

CONSENT MONITORING REPORT



Your Community Partner

Consent Name	Raglan Wastewater Treatment System
Consent No.	971390
Year	2009-10
Date	28 September 2010
File No.	55 06 17M / USV03

District Office
15 Galileo St, Private Bag 54
Ngaruawahia New Zealand
Ph 07 824 8633
Fax 07 824 8091
Call Free 0800 492 452
www.waikatodistrict.govt.nz

Area Offices
Huntly 07 828 7551
Raglan 07 825 8129

REPORT/COMMENTS

Raglan Wastewater Treatment System

The Waikato District Council holds resource consent to discharge up to 2600 cubic metres of treated wastewater per day into the Raglan Harbour. The consent was issued on 1 Feb 2005 and has an expiry date of 14 February 2020.

The data summarises annual monitoring test results for the parameters monitored at the consented site.

A review of the compliance with consent conditions during the 2009-2010 reporting year indicated that the treatment system is closer to meeting the water quality parameters of the resource consent than in the previous period and is likely to be having no more than a minor effect on the receiving environment. The exception to this was suspended solids which in summer is generally algae.

For 9 days in October 2009 and June 2010 there was pumping outside the consented tidal times due to extreme weather and high inflows into the treatment plant. Pumping was done to avoid overtopping of the treatment ponds and Environment Waikato were notified of these events at the time.

The median maximum daily flow was estimated 1637 cubic metres per day over the total reporting period.

Summary of discharge quality to Raglan harbour

Non-compliant Suspended Solids

The Target Median was 20 g/m³. The 90th Percentile target was 30 g/m³.

Performance similar to the previous period.

- The Median value for the 2009-2010 year was 75 g/m³, up from 58.5 g/m³ in 2008-2009.
- Maximum recorded value was 130 g/m³ in Dec 2009.
- The 90th Percentile target was exceeded at 117 g/m³, up from 100 g/m³ in 2008-2009.

Suspended solids levels have continued to exceed the limits.

Non-Compliant Biochemical Oxygen Demand

The Target Median was 10 g/m³. The 90th Percentile target was 20 g/m³.

Similar results to the previous year, very nearly compliant.

- The Median value for the 2009-2010 year was 12 g/m³ up from 11 g/m³ in the previous period.
- Maximum recorded value was 26 g/m³ down from 29 g/m³ for the previous year.
- The 90th Percentile value was 21 g/m³ largely unchanged from the previous year.

Compliant Faecal Coliforms

The Target Median was 14 MPN/100mL. The 90th Percentile target was 43 MPN/100mL.

Significant improvement on previous period due to UV system.

- The Median value for the 2009-10 year was 2 MPN per 100mL.
- The 90th Percentile value was 38 MPN per 100mL

Compliant Enterococci

The Target Median was 35 MPN/100mL.

Significant improvement on the previous year due to UV system.

- The Median value for the 2009-2010 year was 6 MPN per 100mL, for the period 17 December 2009 to 30 January 2010.
- Only one sample collected produced a positive result at 2 MPN/100mL. All other results were reported as less than 2 MPN/100mL or less than 10 MPN/100mL.

Summary of Treatment Issues and Improvement Plans

The results for this year are markedly improved on the previous period in most areas except suspended solids. However the current system is still not operating to its full potential in a number of areas and these will be addressed in the upcoming period.

The results for this year are similar to the previous period in most areas except Faecal Coliforms and Enterococci where significant improvement is evident.

1. The previous annual report described a problem with the Aquamats in the primary and secondary ponds. The manufacturers representative described low biological growth and heavy metals.

A trial was performed to install a cleaned and a new Aquamat side by side in the Primary pond and measure if normal biological cover occurred. After a month the biota on the replacement mats was no different from on the existing original mats beside them. A research Memorandum of Understanding was signed between Wintec and Waikato DC for and they assisted with the trial and Aquamat examinations.

2. The discharge compliance with the Suspended Solids requirement has not been achievable. It has been suspected that the final holding pond is not improving elevated Suspended Solids levels due to lack of settlement action.

It was suspected and reported in the last Annual Report to EW that final Suspended Solids levels had been degraded by influent turbulence scouring. This has disturbed the holding pond bed. The influent pipe manifold was subsequently modified so that horizontal scouring

could not occur. This appeared to help for September and October 2009 however high blue green algae levels over summer are considered responsible for a portion of the summer SS exceedences.

3. The anaerobic ponds had been bypassed for a period to see if this would help address the odour issue. Another solution was devised to aerate the anaerobic pond surface but without release of odours. A trial surface aeration system was installed as an attempt to create an aerobic cap to mitigate the odour release. In general this was successful but subject to abrupt change in response to increased infiltration flows that flushed the ponds or changed the pH.

It was found that this in conjunction with keeping the pH above approximately 7.2 reduced odours acceptably. A project to install a permanent enlarged surface aeration system was planned and installation completed in September 2010. Daily addition of 50kg of Soda Ash into the Marine Parade pump station is now used to assist pH control. This pump station collects and delivers all the Raglan reticulated sewerage direct to the treatment plant.

4. The ongoing reporting of flows and daily inflow and discharge volumes was interrupted by several different telemetry equipment failures in March, April and May 2010 and the process of repair took considerably longer than expected.

5. During 2009-2010 period WDC conducted an investigation into the limitations and problems with the entire telemetry system. In the 2010-2011 year it is intended to upgrade the system so that the recommendations for improvement can be actioned.

6. In October 2009 and June 2010 especially high rainfall meant that unscheduled discharges were required to reduce pond levels. The October event and community feedback led to the development of an improved Unscheduled Discharge Communications Plan. This was used successfully in June and appropriate notifications given to Iwi and the community.

The 2010-2011 period requires further development and investigations to achieve better overall performance, however the progress is occurring.

.....
H Cameron
PLANTS ENGINEER

.....
R Bax
GENERAL MANAGER
WATER & FACILITIES