

Report to the Collaborative Stakeholder Group – for Agreement and Approval

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To: Collaborative Stakeholder Group
From: Chairperson – Bill Wasley
Subject: **Stormwater in the urban environment**
Section: **For Information**

Disclaimer

This report has been prepared by Waikato Regional Council policy advisors for the use of Collaborative Stakeholder Group Healthy Rivers: Wai Ora Project as a reference document and as such does not constitute Council's policy.

1 Purpose

The purpose of this report is to provide the Collaborative Stakeholder Group (CSG) with information on policy provisions which relevant to stormwater in the urban environment.

Recommendation:

1. That the report [Stormwater in the urban environment] (Doc #3633174 dated 15 December 2015) be received.

2 Background

CSG raised the topic of urban issues for water quality at CSG19, 23-24 November 2015 in response some questions raised by the community during the intensive engagement period October – November.

This report outlines the policy context for urban water quality management, including some of the policies and rules that already exist in the Waikato Regional Plan (see appendix 1), provisions of the Proposed Waikato Regional Policy Statement (see appendix 2) and the recommendations recently made by the Land and Water Forum (see appendix 3).

Regional and district/city councils have overlapping responsibilities for water quality in the urban environment. Regional councils have the functions to control the use of land for the purpose of the maintenance and enhancement of the quality of water in water bodies¹. Territorial authorities have the function to control any actual or potential effects of the use, development, or protection of land². This means that for urban environments regional council issue consents to territorial authorities for their stormwater systems, but also advocate and give policy direction to territorial authorities through the higher order RMA document the Regional Policy Statement. Territorial authorities also have a large role to play in managing roading, urban development, stormwater systems and infrastructure which affects run off and discharges of water into rivers and streams.

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Appendix 1: Provisions of the Waikato Regional Plan on stormwater discharges

Appendix 2: Provisions of the Proposed Waikato Regional Policy Statement (beyond legal challenge) on water quality in the urban environment

Appendix 3: Recommendations from Land and Water Forum Fourth report on water quality management in urban environments

¹ S30 Functions of regional council under this Act, Resource Management Act 1991

² S31 Functions of territorial authorities under this Act, Resource Management Act 1991

References

Land and Water Forum 2015. The Fourth Report of the Land and Water Forum. Land and Water Trust, Wellington.

Proposed Waikato Regional Policy Statement 2012 (Beyond legal challenge)

Waikato Regional Plan 2007

Appendix 1: Provisions of the Waikato Regional Plan on stormwater discharges

3 Water Module

3.5 Discharges*

3.5.11 Implementation Methods - Stormwater Discharges

3.5.11.1 Good Practice

Waikato Regional Council will, in conjunction with territorial authorities, organisations, industry groups and individuals discharging stormwater, provide guidance to develop and implement good practices or appropriate codes of practice.

3.5.11.2 Integration with Territorial Authorities

Waikato Regional Council will work with territorial authorities to ensure the integrated management of stormwater in the Region by:

1. Ensuring territorial authorities inform Waikato Regional Council of significant resource consent applications that are likely to adversely affect the quality of stormwater discharges.
2. Ensuring Waikato Regional Council has input into district plan development and reviews.
3. Working with territorial authorities to identify and manage contaminated sites.

3.5.11.3 Stormwater Management

Waikato Regional Council will work with resources users (including territorial authorities) to:

1. Find ways to mitigate adverse effects of existing stormwater discharges;
2. Promote the development of stormwater management plans which record the way in which the stormwater network is operated, including methods to avoid, remedy or mitigate the adverse effects of stormwater discharge; and
3. Promote alternative methods for the treatment and disposal of stormwater from existing and new subdivisions and development.

Advisory Note:

For stormwater discharges in the Lake Taupo Catchment, refer to Policy 13 in section 3.10.3 and Method 7 in section 3.10.4.

3.5.11.4 Permitted Activity Rule – Discharge of Stormwater to Water

The discharge of stormwater to surface water (including geothermal water) is a **permitted activity** subject to the following conditions:

- a. The discharge shall not originate from a catchment that includes any high risk facility¹, contaminated land*, operating quarry or mineral extraction site unless there is an interceptor system* in place.
- b. Any erosion occurring as a result of the discharge shall be remedied as soon as practicable.
- c. The catchment shall not exceed one hectare for discharges that originate from urban areas.
- d. There shall be no adverse increase in water levels downstream of the discharge point which causes flooding on neighbouring properties, as a result of the discharge.
- e. The discharge shall comply with the suspended solids standards in Section 3.2.4.6.
- f. The discharge shall not contain any material which will cause the production of conspicuous oil or grease films, scums or foams, or floatable suspended materials at

- any point downstream that is a distance greater than three times the width of the stream at the point of discharge.
- g. The discharge shall not contain concentrations of hazardous substances that may cause significant adverse effects on aquatic life or the suitability of the water for human consumption after treatment.
 - h. There shall be no discharge to any Significant Geothermal Feature.

For the purposes of conditions a) and g) levels of hazardous substances in stormwater or sediments that comply with the following guidelines and standards, in relation to the substances that they address will be deemed to be complying with the conditions:

- i. Licences under the Hazardous Substances and New Organisms Act 1996 for the use of the substance in New Zealand specifying discharge and receiving water standards for the substance.
- ii. Health and Environmental Guidelines for Selected Timber Treatment Chemicals (Ministry for the Environment, Ministry of Health, 1997).
- iii. Environmental Guidelines for Water Discharges from Petroleum Industry Sites in New Zealand (Ministry for the Environment, 1998).
- iv. Guidelines for Assessing and Managing Contaminated Gasworks Sites in New Zealand (Ministry for the Environment, August 1997).
- v. Australian/New Zealand Water Quality Guidelines For Fresh And Marine Waters, (Australian & New Zealand Environment & Conservation Council, 2001).

For the purposes of this Rule, 'urban area' includes the inner city or town and built up environments, irrespective of local body administrative boundaries, that are serviced by roads where the speed limit is 80 kilometres an hour or less.

Advisory Note:

- Rules controlling discharge structures are set out in Section 4.2.10.
- Significant Geothermal Features are defined in the Glossary, and in Development and Limited Development Geothermal Systems, identified on maps in Section 7.10 of this Plan.

3.5.11.5 Permitted Activity Rule – Discharge of Stormwater Onto or Into Land

The discharge of stormwater (including geothermal water) onto or into land is a **permitted activity** subject to the following conditions:

- a. The discharge shall not originate from a catchment that includes any high risk facility² or contaminated land* unless there is and interceptor system* in place.
- b. The discharge shall be below a rate that would cause flooding outside the design discharge soakage area, except in rain events equivalent to the 10% Annual Exceedence Probability design storm or greater. Any exceedence shall go into designated overland flow paths.
- c. There shall not be any overland flow resulting in a discharge to surface water, except in rain events equivalent to the 10% Annual Exceedence Probability design storm or greater; then there shall be no adverse surface water effects as a result of the discharge.
- d. Any erosion occurring as a result of the discharge shall be remedied as soon as practicable.
- e. The discharge shall not contain concentrations of hazardous substances that may cause significant adverse effects on aquatic life or the suitability of the water for human consumption after treatment.

For the purposes of conditions a) and e) of this rule, the levels of hazardous substances in stormwater or sediments that comply with the following guidelines and standards, in relation to the substances that they address will be deemed to be complying with the condition:

- i. Licences under the Hazardous Substances and New Organisms Act 1996 for the use of the substance in New Zealand specifying discharge and receiving water standards for the substance.
- ii. Health and Environmental Guidelines for Selected Timber Treatment Chemicals (Ministry for the Environment, Ministry of Health, 1997).
- iii. Environmental Guidelines for Water Discharges from Petroleum Industry Sites in New Zealand (Ministry for the Environment, 1998).
- iv. Guidelines for Assessing and Managing Contaminated Gasworks Sites in New Zealand (Ministry for the Environment, August 1997).
- v. Australian/New Zealand Water Quality Guidelines For Fresh And Marine Water, (Australian & New Zealand Environment & Conservation Council, 2001).

3.5.11.6 Controlled Activity Rule – Discharge of Stormwater Onto or Into Land

The discharge of stormwater (including geothermal water) onto or into land that does not comply with Rule 3.5.11.5 is a **controlled activity** (requiring resource consent) subject to the following standards and terms:

- a. The discharge shall be below a rate that would cause overland flow leading to a discharge to surface water, except in rain events equivalent to the 10% Annual Exceedence Probability design storm or greater. Any exceedence shall go into designated overland flow paths.

Waikato Regional Council reserves control over the following matters:

- i. Measures used to control erosion or flooding.
- ii. Measures to avoid, remedy or mitigate the effects of the discharge on groundwater quality.
- iii. Measures (including contaminant loading rates) to ensure that the soil at the site is not contaminated by the discharge to a level that will affect the range of existing and foreseeable uses of the site.
- iv. Measures for avoiding, remedying or mitigating the effects of maintaining stormwater treatment systems.
- v. Information and monitoring requirements.
- vi. Measures to avoid, remedy or mitigate the effects of the discharge on surface water bodies.
- vii. Measures to avoid, remedy or mitigate adverse effects on neighbouring property.

3.5.11.7 Controlled Activity Rule – Discharge of Stormwater Into Water

The discharge of stormwater to surface water (including geothermal water) that is lawfully established at the time of notification of this Plan (28 September 1998) and does not comply with Rule 3.5.11.4 is a **controlled activity** (requiring resource consent) subject to the following standards and terms:

- a. The discharge shall not contain concentrations of hazardous substances that are causing significant adverse effects on aquatic life or the suitability of the water for human consumption after treatment.

Waikato Regional Council reserves control over the following matters:

- i. Measures used to control erosion or flooding.
- ii. Measures to avoid, remedy or mitigate the effects of the discharge on the receiving water bodies.
- iii. Measures for avoiding, remedying or mitigating the effects of maintaining stormwater treatment systems.
- iv. Information and monitoring requirements.

- v. The degree of compliance with discharge or receiving water standards for any hazardous substance in relevant New Zealand Standards, Guidelines or licences issued under the Hazardous Substances and New Organisms Act 1996.

3.5.11.8 Discretionary Activity Rule – Discharge of Stormwater

The discharge of stormwater into water, and/or into or onto land which does not comply with Rules 3.5.11.4, 3.5.11.5, 3.5.11.6 and 3.5.11.7 is a **discretionary activity** (requiring resource consent).

Advisory Notes:

- Information requirements to enable the assessment of any application under this Rule are set out in Section 8.1.2.2 of this Plan. In addition, assessment shall also take into account the matters identified in the policies of Section 3.2.3 of this Plan.
- Rules controlling discharge structures are set out in Section 4.2.10 of this Plan.

Stormwater - Artificially channellised rainwater prior to its point of discharge to land or water.

Appendix 2: Provisions of the Proposed Waikato Regional Policy Statement (deemed operative) on water quality in the urban environment

Chapter 3 Objectives

Objective 3.13 Mauri and health of fresh water bodies

Recognise and provide for the mauri and health of fresh water bodies by:

(e) managing adverse cumulative effects of land use activities on fresh water bodies.

Chapter 6 Built Environment

Policy 6.1 Planned and co-ordinated subdivision, use and development

Subdivision, use and development of the built environment, including transport, occurs in a planned and co-ordinated manner which:

a) has regard to the principles in section 6A;

b) recognises and addresses potential cumulative effects of subdivision, use and development;

Implementation methods

6.1.1 Regional plans, district plans and development planning mechanisms

Local authorities shall have regard to the principles in section 6A when preparing, reviewing or changing regional plans, district plans and development planning mechanisms such as structure plans, town plans and growth strategies.

6.1.2 Advocacy

Local authorities should advocate for the principles in section 6A with respect to development (including infrastructure development) proposals, private plan change proposals and the development of industry guidelines and manuals.

6.1.3 Development manuals and design codes

Territorial authorities should, as appropriate, ensure development manuals and design codes allow and encourage development which is consistent with the principles in section 6A.

6.1.7 Information to support new urban development and subdivision

District plan zoning for new urban development (and redevelopment where applicable), and subdivision and consent decisions for urban development, shall be supported by information which identifies, as appropriate to the scale and potential effects of development, the following:

g) how stormwater will be managed having regard to a total catchment management approach and low impact design methods;

6A Development principles

General development principles

New development should:

c) not compromise the safe, efficient and effective operation and use of existing and planned infrastructure, including transport infrastructure, and should allow for future infrastructure needs, including maintenance and upgrading, where these can be anticipated;

d) connect well with existing and planned development and infrastructure;

da) identify water requirements necessary to support development and ensure the availability of the volumes required;

db) be planned and designed to achieve the efficient use of water;

- j) avoid as far as practicable adverse effects on natural hydrological characteristics and processes (including aquifer recharge and flooding patterns), soil stability, water quality and aquatic ecosystems including through methods such as low impact urban design and development (LIUDD);
- k) adopt sustainable design technologies, such as the incorporation of energy efficient (including passive solar) design, low-energy street lighting, rain gardens, renewable energy technologies, rainwater harvesting and grey water recycling techniques where appropriate;
- o) support the Vision and Strategy for the Waikato River in the Waikato River catchment;

Chapter 8 Fresh water bodies

Policy 8.3 All fresh water bodies

Manage the effects of activities to maintain or enhance the identified values of fresh water bodies and coastal

water including by:

a) reducing:

- i) sediment in fresh water bodies and coastal water (including bank instability) that is derived from human based activities;

Implementation methods

8.3.3 Non-point source discharges

Waikato Regional Council will manage the adverse effects of land use and activities on fresh water bodies and coastal water from non-point source discharges of nutrients and other contaminants where such discharges result in, or are likely to result in, the loss of values of a water body in a way that:

- aa) achieves the fresh water objectives, and meets the limits and, targets for the fresh water body and coastal water;
- a) works with industry and other stakeholders to ensure appropriate information on good practice land use is available;
- b) controls the adverse effects of increases in land use intensity that involve the discharge of contaminants (including nutrients) to fresh water bodies and coastal water;
- c) [Deleted]
- d) introduces controls on contaminant discharges; and
- e) provides for mitigation or offsetting of adverse effects only where effects cannot be avoided or remedied.

8.3.9 Effects of subdivision, use and development

Territorial authorities should, in accordance with their statutory responsibilities, manage the effects of subdivision, use and development either by statutory or non-statutory means, including through district plans, development and subdivision guidelines and structure plan by considering the following:

- a) the availability of water, including by encouraging water conservation measures;
- ab) avoid, remedy or mitigate the adverse effects of the sealing of known aquifer recharge areas
- b) [Deleted]
- c) development and design that minimises the potential for contaminants to enter fresh water bodies and coastal water;
- d) managing flows into stormwater networks including through the adoption of low impact design;
- e) providing for the creation and protection of esplanade reserves and/or strips and riparian habitat, including appropriately vegetated riparian margins where this will have a positive effect on a fresh water body and on its ecological, amenity and recreational values;
- f) the promotion of best practice stormwater management for urban areas, including the need for stormwater catchment plans for greenfield urban development;
- h) managing contaminant loadings (including sediment) entering stormwater networks;

- j) minimising stormwater entering wastewater networks; and
- k) addressing adverse effects on the migration of indigenous species.

8.3.10 Advocacy and education

Waikato Regional Council will:

- a) encourage adoption of land-based mitigation of stormwater, including the use of wetlands;
- b) promote awareness of the effects of stormwater systems and discharges on water quality, habitat quality and connectivity;
- c) promote low-impact design options;
- d) provide information on the value of fresh water bodies and the ecosystem services they provide;
- e) encourage the replacement of onsite wastewater disposal with reticulated wastewater systems where applicable;
- f) encourage retention, enhancement and extension of riparian vegetation and wetlands;
- g) promote awareness of relevant regional and district plan provisions;
- h) promote awareness of soil erosion issues;
- i) encourage adoption of sustainable land management practices;
- j) provide information to territorial authorities to assist in managing land use activities which may adversely affect flow regimes and the availability of water;
- k) promote awareness of the effects of introduction and potential spread of plant and animal pests that affect water resources; and
- l) encourage the regular inspection of communities serviced by onsite wastewater systems, such as in villages and concentrated rural-residential areas, to identify and address any surfacing of effluent from onsite wastewater systems.

Consideration will be given to collaborating with territorial authorities, tāngata whenua, industry and other stakeholders to undertake the above where it is assessed that this may provide a more effective or efficient outcome.

Appendix 3: Recommendations from Land and Water Forum Fourth report on water quality management in urban environments

Recommendation 19: Regional councils and territorial authorities should prioritise the alignment of the planning, investment and delivery of 'three waters' infrastructure, roads, residential development and land use controls to meet water quality objectives in regional plans for freshwater and coastal environments.

Recommendation 20: A "Water sensitive urban design" process must be adopted in the building and upgrading of stormwater and roading infrastructure and residential urban development (and redevelopment).

Recommendation 21: Where wastewater systems overflow into stormwater or directly into waterbodies, in either a controlled (designed) or uncontrolled manner, local authorities should be required to report publicly on:

- a. the maximum acceptable frequencies that are set through consent conditions or plan rules, and the actual number of overflows
- b. planning and progress towards phasing out overflows
- c. how overflows will be managed to achieve objectives and limits.

Recommendation 22: Territorial authorities should review or revise trade waste by-laws to encourage or require the pre-treatment and recycling of trade waste before disposal into municipal wastewater systems.