

CONSENT MONITORING REPORT



Your Community Partner

Consent Name	Meremere Wastewater Treatment System
Consent No.	107031 – 107032 - 107033
Year	1 July 2010 – 30 June 2011
Date	26 September 2011
File No.	55 06 14M / USV03

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REPORT/COMMENTS

Meremere Wastewater Sewage Treatment Discharge 1 July 2010 – 30 June 2011

Resource consent 107031 authorises the Waikato District Council to discharge up to 480 cubic metres per day of treated domestic wastewater from the Meremere oxidation pond and wetland system to the Waikato River. The current consent came into effect August 2003.

The Meremere wastewater treatment system generally showed a continuing difficulty in meeting the daily discharge maximum volume consent conditions. Daily discharge volumes were exceeded regularly due to very heavy local rainfall and infiltration.

The maximum average daily flow was 857 cubic metres per day over the total reporting period. The 90th percentile maximum flow was 1805 m³/day. The 90th percentile average daily flow was 536 m³/day. The median maximum daily flow was 743 m³/day. The median average daily flow was 355 cubic metres per day over the reporting period.

Summary of discharge quality to Waikato River

Compliant TKN

The Target Median was 12 g/m³. The 90th Percentile target was 15 g/m³.

- Median value was compliant at 8 g/m³, down from 11.5 g/m³ in the previous period.
- The 90th Percentile value was compliant at 13.56 g/m³, down from 15.8 g/m³ in the previous period.
- Maximum recorded value was 21 g/m³ in December 2010.

Compliant Total Ammonia

The Target Median was 8 g/m³. The 90th Percentile target was 10 g/m³.

- The Median value was 1.35 g/m³, down from 7.95 g/m³ in 2009-2010.
- The 90th Percentile value was 2.34 g/m³, down from 14.8 g/m³ in 2009-2010.
- Maximum recorded value was 8.40 g/m³ in June 2011.

Compliant TP

The Target Median was 5 g/m³. The 90th Percentile target was 7 g/m³.

- The Median value was 1.97 g/m³, down from 3.6 g/m³ in 2009-2010.
- The 90th Percentile value was 3.69 g/m³, down from 6.44 g/m³ in 2009-2010.
- Maximum recorded value was 5.5 g/m³ in Dec 2010.

Partially-compliant cBOD5

The Target Median was 15 g/m³. The 90th Percentile target was 20 g/m³.

- The Median value was 14.1 g/m³, up from 8.25 g/m³ the previous period.
- The 90th Percentile value was 20.6 g/m³, down from 21.75 g/m³ for 2009-2010.
- Maximum recorded value was 28 g/m³ in Dec 2010.

Non-compliant SS

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

- The Median value was 63 g/m³, up from 37 g/m³ in 2009-2010.
- The 90th Percentile value was 116 g/m³, up from 106 g/m³ in 2009-2010.
- Maximum recorded value was 320 g/m³ Dec 2010.

Non-compliant E Coli

The Target Median was 630 MPN/100mL. The 90th Percentile target was 3500 MPN/100mL.

- The Median value was 3000 MPN/100mL, up from 570 in 2009-2010.
- The 90th Percentile value was 20000 MPN/100mL, down from 20280 MPN/100mL in 2009-2010.
- Maximum recorded value was 23000 MPN/100mL in Jan 2011.

Non-compliant Faecal Coliforms

The Target Median was 900 MPN/100mL. The 90th Percentile target was 5000 MPN/100mL.

- The median value was 5400 MPN/100mL, up from 570 in 2009-2010.
- The 90th Percentile value was 34000 MPN/100mL, same as 2009-2010.
- Maximum 43000 MPN/100mL in Jan 2011.

Summary of Nutrient load discharged to Waikato River

Total Nitrogen

- Median value for the 2010/2011 year was 2.80 kg/day.
- The 90th Percentile value was 4.58 kg/day.
- Maximum recorded daily total was 6.5 kg/day in June 2011.

Total Phosphorous

- Median value for the 2010/2011 year was 0.71 kg/day.
- The 90th Percentile value was 1.15 kg/day.
- Maximum recorded daily total 1.21 kg/day in Jan 2011.

Improvements and future work

An upgrade of the treatment plant commenced in May 2011. The focus of the upgrade was to improve the operational elements for the pond providing hydraulic separation and a facility to control the levels of the main pond and thus improve the retention of effluent during periods of high infiltration. The Electrical, Telemetry and control elements have been completed, replaced and upgraded to provide a reliable system. Previously the UV unit was damaged due to debris entering the pumping main. Steps have been taken to install bucket filters which will prevent this situation occurring in the future. The UV unit has been re-commissioned and a regular service agreement with an agent is being set up to ensure reliable treatment is maintained.

Additional works planned for 2011/2012 include replacing the diffuser at the existing discharge point. The new diffuser has already been manufactured. There will be additional planting of the wetland which will involve local Iwi and Council representatives.

In regard to storm water infiltration, work has been undertaken to investigate the causes of the infiltration and to eliminate by renewing pipework or diverting storm water away from the wastewater reticulation network. Examples of work done include relining existing pipelines, resealing of manhole chambers and diverting illegal house connections. However it must be noted that infiltration is still apparent and that further works are planned for the coming year 2011/2012.

As previously discussed with WRC it is acknowledged that the performance of the treatment plant would never be able to fully meet the current consent conditions all of the time, other than introducing superior technology, which would require a substantial capital and ongoing operational expenditure. Therefore the works implemented will provide a basis to monitor, record and analyse the treatment plants performance. It is then planned to determine options for the plant's future so that agreed consent conditions can be met as required by WRC. It is planned for the monitoring of the treatment plant to run over the next 12 months and to provide base line of the results. Council will then prepare an options study which will provide basis for an informed decision to the future of the plant.

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