultural Effluent

Point source discharge of untreated sewage and/or untreated agricultural effluent directly into the district's water bodies shall be a **Prohibited Activity**, for which no resource consent shall be granted.

Principal Reason

Point-source discharges of these contaminants inevitably lower the quality of the receiving waters. They are particularly offensive to tangata whenua. Such discharges are localised and able to be contained and treated. There is usually no reason to avoid treating them.