

Meeting: Infrastructure Network Committee - 31 July 2018

Name of item: Water and Wastewater Compliance to 18 June 2018

Author: Jessica Crawford - Infrastructure Consents Planner

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Purpose of the report

The purpose of this report is to provide resource consent non-compliance information for water treatment plants and wastewater treatment plants.

Ongoing non-compliance, if not dealt with effectively, may result in legal proceedings, environmental degradation and public health issues.

This is an update report on new non-compliance and material changes since the previous report dated 17 April 2018. The report also reiterates significant on-going non-compliance. Full reports are provided every third committee meeting.

Executive summary

Water Treatment Plants

- The pump test at the Smoothy Road bore was completed in May 2018. The results of the test are still being studied and early indications are that the bore is capable of yielding the water demands of Opononi.

Wastewater Treatment Plants

- Three wastewater treatment plants have had breaches of resource consent limits since the last report. All occurrences have a low significance as they likely to be one-off events.
- Kaikohe Wastewater Treatment Plant discharge volume is trending upwards and will breach consented limits if the trend continues.
- Kohukohu wastewater treatment plant continues to show elevated 5-day median faecal coliform counts.
- At the time of writing this report, staff understand that the Northland Regional Council will be applying for an Enforcement Order on the Council for the ongoing non-compliant discharges from Paihia wastewater treatment plant.

Recommendation/s

The report is noted.

Glossary

Term	Expanded	Purpose
12-day Median	The median value calculated over the most previous 12 results.	A way to remove random noise from a series of data in order to show trends more accurately.
BOD	Biochemical Oxygen	The amount of dissolved oxygen

	Demand	consumed in a waterbody by biological processes breaking down organic matter. Used as a measure of the amount of organic pollution in water.
c/100mL	colony- forming units per 100 millilitres	Used as an indicator of micro-organisms in water.
pH	Potential Hydrogen	Most consent conditions for WWTPs have a requirement of a pH range between 6.5 and 8.5. Most microorganisms live within this pH range.
TSS	Total Suspended Solids	Particles of silt, clay, or organic matter suspended in the water column.

1) Background

This report has been prepared to ensure that elected members are briefed on issues of resource consent compliance at water treatment plants (WTP) and wastewater treatment plants (WWTP).

2) Discussion and options

Water Treatment Plants Compliance Summary

Opononi/Omapere - Smoothy Road bore update

A condition of the resource consent to take water from the Waiotemarama Stream requires that the residual flow must be increased from the 10 litres per second to 14 litres per second by June 2019. Failure to meet this condition will result in non compliance.

The pump test at the Smoothy Road bore was completed in May 2018. Monitoring and pumping took place over 12 days. The results of the test are still being studied, and early indications are that the bore is capable of yielding the water demands of Opononi. Council will be preparing an application to Northland Regional Council for resource consent to take water from the aquifer. It is expected that the application will be lodged before 31 August 2018.

Wastewater Treatment Plant Compliance

Tables below provide information on WWTPs where new non compliance has occurred since the previous report (dated 17 April 2018) and WWTPs with significant on-going non compliance.

Table 1: New non compliance occurrences

Treatment Plant	New non compliance occurrences	Frequency	Significance
Kaero	Breach of downstream pH limit	On-going	Low
Kaikohe	Effluent volume approaching consented discharge volume limit	On-going	High
Kaikohe	Breach of downstream ammonia limit	Infrequent	Low
Taipa	Breach of faecal coliform limit	Infrequent	Low

Kaeo

The lower pH limit is pH 6.5. Both results over the reporting period were non-compliant at pH 5.88 and pH 6.01. The timing of these results corresponds with desludging of the ponds therefore it is expected that the desludging activity is the cause of the low pH. The pH results are expected return to typical within a short period and no further action is planned at this time.

Kaikohe

- (a) The discharge volume limit is 1,710m³/24 hours. Over the reporting period the effluent flows average 1,649m³/24 hours; a significant increase on previous reporting periods. If this trend continues it is likely that there will be a breach of consent. Operations staff are assessing the trend to ascertain its cause.
- (b) The limit for the downstream ammonia is dependent on the discharge pH – at a pH of 8 the ammonia limit is 0.9g/m³. Over the reporting period one result was non-compliant at 2g/m³. This is a high and uncommon result. It is likely to be a one-off and no further action is planned.

Taipa

The limit for faecal coliforms is 1,000c/100mL. The results from this reporting period include a non compliant result of 8,000c/100mL. This is expected to be a one-off result, and is considered to be caused by the recent desludging of the effluent ponds. The faecal coliform count should return to typical within a short period and no further action is planned.

Table 2: Significant ongoing non compliance

WWTP	Significant ongoing non compliance	Frequency	Significance	Update
Ahipara	Operating under two abatement notices. Abatement notices issued due to: (a) on-going breach of 12-day median and 90th percentile faecal coliform limits; and (b) on-going breach of volume of leachate discharged into the pond system from the Ahipara Landfill.	On-going	High	(a)Planned actions continue (b) Flows are now compliant with the consent
Kaitaia	Operating under abatement notice. Abatement notice issued due to ongoing over-flows from the wastewater network.	Ongoing	High	Planned actions continue
Kerikeri	Ongoing breach of E.coli, BOD, TSS and ammonia limits.	On-going	High	Planned actions continue
Opononi	Operating under abatement notice. Abatement notice issued due to ongoing breach of 12-day median and 90th percentile E.coli limits.	On-going	High	Planned actions continue
Paihia	Operating under abatement notice. Abatement notice issued due to ongoing	Ongoing	High	Planned actions

	breach of ammonia.			continue
Russell	Operating under abatement notice. Abatement notice issued due to ongoing breach of E.coli limits.	Intermittent	High	Planned actions continue

Paihia WWTP Enforcement Order

Staff understand the NRC CEO has agreed with apply to the Environment Court for an Enforcement Order to be issued against FNDC for Paihia WWTP. At the time of writing this report no further information is available. A verbal update can be provided at the meeting to give the most current information

Reason for the recommendation

This report is for information purposes.

3) Financial implications and budgetary provision

Financial implications associated with addressing resource consent non-compliance are outside the scope of this report.

Manager: Andy Finch - General Manager – Infrastructure and Asset Management

Compliance schedule:

Full consideration has been given to the provisions of the Local Government Act 2002 S77 in relation to decision making, in particular:

1. A Local authority must, in the course of the decision-making process,
 - a) Seek to identify all reasonably practicable options for the achievement of the objective of a decision; and
 - b) Assess the options in terms of their advantages and disadvantages; and
 - c) If any of the options identified under paragraph (a) involves a significant decision in relation to land or a body of water, take into account the relationship of Māori and their culture and traditions with their ancestral land, water sites, waahi tapu, valued flora and fauna and other taonga.
2. This section is subject to Section 79 - Compliance with procedures in relation to decisions.

Compliance requirement	Staff assessment
State the level of significance (high or low) of the issue or proposal as determined by the Council's Significance and Engagement Policy	This report is significant in that it reports WTPs and WWTPs that are non compliant with consent conditions and/or that are currently operating under enforcement action by NRC.
State the relevant Council policies (external or internal), legislation, and/or community outcomes (as stated in the LTP) that relate to this decision.	This report is for information only.
State whether this issue or proposal has a District wide relevance and, if not, the ways in which the appropriate Community Board's views have been sought.	These issues are operational in nature and Community Board views have not been sought.
State the possible implications for Māori and how Māori have been provided with an opportunity to contribute to decision making if this decision is significant and relates to land and/or any body of water.	This report is for information only. Where appropriate, Maori representatives are regularly updated regarding WTP and WWTP compliance with resource consent conditions.
Identify persons likely to be affected by or have an interest in the matter, and how you have given consideration to their views or preferences.	Interested parties include: <ul style="list-style-type: none"> • NRC • Community Liaison Groups, established as a requirement of conditions of resource consent for discharges from some of the WTPs and WWTPs; • Public Health Officer • General public who interact with the waterways and sites where WTP and WWTP discharges are located.

State the financial implications and where budgetary provisions have been made to support this decision.	This report is for information-only.
Chief Financial Officer review.	