

Report to the Collaborative Stakeholder Group – for Agreement and Approval

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To: Collaborative Stakeholder Group
From: Chairperson – Bill Wasley
Subject: Point source discharge information
Section: Agreement and Approval

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 point source discharges, to assist them in their discussions on setting limits, targets and policy, and allocating the responsibility to reduce discharges.

Recommendation:

1. That the report [Point source discharge information] (Doc #3604675 dated 2 December 2015) be received, and
2. That the Collaborative Stakeholder Group use the information contained within this report (and subsequent information which is currently in development) as part of their deliberations on setting limits, targets and policy, and the allocation of responsibility for reducing discharges.

2 Introduction

CSG have received information on point source discharges and scenario modelling results which outlined the magnitude of change and costs of achieving different water quality outcomes in the river. This report brings together some policy, consent, technical and modelling information on point source discharges, as **a start** at trying to address the follow questions:

- What are the main point sources in the catchment, where are they and how are they currently managed?
- How much do point sources currently contribute to the total contaminant load in the rivers?

- What is the cost and effectiveness of reducing contaminants from these point sources?
- How much should point sources be required to reduce, by when, and why?

More information is currently being developed and will be provided to CSG at subsequent workshops.

3 What are the point sources in the catchment and where are they located?

A large A3 map containing the sub-catchment boundaries and point sources which are part of the economic modelling will be put on the wall at the CSG workshop. This report contains information on those consents, and they are:

Municipal	Industrial
1. Tuakau/Pukekohe	1. Tuakau rendering plant/ Waikato By-products
2. Meremere	2. Hautapu dairy factory
3. Te Kauwhata	3. Horotiu meatworks
4. Huntly	4. Te Awamutu dairy factory
5. Ngaruawahia	5. Te Rapa dairy factory
6. Hamilton City	6. Kinleith pulp and paper mill
7. Cambridge	7. Wairakei power station
8. Te Awamutu	8. Roto-o-rangi piggery
9. Otorohanga	9. Reporoa dairy
10. Te Kuiti	10. Lichfield dairy
11. Tokoroa	
12. Taupo	

4 How are they currently managed?

4.1 Waikato Regional Plan

All large point source discharges are managed through the current Waikato Regional Plan policies and rules, and operate under consents with conditions attached. There are three policies relevant to large point source discharges, which are:

Chapter 3.5 Discharges, 3.5.3 Policies

- Policy 2: Managing Discharges to Water with More than Minor Adverse Effects
- Policy 3: Alternatives to Direct Discharge to Water
- Policy 4: Discharges to Land

See Appendix 1 for wording of the policies.

These policies are implemented by a number of rules. The rule which most large point source discharge consents are issued under is:

3.5.4.5 Discretionary Activity Rule – Discharges – General Rule

*Any discharge of a contaminant into water, or onto or into land, in circumstances which may result in that contaminant (or any other contaminant emanating as a result of natural processes from that contaminant) entering water, that is not specifically provided for by any rule, or does not meet the conditions of a permitted or a controlled activity rule in this Plan, is a **discretionary activity** (requiring resource consent).*

This rule is discretionary, which means that Council must consider any and all relevant effects of the activity when making the decision to grant or decline the consent, and when applying conditions. The Council must also 'have regard to' any relevant provisions of the Waikato Regional Plan¹ and 'have particular regard to' the Vision and Strategy when making decisions on resource consents (s17 Waikato-Tainui Raupatu Claims (Waikato River) Settlement Act 2010).

In a review of the Waikato Regional Plan from an implementation perspective consent officers' comments on rule 3.5.4.5 include:

- Good in that it provides lots of flexibility.
- Bad in that there is limited strong policy guidance in the Waikato Regional Plan for decision-making i.e. currently too broad.
- Due to the lack of strong guidance it means when processing consents there is a degree of reliance on precedent (because that is in line with the most recent thinking in the courts).
- This focuses the process on the facts of the case and the effects on the environment, as there is less focus on what the plan says because its guidance is not strong.

(Britton, 2014)

4.2 Resource Management Act 1991 s128 reviews

CSG received a report at workshop 6, 15-16 September 2014 which outlined review conditions on consent applications. The main points from that report are also relevant to existing consents and how they might be reviewed. These main points are:

- A review is a way of providing councils with the flexibility to review conditions to reflect changes over time, including changes to policy.
- Review of consent applications under s128 is a tool available to the council, which can be imposed when the consent is granted, and provides an opportunity for review, to be used at the discretion of the consent authority.
- Review under s128 enables conditions of consent to be reviewed however does not allow review of any conditions in relation to consent time frames.
- The permitted scope of a review is limited. The law is clear that a review cannot remove the benefit of the consent – in other words render it unusable for the purpose for which it was granted. Neither is a review an opportunity to re-litigate the original grant of consent.
- There are two specific mechanisms available in s128 of the RMA that would enable the conditions of a resource consent to be reviewed for the purpose of enabling integration or alignment with a regional plan. They are s128(1)(a) and s128(1)(b). These operate in different ways.
- The extent and choice of review mechanism would depend on the overall purpose for applying a review condition. For example:
 - s128 (1) (a) provides latitude to specify a specific purpose for the consent review (e.g. to meet water quality standards) but must specify the time(s) at which review may occur;

¹ As well as any actual and potential effects on the environment, and any relevant provisions of a national environmental standard, other regulations, a national policy statement, a New Zealand coastal policy statement, a regional policy statement or proposed regional policy statement and any other matter the consent authority considers relevant and reasonable necessary to determine an application. See section 104 Resource Management Act 1991.

- s128 (1) (b) can be used as of right i.e. without review conditions on consents if the purpose is alignment of consents with changes in policy when the plan becomes operative.
- It should be noted that consents are unable to take account of possible future policy, except by way of imposition of review conditions.

(Waikato Regional Council, 2014)

See Appendix 2 for the wording of s128 of the Resource Management Act.

4.3 Point source discharge resource consent information

At CSG 18, 13-14 October 2015, CSG received a brief report for their information containing basic data on the main large point source consents in the Waikato and Waipa River catchments (Waikato Regional Council, 2015). CSG requested that more information be provided on the consents at future workshops (Workshop notes CSG18).

This report includes review clauses and dates for point source discharge consents. Additional consents which weren't in the last point source report to CSG, but are part of the economic modelling, have also been included.

This is summarised below in sections 4.4 and 4.5, with the detail for each consent contained in Appendix 3.

4.4 Typical review clauses

All of the consents outlined in this report contain review clauses in the consent conditions, with dates when a review can take place. As mentioned above, s128(1)(a) enables a consent to be reviewed for a specific purpose, at a specific time, if it is listed as a condition in the consent. Table 1 shows some of the typical types of these review clauses, and an example of the specific wording of that type of clause.

Table 1: Types of review clauses and examples of wording for each type of clause

Type of clause	Example of wording
Adverse effects	To review the effectiveness of the conditions of this resource consent in avoiding or mitigating any adverse effects on the environment, in particular effects on the Waikato River water quality, from the exercise of this resource consent and if necessary to avoid, remedy or mitigate such effects by way of further or amended conditions
Best practicable option	If necessary and appropriate, to require the holder of this resource consent to adopt the best practicable option to remove or reduce adverse effects on the surrounding environment due to contaminants entering the Waikato River
Monitoring	To review the adequacy of and the necessity for monitoring undertaken by the consent holder
Compliance	Compliance of the treatment system with the effluent quality criteria specified in this permit
Inconsistent with Vision and Strategy	To review the conditions of this resource consent to ensure the exercise of this resource consent is not inconsistent with the Vision and Strategy for the Waikato River which is part of the Waikato Regional Policy Statement pursuant to the Waikato-Tainui Raupatu Claims Waikato River Settlement Act 2010 and, if necessary, to address any such inconsistencies by way of further or amended conditions

Type of clause	Example of wording
Changes in council policy or plans	To take into account any changes to the Waikato Regional Council's Regional Plans or Policies
Implementing rules	Meeting the requirements of any operative regional plan in relation to minimum standards of water quality Implementing the rules of a Regional Plan

As well as the typical review clauses noted above, there are other clauses which are also used in consents contained in this report. The complete list of the types of clauses for each consent in this report can be found in Appendix 3.

4.5 Typical contaminants managed

All consents contained in this report specify the discharge limits of contaminants in the consent conditions. The contaminants relevant to Healthy Rivers Wai Ora are nitrogen, phosphorus, sediment and E. coli. The consents specify a range of different measures for each of those contaminants, as shown in Table 2:

Table 2: Contaminants and measures used in consents in this report

Nitrogen	Phosphorus	Sediment	Microbes
Ammoniacal nitrogen	Total phosphorus	Suspended sediment	E. coli
Total Kjeldahl nitrogen	Dissolved reactive phosphorus	Turbidity	Faecal coliform bacteria
Total nitrogen			
Dissolved inorganic nitrogen			
Nitrite-nitrogen			

In addition to any of the measures noted above, other typical contaminants which are limited by consent conditions are biochemical oxygen demand, pH and temperature. These are outside the scope of Healthy River Wai Ora and so are not noted in this report.

As all of the consent conditions are expressed differently they cannot be easily compared. There is additional information which can be generated based on consent condition information on volume and concentration, to calculate the consented load. This task is currently underway.

5 How much do point sources currently contribute to the total load in the rivers?

At CSG5, 14-15 August 2014, Bill Vant (WRC water quality scientist) presented information on point source discharges contribution to the Waikato and Waipa Rivers (Waikato Regional Council, 2014). This presentation was based on the technical report 'Sources of nitrogen and phosphorus in the Waikato and Waipa Rivers, 2003-12' (Vant, 2014). Some key findings from that report are²:

² NOTE: Vant (2014) includes 19 point sources, while the economic modelling contains 22. One point source from Vant (2014) that was not included in the modelling is Ohaaki power station. Four point sources which are included in the modelling but not in Vant (2014) are Taupo wastewater treatment plant, Rot-o-rangi piggery, Reporoa dairy and Lichfield dairy.

1. The mass flows of nitrogen and phosphorus discharged from several of the point sources fell over the decade. The available data showed a drop of about 30% in the combined mass flow of phosphorus, and a 7% drop in nitrogen. These reductions were mostly due to ongoing improvements in wastewater treatment at the sites.
2. Altogether, the 19 point sources contributed about 7% of the mass flow of nitrogen carried to the sea by the Waikato and Waipa Rivers during 2003–12. They also contributed about 18% of the mass flow of phosphorus. The greatest concentration of point sources is found in the Lower Waikato sub-catchment, where they contributed 12% of the nitrogen and 31% of the phosphorus.
3. More than half of the combined mass flow of nitrogen from these point sources was contributed by just three operations, namely Hamilton sewage (26% of the total), Kinleith pulp and paper mill (20%) and Horotiu meatworks (12%). And nearly half of the combined mass flow of phosphorus was contributed by just two of these, namely Hamilton sewage (37%) and the Kinleith mill (11%).

Table 3 and 4 are taken directly from Vant (2014) and show:

- the average flows, concentrations and mass flows of nitrogen and phosphorus for 2003-12 from the 19 point sources which were included in the report, and
- the mass flows of nitrogen and phosphorus in the Waikato River catchment for 2003-12 for moderate-to-large consented point source discharges, and estimates of the background mass flows, and mass flows from catchment land use.

Table 3: Average flows of wastewater, and average concentrations and mass flows of nitrogen (N) and phosphorus (P) from 19 consented discharges to the Waikato and Waipa Rivers, 2003–12. “Δ” denotes sites where there was sufficient information to assess changes

Site	Flow (m ³ /day)	Concentration (g/m ³)		Mass flow (t/yr)		
		Total N	Total P	Total N	Total P	
Sewage wastewater						
A	Hamilton (Δ)	41,460	12	2.8	189	63.1
B	Tuakau-Pukekohe (Δ)	6580	9	5.9	21	13.7
C	Te Awamutu (Δ)	4500	6	4.2	11	7.0
D	Cambridge (Δ)	4110	38	6.5	54	8.5
E	Te Kuiti	3430	33	4.6	26	4.0
F	Tokoroa	3060	29	5.8	32	6.5
G	Huntly (Δ)	2660	15	5.0	14	4.2
H	Ngaruawahia	1670	14	4.4	8	2.5
I	Otorohanga	1510	25	3.8	14	2.1
J	Te Kauwhata (Δ)	700	9	3.8	2	0.9
K	Meremere	310	11	2.7	1	0.2
Sub-total sewage				373	113	
Industrial wastewater						
L	Wairakei power station	1,260,000	<1	–	50	–
M	Kinleith pulp and paper mill (Δ)	85,210	5	0.6	145	19.1
N	Te Rapa dairy factory (Δ)	15,450	2	1.9	11	10.8
O	Te Awamutu dairy factory (Δ)	4130	11	3.4	15	4.8
P	Ohaaki power station	3200	1	0.6	1	0.7
Q	Horotiu meatworks (Δ)	2160	114	17.2	90	13.8
R	Hautapu dairy factory	930	51	1.4	17	0.5
S	Tuakau rendering plant (Δ)	500	148	48.9	30	8.4
Sub-total industrial				357	58	
Total				730	171	

Source: Vant (2014) page 8, table 4.

Table 4: Mass flows of nitrogen and phosphorus in the Waikato River catchment during 2003–12. The combined mass flows from the various consented moderate-to-large point source discharges are shown, as are estimates of the pre-development or background mass flows, and the mass flows resulting from catchment land use.

	Upper Waikato	Waipa	Lower Waikato*	Combined
Nitrogen (t/yr)				
Overall	3623	4069	3501	11,193
LTaupo outflow	339 (9%)			339 (3%)
Point sources	227 (6%)	66 (2%)	437 (12%)	730 (7%)
Background	1453 [†] (40%)	928 (23%)	904 (26%)	3284 (29%)
Landuse	1604 (44%)	3075 (75%)	2160 (62%)	6840 (61%)
Phosphorus (t/yr)				
Overall	271	273	408	951
LTaupo outflow	23 (9%)			23 (2%)
Point sources	26 (9%)	18 (7%)	127 (31%)	171 (18%)
Background	150 [†] (55%)	93 (34%)	90 (22%)	333 (35%)
Landuse	71 (26%)	162 (59%)	191 (47%)	425 (45%)

*Results are for Karapiro to Tuakau (area 3012 km²), rather than to Port Waikato

[†]Includes geothermal inputs (see text)

Source: Vant (2014) page 10, table 5.

6 What is the cost and effectiveness of reducing contaminants from point sources?

Point sources have been included in the scenario modelling undertaken by the Technical Leaders Group (TLG). The model seeks to find the ‘cheapest’ combination of mitigations, from a suite of mitigations including on-farm, edge of field and point source, to meet the different limits set in the rivers as defined by the CSG. The model utilised data on point source loadings from Vant (2014), and the costs of point source abatement from Opus International Consultants (2013)³. The results so far have shown that “point source... mitigations grow in importance as limits become more binding” (Doole, Elliott and McDonald, 2015, pg 19). Costs increase as scenarios 10% through to 100% of scenario 1 are modelled.

Additional information can be extracted from the modelling results. The table below shows when each point source mitigation ‘kicks in’ in the different percentage steps towards achieving scenario 1. This illustrates the model optimising an upgrade of different point sources, based on the cost of an upgrade of each plant in relation to its current level of treatment, the cost of all the alternative mitigation options and the different limits set down the rivers (data from document #3612355).

³ Modified following further consultation with dischargers (Blair Keenan Waikato Regional Council).

Table 5: Point source mitigations adoption in steps towards scenario 1

	Point source	Step toward scenario 1 when mitigations are required*
Municipal	Tuakau/Pukekohe	-
	Meremere	75%
	Te Kauwhata	75%
	Huntly	50% and 75%
	Ngaruawahia	50% and 75%
	Hamilton	50% and 75%
	Cambridge	25%
	Te Awamutu	75%
	Otorohanga	50%
	Te Kuiti	75%
	Tokoroa	50%
	Taupo	-
	Industrial	Hautapu dairy factory
Horotiu meatworks		50%
Te Awamutu dairy factory		75%
Te Rapa dairy factory		50% and 75%
Kinleith pulp and paper mill		25% and 50%
Wairakei power station		-
Tuakau rendering plant/ Waikato By-products		-
Rotorangi		-
Reporoa dairy		-
Lichfield dairy		-

* - indicates a point source mitigation was not selected by the model.

7 How much should point sources reduce by and why?

Over the next few months CSG are going to be focusing on setting objectives, limits, targets and policy for the rivers and how to allocate the responsibility to achieve those limits. The information contained in this report will be useful when considering all the sources of contaminants in the rivers and the possibilities to achieve a reduction.

As mentioned above, additional information which will also be important, and is currently being developed is:

- A calculation of the consented discharge load from large point source consents, to compare to the calculated actual discharge load as included in Vant (2014) and the economic modelling.

Some important points from a policy perspective are:

1. Point source discharges are already controlled by rules in the Waikato Regional Plan and are managed to meet the conditions of their resource consents. Along with the review clauses specified in each consent, s128(1)(b) RMA provides the 'as of right' ability for a council to review conditions in light of new standards or limits in a plan, but how much those conditions can be changed is limited.
2. All consents will eventually expire and new consents will need to be applied for. There is already an expectation from council that point sources aim for continual improvement. CSG need to work through how much responsibility point source discharges are going to have in the task of reducing contaminants to the river, and

how this is signalled in the Waikato Regional Plan. If the decision is to 'chunk down' the point source discharges then this needs to be really clearly stated in the policies in the plan.

3. At a catchment scale the current contribution of the total load of nitrogen and phosphorus to the river from point source discharges is less significant than diffuse sources. While this is true overall, there are a few points to remember. The CSG is trying to achieve different N and P attribute levels in the main stem as we move downstream through the Waikato FMUs. This can make point sources important within an FMU or a sub-catchment. Also, to achieve the desired limits we must look at manageable load only (i.e., not include background), so point sources are a higher proportion of the manageable load.
4. Many large point source discharges have invested in the past to upgrade treatment systems, but all are at different treatment levels and stages of upgrading. For some, further upgrades may be very costly and result in minimal gains in overall water quality in the rivers. This has both effectiveness and cost effectiveness implications which will need to be addressed through the s32 analysis reporting.
5. CSG needs to articulate the reasoning behind requirements to achieve contaminant reductions from all sources, and be clear whether this is for cost effectiveness or equity reasons.

Emma Reed

Policy development workstream
Waikato Regional Council

Bill Wasley

Independent Chairperson, Collaborative
Stakeholder Group

Appendix 1: Waikato Regional Plan policies relevant to large point source discharges

Appendix 2: S128 Resource Management Act

Appendix 3: Detailed consent information

References

Britton R 2014. Waikato Regional Plan and Waikato Regional Coastal Plan Review: Implementation Perspectives. Focus Resource Management Group. Document #3240387.

Data on when point source dischargers require updates. Document #3612355.

Doole G, Elliott S and McDonald G 2014. Evaluation of scenarios for water-quality improvement in the Waikato and Waipa River catchments. Assessment of second set of scenarios. Draft for discussion purposes. Dated 24 September 2015. Report No. HR/TLG/2015-2016/4.2. Document # 3564910.

Opus International Consultants 2013. Municipal and industrial water values in the Waikato River catchment. Opus International Consultants, Auckland.

Vant B 2014. Sources of contaminants in the Waikato-Waipā catchment. Presentation to CSG5. Document #3127539.

Vant B 2014. Sources of nitrogen and phosphorus in the Waikato and Waipa Rivers, 2003-12. Waikato Regional Council Technical Report 2014/56. Waikato Regional Council: Hamilton. Report available from <http://www.waikatoregion.govt.nz/tr201456/>

Waikato Regional Council 2014. The addition of review conditions on consents applications prior notification of the Waikato Regional Plan Change 1. Agreement and Approvals. For information. Dated 19 August 2014. Document #3140943

Waikato Regional Council 2015. Main point source discharge consents in the Waikato and Waipa River catchments. Agreement and Approval. For information. Dated 12 October 2015. Document #3574169.

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Workshop notes, CSG 5, 14-15 August 2014. Day 2, Section 11, Point vs non-point sources presentation - Bill Vant (WRC). Document #3136044.

Workshop notes, CSG 18, 13-14 October 2015. Day 1, Section 8, Approvals and updates, Point source discharges report. Document # 3577749.

Appendix 1 – Waikato Regional Plan policies relevant to large point source discharges

Chapter 3.5 Discharges, 3.5.3 Policies

Policy 2: Managing Discharges to Water with More than Minor Adverse Effects

Control, through resource consents, discharges to water that are likely to have more than minor adverse effects so that:

- a) adverse effects on surface water bodies that are inconsistent with the policies in Section 3.2.3 of this Plan are avoided as far as practicable and otherwise remedied or mitigated
- b) the discharge causes no significant adverse effects from flooding or erosion
- c) there are no significant adverse effects from downstream siltation
- d) there are no significant adverse effects on the Coastal Marine Area, wetlands⁴ that are areas of significant indigenous vegetation and/or significant habitats of indigenous fauna, cave ecosystems or lakes
- e) any subsequent discharges to air do not have adverse effects that are inconsistent with the policies for air quality provided in Section 6.1.3 of this Plan.

Policy 3: Alternatives to Direct Discharge to Water

Land-based treatment systems will be promoted where soil type and drainage will allow and where adverse effects are minor or are less than those from a direct discharge to water. If the economic burden of adopting land treatment is unacceptable, provision will be made for a phased introduction of land treatment over an agreed period of time.

Policy 4: Discharges to Land

Ensure that the discharge of contaminants onto or into land maximises the reuse of nutrients and water contained in the discharge.

NOTE: Section 3.2.3 contains a series of policies for managing water bodies, which a number of different water management classes.

⁴ Refer to Appendix 3 of the RPS

Appendix 2 – S128 Resource Management Act

128 Circumstances when consent conditions can be reviewed

1. A consent authority may, in accordance with [section 129](#), serve notice on a consent holder of its intention to review the conditions of a resource consent—
 - a. at any time or times specified for that purpose in the consent for any of the following purposes:
 - i. to deal with any adverse effect on the environment which may arise from the exercise of the consent and which it is appropriate to deal with at a later stage; or
 - ii. to require a holder of a discharge permit or a coastal permit to do something that would otherwise contravene [section 15](#) or [15B](#) to adopt the best practicable option to remove or reduce any adverse effect on the environment; or
 - iii. for any other purpose specified in the consent; or
 - b. in the case of a coastal, water, or discharge permit, when a regional plan has been made operative which sets rules relating to maximum or minimum levels or flows or rates of use of water, or minimum standards of water quality or air quality, or ranges of temperature or pressure of geothermal water, and in the regional council's opinion it is appropriate to review the conditions of the permit in order to enable the levels, flows, rates, or standards set by the rule to be met; or
 - ba. in the case of a coastal, water, or discharge permit, when relevant national environmental standards have been made; or
 - c. if the information made available to the consent authority by the applicant for the consent for the purposes of the application contained inaccuracies which materially influenced the decision made on the application and the effects of the exercise of the consent are such that it is necessary to apply more appropriate conditions.
2. A consent authority must, in accordance with [section 129](#), serve notice on a consent holder of its intention to review the conditions of a resource consent if required by an order made under [section 339\(5\)\(b\)](#).
3. A regional council must notify the chief executive of the Ministry of Fisheries as soon as is reasonably practicable if it intends to review a condition of a coastal permit authorising an aquaculture activity to be undertaken in the coastal marine area and the condition has been specified under [section 186H\(1A\)](#) of the Fisheries Act 1996 as a condition that may not be changed or cancelled until the chief executive of the Ministry of Fisheries makes a further aquaculture decision.

Appendix 3 – Detailed consent information

Name	Description	Commence Date	Expiry Date	Holder	Auth Status	Type of Review Clause
Tuakau/Pukekohe wastewater treatment plant AUTH940331.01.01 <i>There is a new application in process for this discharge</i>	To discharge up to 8450 c/m (dry weather flow) of treated sewage effluent via a seepage bed into the Parker Lane Stream for waste disposal purposes	20/07/1995	30/06/2015	Watercare Services Ltd	Expired s124 protection applies	July 1998, 2003, 2008, 2013 Adverse effects on the environment Compliance
Meremere wastewater treatment plant AUTH105031.01.03	Discharge up to 480 c/m p/d of treated wastewater effluent (up to 160 c/m p/d dry weather flow) from a new constructed sub-surface flow wetland (planted rock filter) to the Waikato River, in the vicinity of SH 1, Meremere	05/08/2003	05/08/2018	Waikato District Council	Current	September 2006, 2009, 2013 Adverse effects on the environment Best practicable option Adequacy and necessity of monitoring
Te Kauwhata wastewater treatment plant AUTH117991.01.01	Discharge treated municipal wastewater from the Te Kauwhata Wastewater Treatment Plant into Lake Waikare.	04/07/2013	04/07/2028	Waikato District Council	Current	September each year, or within 6 months of delivering of investigative reports Adverse effects on the environment Best practicable option Adequacy and necessity of monitoring Inconsistent with Vision and Strategy
Huntly wastewater treatment plant	Discharge up to 11,500 cubic metres per day of treated wastewater from the Huntly	13/04/2011	31/03/2029	Waikato District Council	Current	September to February of 2015, 2020, 2025 Adverse effects on the

Name	Description	Commence Date	Expiry Date	Holder	Auth Status	Type of Review Clause
AUTH119647.01.02	WWTP into the Waikato River					environment Best practicable option Adequacy and necessity of monitoring Inconsistent with Vision and Strategy
Ngaruawahia wastewater treatment plant AUTH119642.01.02	Discharge up to 11,200 cubic metres per day of treated wastewater from the Ngaruawahia WWTP into the Waikato River	14/04/2011	31/03/2029	Waikato District Council	Current	September to February of 2015, 2020, 2025 Adverse effects on the environment Best practicable option Adequacy and necessity of monitoring Inconsistent with Vision and Strategy
Hamilton City wastewater treatment plant AUTH114674.01.01	Discharge treated wastewater from a multi-port diffuser main outfall to the Waikato River to the south-east of the Hamilton Wastewater Treatment Plant; and to discharge the same to the Waikato River via a bypass outfall at times of planned maintenance	18/09/2007	18/09/2027	Hamilton City Council (City Waters)	Current	January, February and March of 2013, 2018, 2023 Adverse effects on the environment Best practicable option Adequacy and necessity of monitoring Require assessment for need to further remove pathogens and reduce E. coli limit if necessary Require assessment for need to further remove nutrients and reduce limits if necessary Change the definitions of summer and winter

Name	Description	Commence Date	Expiry Date	Holder	Auth Status	Type of Review Clause
						Respond to concerns raised by the Tangata Whenua Wastewater Liaison Group
Cambridge wastewater treatment plant AUTH960698.01.02	Discharge up to 7,200 cubic metres of treated sewage effluent from Cambridge: i) to the Waikato River until November 1999, ii) to the ground via rapid infiltration beds after November 1999;	17/12/1996	01/12/2016	Waipa District Council	S 124 protection applies	December to May of 2001, 2006, 2011 Adverse effects on the environment Adequacy and necessity of monitoring Changes in council policy or plans Within 12 months of receiving leachate from landfill assess the effect of that leachate on system
Te Awamutu wastewater treatment plant AUTH103373.01.02 <i>There is a new application in process for this discharge</i>	Discharge treated wastewater to rockfilter and thence to the Mangapiko Stream	03/11/2000	31/10/2015	Waipa District Council	S 124 protection applies	January of 2006, 2011, 2013 Adverse effects on the environment Best practicable option Adequacy and necessity of monitoring.
Otorohanga wastewater treatment plant AUTH123569.01.01	To discharge up to 5000m3 per day of treated wastewater into the Mangaorongo Stream from the Otorohanga Wastewater Treatment Plant.	05/12/2012	02/11/2037	Otorohanga District Council	Current	2017, 2022, 2027, 2032 Adverse effects on the environment Best practicable option Adequacy and necessity of monitoring Inconsistent with Vision and Strategy

Name	Description	Commence Date	Expiry Date	Holder	Auth Status	Type of Review Clause
Te Kuiti wastewater treatment plant AUTH112639.01.01	To discharge treated municipal wastewater to the Mangaokewa Stream from the Te Kuiti Wastewater Treatment Plant	30/01/2015	30/01/2040	Waitomo District Council	Current	2019, 2024, 2029, 2034 Adverse effects on the environment Best practicable option Adequacy and necessity of monitoring Errors or omissions in the application information that materially influenced the decision
Tokoroa wastewater treatment plant AUTH104994.01.01	Discharge up to 900 cubic metres per day of treated wastewater to the Oraka Stream, in the vicinity of SH 27, Tirau	03/02/2004	01/12/2023	South Waikato District Council	Current	June of 2004, 2005, 2006, 2011, 2016, 2021 Adverse effects on the environment Best practicable option Adequacy and necessity of monitoring Changes in council policy or plans
Taupo wastewater treatment plant	Details not provided – land based discharge					
Wairakei Power Station AUTH104712.01.07	Discharge up to 17.2 cubic metres per second of water, cooling water, steam condensate and added contaminants to the Waikato River via the existing cooling water discharge structure, immediately to the east of the Wairakei Power Station or within 100 metres of it	20/08/2007	30/06/2026	Contact Energy Ltd	Current	August to January of 2009, 2011, 2013, 2015, 2017, 2019, 2021, 2023 Adverse effects on the environment Best practicable option Alter conditions in light of Heat Reductions Options Report

Name	Description	Commence Date	Expiry Date	Holder	Auth Status	Type of Review Clause
Kinleith pulp and paper mill AUTH961348.01.02	Discharge water/contaminants to water from processes associated with production of pulp & paper	21/11/2000	01/01/2023	Carter Holt Harvey Ltd	Current	June of 2009, 2016 Best practicable option Implementing rules Adequacy and necessity of monitoring Ensuring conditions are effective in avoiding and mitigating adverse effects Ensuring effects are reduced
Te Rapa Dairy Factory AUTH970032.01.04	(i) to discharge up to 29,500 cubic metres of treated dairy factory wastewater and cooling water per day at a maximum rate of 350 litres per second; and (ii) to discharge up to 3360 cubic metres of factory site stormwater per day at a maximum rate of 2800 litres per second, both to land (in circumstances where it may enter groundwater) and then to the Waikato River in the vicinity of State Highway 1, Te Rapa	29/07/1998	01/09/2017	Fonterra Co-operative Group Limited (Te Rapa Site)	Current	June to August of 2000, 2005, 2010, 2015 Best practicable option Adverse effects on the environment Implementing rules Adequacy and necessity of monitoring
Te Awamutu Dairy Factory AUTH105421.01.02	Discharge up to 12,500 c/m p/d of dairy factory wastewater including all process water, wash down waste, condensate cow water, cooling tower blowdown, and contaminants associated with any of these discharges to the Mangapiko	04/04/2003	01/04/2017	Fonterra Co-operative Group Limited (Te Awamutu Site)	Current	March of 2005, 2008, 2011, 2014 Adverse effects on the environment Best practicable option Adequacy and necessity of monitoring

Name	Description	Commence Date	Expiry Date	Holder	Auth Status	Type of Review Clause
	Stream					
Horotiu Meatworks AUTH100578.01.03 <i>There is a new application in process for this discharge</i>	Discharge up to 7000 cubic metres of treated wastewater and stormwater from meat and dairy product processing to the Waikato River	23/07/2001	01/07/2016	AFFCO NZ Ltd	Expired s124 protection applies	June of 2005, 2010 Implementing rules Adequacy and necessity of monitoring Need to impose further nitrogen and/or phosphorus limits to control phytoplankton growth in the lower Waikato River Need to impose further restrictions on the microbiological quality of the discharge
Hautapu Dairy Factory AUTH961133.01.05	Discharge dairy factory processing water to Waikato River	07/02/2000	31/01/2019	Fonterra Co-operative Group Limited (Hautapu Site)	Current	October of 2004, 2009, 2014 Adverse effects on the environment Best practicable option Adequacy and necessity of monitoring
Tuakau Rendering Plant/ Waikato By-Products AUTH107997.01.02 <i>There is a new application in process for this discharge</i>	Discharge up to 1000 cubic metres per day of treated effluent plus clean process water and stormwater to the Waikato River.	05/09/2005	01/05/2015	Graeme Lowe Protein Ltd	Expired s124 protection applies	November of 2006, 2009, 2012 Adverse effects on the environment Best practicable option Adequacy and necessity of monitoring
Roto-o-rang Piggery AUTH13383.01.01	Discharge up to 100 cubic metres per day of treated piggery wastewater to an unnamed drain that is a	29/11/2006	01/11/2016	Waratah Farms Ltd	Current	June every year Best practicable option Adverse effects on the

Name	Description	Commence Date	Expiry Date	Holder	Auth Status	Type of Review Clause
	tributary of the Mangapiko Stream, near Roto-o-rangi.					environment Adequacy and necessity of monitoring
Lichfield dairy factory AUTH132861.04.01	Discharge low strength dairy manufacturing wastewater to land.	22/01/2015	22/01/2050	Fonterra Ltd	Current	2019, 2024, 2029, 2034, 2039 and 2044 Adverse effects on the environment Best practicable option Inconsistent with Vision and Strategy
Reporoa dairy factory AUTH122691.01.01	Discharge dairy manufacturing wastewater (including stormwater) and dairy farm effluent onto land and associated discharges to air.	09/12/2014	09/12/2034	Fonterra Ltd	Current	Within 6 months of receiving reports required by four consent conditions Adverse effects on the environment Best practicable option Adequacy and necessity of monitoring Inconsistent with Vision and Strategy