

Report on Compliance with the Drinking-water Standards for New Zealand 2005 (Revised 2008) and duties under Health Act 1956

For Period: 1st July 2017 to 30th June 2018

Drinking Water Supplies:

Whatatutu (WHA004)

Te Karaka (TEK002)

Gisborne City (GIS001)

Water Supplier:

Gisborne District Council

Central North Island Drinking Water Assessment Unit

Gisborne Branch Office

Population Health

Te Puna Waiora

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Gisborne

Report Identifier

GDC_DWSNZ2005/08Compliance_021018_v1

Executive Summary

This report provides GDC with the results from an assessment of the Gisborne City, Te Karaka and Whatatutu water supplies. This assessment was carried out against the following compliance standard and statute:

- The DWSNZ
- Part 2A of the Act

DWAs are required to undertake this assessment under section 69ZL of the Act. The period for this assessment was 1st July 2017 to 30th June 2018.

Table 1.1: Summary of Treatment Plant DWSNZ Compliance

Plant Name	Bacterial Compliance	Protozoa Compliance	Cyanotoxin Compliance	Chemical Compliance	Radiological Compliance	Overall Compliance
Waingake (TP00174)	Yes	No	Yes	Yes	N/A	No
Waipaoa (TP00175)	Yes	Yes	N/A	N/A	N/A	Yes
Te Karaka (TP00176)	Yes	Yes	N/A	N/A	N/A	Yes
Whatatutu (TP00177)	Yes	Yes	N/A	N/A	N/A	Yes

Table 1.2: Summary of Distribution Zone DWSNZ Compliance

Distribution zone name	Bacterial Compliance	Cyanotoxin Compliance	Chemical Compliance	Overall Compliance
Gisborne City (GIS001GI)	Yes	N/A	N/A	Yes
Gisborne Rural (GIS001RU)	Yes	N/A	N/A	Yes
Te Karaka (TEK002TE)	Yes	N/A	N/A	Yes
Whatatutu (WHA004WH)	Yes	N/A	N/A	Yes

Summary of water supplier duties under the Health Act

Section 69S – Duty of suppliers in relation to the provision of drinking water	Met for all supplies
Section 69U – Duty to take reasonable steps to contribute to protection of source of drinking water	Met for all supplies
Section 69ZD – Duty to keep records and make them available	Met for all supplies
Section 69ZE – Duty to investigate complaints	Met for all supplies

The assessment was undertaken by Cathy Walker (DWA Trainee) and Reynold Ball (DWA) both part of CNIDWAU. The results are based on the information provided by Ralph Ogden, Senior Treatment Plant Operator, and Peter Hancock, Environmental Monitoring Team Leader. Information related to sampling, storage and transportation methods was assessed as part of the 'Assessing and Authorising the Competence of Persons performing analyses or calibration' assessment in 2016.

Priority tasks

The DWA considers the following tasks as priority for the upcoming 2018/2019 compliance year:

1. Reassessing and authorising GDC, as an organisation, to perform analyses, verifications and calibrations.
2. Monitoring the correlation between the monitoring point at the Waingake Treatment Plant and the point after 30 minutes contact time where the correlation was established in 2010.
3. Supplying the results from the 2018 *Cryptosporidium* monitoring at Waingake, to the DWA, for log credit assignation.

This report aligns with the information entered in the Ministry of Health 'Annual Survey of Drinking-water Quality 2017-2018' which will populate the Minister of Health's 'Annual Report on Drinking Water 2017-2018'. The Minister's report will be publicly released during the year 2018-2019.

Terminology

Non-Compliance = Areas where the drinking water supply does not comply with the DWSNZ.

Abbreviations

CNIDWAU	Central North Island Drinking Water Assessment Unit
DWA	Drinking Water Assessor
DWO	Drinking Water Online
DWSNZ	Drinking Water Standards for New Zealand 2005 (Revised 2008)
<i>E. coli</i>	<i>Escherichia coli</i>
GDC	Gisborne District Council
L/sec	Litres per second
MAV	Maximum Acceptable Value
Mg/L	Milligrams per litre
MoH	Ministry of Health
MPN	Most Probable Number
NES	National Environmental Standard
NTU	Nephelometric Turbidity Unit
pH	Potential of hydrogen
RMA	Resource Management Act 1991
The Act	Health Act 1956, Part 2A
UV	Ultraviolet
UVI	Ultraviolet Intensity
UVT	Ultraviolet Transmittance
W/m ²	Watts per square metre
mJ/cm ²	Millijoules per square centimetre

Treatment Plants

Treatment Plant: Bacterial compliance

Bacterial compliance is under section 4 of the DWSNZ.

Table 2.1.1: Summary of section 4.3: Compliance criteria for water leaving the treatment plant

Plant name	Treatment Parameter	Requirements in DWSNZ	Summary of monitoring results	Compliance
Gisborne water supply –Waingake criterion 2A for city zone				
Waingake (TP00174)	Turbidity	Daily 95% samples <1NTU No sample >2 NTU	Daily 95% samples <1NTU No sample >2 NTU	Compliant
	FACE	Daily 98% of samples ≥ 0.2mg/L	Daily 98% of samples ≥ 0.2mg/L	Compliant
Gisborne water supply –Waipaoa criterion 2A				
Waipaoa (TP00175)	Turbidity	Daily 95% samples <1NTU No sample >2 NTU	Daily 95% samples <1NTU No sample >2 NTU	Compliant
	FACE	Daily 98% of samples ≥ 0.2mg/L	Daily 98% of samples ≥ 0.2mg/L	Compliant
Te Karaka water supply - criterion 5				
Te Karaka (TP00176)	Compliance is achieved by meeting protozoal compliance – see Summary of Treatment Processes, associated Log Credits and Compliance Assessment			Compliant
Whatatutu water supply - criterion 5				
Whatatutu (TP00177)	Compliance is achieved by meeting protozoal compliance – see Summary of Treatment Processes, associated Log Credits and Compliance Assessment			Compliant

Compliance with operational requirements

Waingake Treatment Plant (TP00174) – Criterion 2A for city zone – All requirements met

The water leaving the Waingake Treatment Plant is continuously monitored for pH, FAC and turbidity. A monthly report, including both raw data measurements and a daily analysis of the FACE and turbidity data, in relation to compliance requirements for these parameters, was supplied from GDC. The reports show the number of data readings (the minimum, maximum and average readings), the number of readings above the set point, what percentage of the readings were compliant and the overall compliance status for that day. GDC supply SCADA printouts, diary notes and an explanation when the monitoring results do not meet compliance requirements.

Explanations were provided for the Waingake Water Treatment Plant for the 4th and 21st of January 2018 and for the 19th of April 2018. The explanations were accepted by the DWA and remedial actions taken ensured non-compliant water was not delivered to the city zone.

Waipaoa Treatment Plant (TP00175) – Criterion 2A - All requirements met

The Waipaoa Treatment Plant provides water in an emergency and supplements the Waingake supply. The Waipaoa Treatment Plant was activated as a supplementary supply for 16 days from the 5th to the 20th December 2017.

The water leaving the Waipaoa Treatment Plant is continuously monitored for pH, FAC and turbidity. A report, including both raw data measurements and a daily analysis of the FACE and turbidity data, in relation to compliance requirements for these parameters, was supplied from GDC. The report showed the number of data readings (the minimum, maximum and average readings), the number of readings above the set point, what percentage of the readings were compliant and the overall compliance status for that day. GDC supply SCADA printouts, diary notes and an explanation when the monitoring results do not meet compliance requirements.

Explanations were provided for the Waipaoa Water Treatment Plant for the 9th and 17st of December 2017. Non-compliant water was not delivered to customers.

Compliance with sampling / analytical / remedial requirements

Waingake Treatment Plant (TP00174) – Criterion 2A for city zone - All requirements met.

Waipaoa Treatment Plant (TP00175) – Criterion 2A - All requirements met.

Section 4.3.2.1 Compliance criteria 2A

1. The applicable sampling and analytical requirements in sections 4.3.6 and 4.3.7 were met (see below).
2. FAC, pH and turbidity are measured continuously. The requirements of section 3.2 were met (see below).
3. Monitoring requirements for FACE were met (see Table 2.1.1).
4. Chlorine contact time is discussed in 4.3.7.2 and has been assessed as met.

Section 4.3.6: Compliance sampling and analytical requirements

Section 4.3.6.1: General

- Persons performing analyses or calibration have been assessed by the DWA; GDC was authorised in 2016. Reassessment is due in 2019.
- Procedures for sample collection and storage, testing and reporting were appropriate.
- Referee methods in Appendix 2 were followed.

Section 4.3.7: Sampling sites for bacterial compliance

Section 4.3.7.2: Disinfectants

- When the flow through the Waingake Water Treatment Plant is high and the level in the clearwater reservoir is low, 30 minutes contact time is not achieved. A correlation has been established and is documented. There is no evidence the correlation is being monitored.

Section 4.3.7.3: pH

- pH is measured close to where FAC is measured
- Individual filter and combined turbidity sampling is undertaken.

Section 4.3.7.4: Turbidity

- pH is measured.

3.2 Continuous monitoring requirements

1. (a) One minute measurements are made for:
 - i. Turbidity.(b) Five minute measurements are made for:
 - i. chlorine concentration.
 - ii. pH.
2. Continuous monitors were standardised as required. An alarm is installed on all compliance meters.
3. The DWA was informed when the disinfection dosing at Waingake did not meet the relevant criteria. The actions outlined in Section 3- 'Alarm assessment Procedures' in the GDC 'Treatment Operation Manual –Work Instructions' were followed. Non-compliant water was not delivered to the customers in the city zone.

4. Turbidity monitors are independent.

Waingake Treatment Plant (TP00174) – Criterion 1 for rural zone

Table 2.1.2: Summary of *E.coli* sampling results

Plant name	Number of samples required	Number of samples collected	Number of transgressions	Compliance
Waingake (TP00174)	104	128	0	Compliant

Section 4.3.1.1

1. The water leaving the treatment plant was monitored for *E. coli* at a frequency greater than required.
2. No *E. coli* was found.
3. The applicable sampling and analytical requirements in sections 4.3.6, 4.3.7 and 4.3.8 were met.

Section 4.3.6.2

- *E. coli* samples are collected aseptically. GDC have procedures to ensure timing, transport and temperature requirements are met. A MoH recognised laboratory is used: Watercare Services Ltd.

Section 4.3.7.1

- *E. coli* samples are collected from water leaving the Treatment Plant.

Section 4.3.8.1

- *E. coli* samples were collected using six days of the week and apart from one occasion (5/12/17), when a sample was delivered late to the laboratory, the days between samples requirement was met. On this occasion a further sample was taken the following day. Leniency was given on this matter.

Treatment Plant: Protozoa compliance

Protozoal compliance is under section 5 of the DWSNZ.

Table 2.2.1: Protozoa Log credit Requirement

Plant Name	Protozoal Risk Category	Log Credit Required
Waingake (TP00174)	Water from forest, bush, scrub or tussock catchments with no agricultural activity	3*
Waipaoa (TP00175)	Water from pastoral catchment that always has low concentrations of cattle, sheep, horses or humans in immediate vicinity or upstream	3*
Te Karaka (TP00176)	Water from pastoral catchment that always has low concentrations of cattle, sheep, horses or humans in immediate vicinity or upstream	4
Whatatutu (TP00177)	Water from pastoral catchment that always has low concentrations of cattle, sheep, horses or humans in immediate vicinity or upstream	4

*Determined from 5 yearly *Cryptosporidium* monitoring

Summary of Compliance with Risk Categorisation process

Section 5.2.1.1 Catchment risk category approach.

Te Karaka (TP00176) - The 4 log credits required for this plant was determined from the Te Karaka Catchment Risk Assessment submitted in May 2018. Reassessment is required before May 2023.

Whatatutu (TP00177) - The four log credits required for this plant was determined from information provided in the Whatatutu WSP, which was approved in December 2017. Reassessment is required before December 2022

Section 5.2.1.2 *Cryptosporidium* monitoring

Waingake (TP00174) - A three log removal requirement was determined by protozoa monitoring undertaken by GDC and confirmed by the DWA on the 30th of July 2014. As protozoa monitoring must be repeated every five years repeat sampling was initiated in January 2018.

Waipaoa (TP00175) - A three log removal requirement was determined by *Cryptosporidium* monitoring undertaken by GDC and confirmed by the DWA on the 15th of February 2012. GDC provided *Cryptosporidium* monitoring results completed in early 2017 to CNIDWAU for assessment. The assessment was completed on the 29th of August 2017 and concluded that 3-log was determined by *Cryptosporidium* monitoring. Repeat sampling is not due again until 2021.

Table 2.2.2: Summary of Treatment Processes, associated Log Credits and Compliance Assessment

Plant name	Treatment Process ¹	Potential Log Credit Available	Summary of Turbidity results	Compliance with all other requirements of criterion ²	Log credit achieved
Waingake (TP00174)	Coagulation, sedimentation and filtration	3	Water turbidity exceeded 1NTU for more than 3 minutes on 4/1/2018	Yes	0
Waipaoa (TP00175)	Coagulation, sedimentation and filtration	3	Met requirements	Yes	3
Te Karaka (TP00176)	Coagulation direct filtration	2.5	Met requirements	Yes	2.5
	UV	3	Met requirements	Yes	3
Whatatutu (TP00177)	Coagulation direct filtration	2.5	Met requirements	Yes	2.5
	UV	3	Met requirements	Yes	3

¹ Treatment Process meeting DWSNZ definition of available combination of treatment technology

² Further details provided below under log credit assessment

Summary of Log Credit Assessment

Waingake (TP00174) – Not all applicable requirements met – 0 Log credits achieved

Section 5.4: Coagulation, sedimentation and filtration – Applicable requirements met

5.4.1 Log credit assessment

1. (a) Filtration is of a rapid granular media design.
- (b) All water passes through the process.
- (c) The monitoring requirements of section 5.4.2 are met.
- (d) Measurements of turbidity of the water leaving each filter met the following requirements
 - i) The turbidity does not exceed
 - A. 0.30 NTU for more than 5% of the time over the compliance monitoring period.
 - B. 0.50 NTU for more than 1% of the time over the compliance monitoring period.

5.4.2 Monitoring

1. The turbidity of the water leaving each filter is measured as required.
3. Requirements of section 3.2 are met.

3.2 Continuous monitoring requirements

1. (a) One minute measurements are made for:
 - ii. Turbidity.
2. Continuous monitors were standardised as required. An alarm is installed on all compliance meters.
3. The DWA was informed when monitoring did not meet relevant criteria. The actions outlined in Section 3- 'Alarm assessment Procedures' in the GDC 'Treatment Operation Manual –Work Instructions' were followed.
4. Turbidity monitors are independent.

Section 5.4: Coagulation, sedimentation and filtration – Applicable requirements not met

5.4.1 Log credit assessment

1. (d) Measurements of turbidity of the water leaving each filter met the following requirements
 - i) The turbidity does not exceed
 - C. 1.0 NTU for the duration of any 3 minute period.

On 4th January 2018 a slug of high turbidity water (>100NTU) came onto the plant. This resulted in the filters being unable to treat the water to compliance level for about half an hour. The flow was stopped and the water was scoured to waste. The scouring point is in the rural zone past the first customers. All non-compliant water was scoured before flow into the main city area was resumed.

Waipaoa (TP00175) – Complied - All applicable requirements met – 3 Log credits achieved

Section 5.4: Coagulation, sedimentation and filtration

5.4.1 Log credit assessment

1. (a) Filtration is of a rapid granular media design.
- (b) All water passes through the process.
- (c) The monitoring requirements of section 5.4.2 are met.
- (d) Measurements of turbidity of the water leaving each filter met the following requirements
 - i) The turbidity does not exceed
 - A. 0.30 NTU for more than 5% of the time over the compliance monitoring period.
 - B. 0.50 NTU for more than 1% of the time over the compliance monitoring period.
 - C. 1.0 NTU for the duration of any 3 minute period.

5.4.2 Monitoring

1. The turbidity of the water leaving each filter is measured as required.
3. Requirements of section 3.2 are met.

3.2 Continuous monitoring requirements

1. (a) One minute measurements are made for:
 - ii. Turbidity.
2. Continuous monitors were standardised as required. An alarm is installed on all compliance meters.
3. There were no notifications required to be notified.
4. Turbidity monitors are independent.

Te Karaka (TP00176) – Complied - All applicable requirements met – 5.5 Log credits achieved
Whatatutu (TP00177) – Complied - All applicable requirements met – 5.5 Log credits achieved

Section 5.5: Coagulation, direct filtration

5.5.1 Log credit assessment

1. Filtration is of a rapid granular media design.
2. All water passes through the process.
3. The monitoring requirements of section 5.5.2 are met (see below).
4. Measurements of turbidity met the following requirements
 - (a) For continuous monitoring the turbidity does not exceed
 - A. 0.30 NTU for more than 5% of the time over the compliance monitoring period.
 - B. 0.50 NTU for more than 1% of the time over the compliance monitoring period.
 - C. 1.0 NTU for the duration of any 3 minute period.

5.5.2 Continuous monitoring requirements

1. Turbidity is measured at the required frequency – continuous measurements are made every minute, manual measurements are made daily.
3. Requirements of section 3.2 are met for continuous monitoring (see below).
4. The compliance monitoring period is one month for continuous monitoring and one year for manual monitoring.

5.3.3 Preventative and remedial actions

The turbidity monitoring results did not exceed those specified in 5.5.1.

3.2 Continuous monitoring requirements

1. (a) One minute measurements are made for:
 - i. Turbidity.
2. Continuous monitors were standardised as required. An alarm is installed on all compliance meters.
3. The DWA would be informed if monitoring did not meet relevant criteria. The treatment plant shuts down on high turbidity alarms.

Section 5.16: Ultraviolet light disinfection

5.16.1 Log credit assessment

1. All water passes through the UV reactor.
2. The monitoring requirements of section 5.16.3 are met (see below).
3. Measurements of UVI met the requirements
 - a. $>17.4 \text{ W/m}^2$ for more than 95% of the compliance monitoring period.
 - b. There was no 3 minute period where the UVI measured $< 80\%$ of 17.4 W/m^2 .
4. The water entering the reactor met:
 - b. The turbidity requirements
 - i. For continuous monitoring the turbidity did not exceed
 - A. 1.0 NTU for more than 5% of the monitoring period.

- B. 2.0 NTU for any 3 minute period.
- 5. b. i. All samples had greater than 80% transmittance.
- 6. The equipment was operated within the validated flow range of <3 L/sec.

5.16.2 Validation

The UV unit is validated to provide a guaranteed minimum dose of 40 mJ/cm² as long as flow is <3L/s and UVI is above 17.4 W/m².

5.16.3 Monitoring

1. The monitoring requirements were met
 - Total flow is continuously monitored.
 - A flow restrictor is in place for each UV reactor.
 - Turbidity is monitored continuously, online, and on a daily basis, using field equipment (weekly monitoring is required).
 - UVI is measured continuously.
 - UVT is measured daily (weekly monitoring is required).
 - Lamp replacement hour meter is continuously monitored and recorded daily.
 - Lamp outage is monitored continuously. UVI is alarmed.
2. The standardisation and replacement meets the requirements
 - a. Duty sensors
 - i. Standardisation of sensor is done monthly.
 - ii. A reference is used.
 - b. Reference sensor
 - ii. The reference sensor replaces a duty sensor after 12 months and a new sensor is purchased.

5.16.4 Preventative and remedial actions

The UV monitoring results did not exceed those specified in 5.16.1.

Log Credit Total (Total of all Treatment Processes) Achieved:

Waingake (TP00174):	0 log credits
Waipaoa (TP00175):	3 log credits
Te Karaka (TP00176):	5.5 log credits
Whatatutu (TP00177):	5.5 log credits

Treatment Plant: Cyanotoxin compliance

Cyanotoxin compliance is under section 7 of the DWSNZ

Summary of Management Protocol Compliance

Waingake (TP00174) – GDC have developed a protocol that was approved by the DWA in 2012. No evidence of cyanobacteria bloom was found in the source water for the period of 1 July 2017 to 30 June 2018.

Waipaoa (TP00175) – The source water for this drinking water supply has not previously been identified as experiencing algal blooms. The DWA may review this opinion in the future.

Te Karaka (TP00176) – Based on the relatively consistent turbidity results from this bore and the criteria stated within DWSNZ, the DWA does not consider this to be applicable to the source bore.

Whatatutu (TP00177) – The source water for this drinking water supply has not previously been identified as experiencing algal blooms. The DWA may review this opinion in the future.

Treatment Plant: Chemical compliance

Chemical compliance is under section 8 of the DWSNZ

Waingake (TP00174), Waipaoa (TP00175), Te Karaka (TP00176) and Whatatutu (TP00177): A Plumbosolvent water notice was provided to consumers at the specified frequency during the compliance period. Notices were published in the newspaper and feature on the GDC website.

Table 2.3: Priority 2 Determinands: Monitoring Results

Plant Name	Priority 2 Determinands	No. of samples required	No. of samples taken	Transgressions	Compliance
Waingake (TP00174)	Fluoride	52	52	0	Compliant
Waipaoa (TP00175)	No Priority 2 Determinands assigned				
Te Karaka (TP00176)	No Priority 2 Determinands assigned				
Whatatutu (TP00177)	No Priority 2 Determinands assigned				

Priority 2 Determinands: Summary of compliance with general sampling/ remedial actions / analytical requirements - Waingake (TP00174)

8.2 Compliance criteria

8.2.1.1 General

1. Samples are taken at an agreed site and at the required frequency.
2. Sampling and analytical techniques comply with DWSNZ. The referee method is used - Ion selective electrode. Testing is undertaken by Watercare Services Ltd, a MoH recognised laboratory.
4. No samples were above the MAV.
5. As for 4.

8.3 Monitoring

8.3.1 Sampling sites

Samples are collected in the distribution zone as the concentration is unlikely to change in the distribution zone.

8.4 Transgressions and remedial actions

- No samples were above the MAV.

Treatment Plant: Radiological compliance – Not applicable to any GDC supply

Radiological compliance is under section 9 of the DWSNZ

Radiological compliance is not applicable to surface or shallow groundwater that is considered to be the equivalent of surface water.

Distribution Zones

The following compliance information was derived from DWO.

Distribution Zone: Bacterial compliance

Distribution zone bacterial compliance is under section 4.4 of the DWSNZ

Summary of *E.coli* sampling results

Table 3.1: Summary of Section 4.4.1 Compliance criterion 6A for drinking-water in a distribution zone

Distribution zone name	Number of samples required	Number of samples collected	Number of transgressions	Compliance with other requirements	Overall compliance
Gisborne City (GIS001GI)	124	137	0	Yes	Yes
Gisborne Rural (GIS001RU)	12	12	0	Yes	Yes
Te Karaka (TEK002TE)	12	12	0	Yes	Yes
Whatatutu (WHA004WH)	52	58	0	Yes	Yes

Summary of compliance with general sampling / analytical / remedial action requirements

Section 4.4.1

1. Water in the distribution is monitored for the presence of *E. coli*.
2. The sampling sites and frequency meets section 4.4.3 and 4.4.4 requirements (see below).
3. *E. coli* was not detected in any sample.
4. The sampling and analytical procedures comply with section 4.3.6.

Section 4.4.3

- Sampling is undertaken to a plan that provides a wide coverage of the distributions. The sampling points have been agreed with the DWA.

Section 4.4.4

- Sampling frequencies met or exceed requirements (see above summary).
- Maximum days between samples were met.
- Minimum days of the week used for sampling.

Section 4.3.6: Compliance sampling and analytical requirements

Section 4.3.6.1: General

- Persons performing analyses or calibration have been assessed by the DWA; GDC was authorised in 2016. Reassessment is due in 2019.
- Procedures for sample collection and storage, testing and reporting were appropriate.
- Referee methods in Appendix 2 were followed.

Section 4.3.6.2

- *E. coli* samples are collected aseptically. GDC have procedures to ensure timing, transport and temperature requirements are met. A MoH recognised laboratory, Watercare Services Ltd., was used for analysis.

Distribution Zone: Cyanotoxin Compliance – Not applicable to any GDC supply

Cyanotoxin compliance is under section 7 of the DWSNZ

Distribution Zone: Chemical compliance - Not applicable to any GDC supply

Chemical compliance is under section 8 of the DWSNZ

Table 3.2: Summary of Distribution Zone DWSNZ Compliance

Distribution zone name	Bacterial Compliance	Cyanotoxin Compliance	Chemical Compliance	Overall Compliance
Gisborne City (GIS001GI)	Yes	N/A	N/A	Yes
Gisborne Rural (GIS001RU)	Yes	N/A	N/A	Yes
Te Karaka (TEK002TE)	Yes	N/A	N/A	Yes
Whatatutu (WHA004WH)	Yes	N/A	N/A	Yes

Summary of Audit Activities to Verify DWSNZ Monitoring Data

Data verification activities were undertaken during the year and completed during the Ministry of Health's annual drinking-water survey. Sampling results for the GDC's water supplies is collated in DWO. In addition, monthly plant monitoring reports, for compliance with bacteriological and protozoan requirements, were received for all treatment plants. These are generated from SCADA data. Where non compliances were identified, GDC provide SCADA printouts, diary notes and event notification forms if applicable. These are reviewed by the DWA and any queries are addressed to the utilities manager and senior water treatment plant operator at GDC.

Information provided to the DWA was reviewed and compared to information provided in DWO. Further information was requested where required to enable the DWA to make a decision on compliance.

Summary of DWSNZ Compliance

Treatment Plants

Full compliance with the DWSNZ **was not achieved** for the Waingake (TP00174) treatment plant for the period 1 July 2017 – 30 June 2018.

Full compliance with the DWSNZ **was achieved** for the Waipaoa (TP00175) Te Karaka (TP00176) and Whatatutu (TP00177) treatment plants for the period 1 July 2017 – 30 June 2018.

Distribution zones

Full compliance with the DWSNZ **was achieved** for the Whatatutu (WHA004WH), Te Karaka (TEK002TE), Gisborne City (GIS001GI) and Gisborne Rural (GIS001RU) distribution zones for the period 1 July 2017 – 30 June 2018.

Assessment of Compliance with Duties of drinking-water suppliers under the Act

The duties of the water supplier under the Health Act have all been met.

Section 69S – Duty of suppliers in relation to the provision of drinking water	Met for all supplies
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This decision is based on the following – There were no reported times when water was not being supplied to customers for eight hours or more from any of the GDC water supplies.

Section 69U – Duty to take reasonable steps to contribute to protection of source of drinking water	Met for all supplies
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This decision is based on the following – GDC have undertaken a number activities to monitor and protect its source waters including initiating *Cryptosporidium* monitoring for the combined source water at Waingake, annual chemical screens for source waters, having a cyanobacteria management protocol for Waingake treatment plant, feral animal culling in the catchment, fencing off animal access to the dams and liaison with GDC’s regional council services.

Section 69ZD – Duty to keep records and make them available	Met for all supplies
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This decision is based on the following – complete records have been kept during the annual survey period. Using these records the DWA was able to ascertain the supplier’s compliance with DWSNZ and with the duties under the Act.

Section 69ZE – Duty to investigate complaints	Met for all supplies
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GDC have a robust request for service that is time bound, monitored and escalated if not attended to. Details of complaints relating to GDC drinking water supplies, for the compliance year, were made available to the DWA. The actions taken were appropriate and were made within the service timeframes.

The results in this report relate only to the compliance of the above listed treatment plants and distribution zones.

Te Karaka (TEK002) and Whatatutu (WHA004) Supplies

Please be aware that under the Act these supplies fall into the category of a small drinking water supply. Therefore the legal requirement to take all practicable steps to comply with the DWSNZ applied from 1 July 2015. This has been met for these supplies for the period 1 July 2017 – 30 June 2018.

Gisborne City (GIS001) Supply

Please be aware that under the Act, this supply falls into the category of a large drinking water supply. Therefore the legal requirement to take all practicable steps to comply with the DWSNZ applied from 1 July 2012. This has been met for this supply for the period 1 July 2017 – 30 June 2018.

Information in this report may be provided to the MoH at their request. With the exception of the MoH, this report shall not be reproduced without the approval of the CNIDWAU and GDC.

Completed 5th October 2018



Cathy Walker
Drinking Water Assessor -Trainee
Central North Island Drinking Water Assessment Unit –Gisborne

Assessment Report Information

Report identifier	GDC_DWSNZ2005/08Compliance_021018_v1
Drinking Water Assessment Unit (Inspection Body)	Central North Island Drinking Water Assessment Unit Population Health Private Bag 7001, Gisborne Phone: 06 869 1311
Drinking Water Assessor	Cathy Walker supervised by Reynold Ball
Assessment Date	11/7/18 – 31/8/18
Description of assessment work	Assessment of Compliance with Drinking Water Standards for New Zealand 2005 (Revised 2008) for <u>Gisborne City Drinking Water Supply</u> (GIS001), Sources (S00104, S00105, S00106, S00107), Treatment Plants (TP00174, TP00175), Distribution Zones (GIS001GI, GIS001RU); <u>Te Karaka Drinking Water Supply</u> (TEK002), Source (S00108), Treatment Plant (TP00176), Distribution Zone (TEK002TE); <u>Whatatutu Drinking Water Supply</u> (WHA004), Source (S00109), Treatment Plant (TP00177), Distribution Zone (WHA004WH).
Equipment Used	Drinking Water Online was used to report the results to the Ministry of Health during the Annual Survey.
Water Supply Owner / Person Responsible	Gisborne District Council Neil Daykin
Assessment method	Standard assessment as per Scope 1A Procedure Drinking Water Standards for New Zealand 2005 (Revised 2008)
Documents and Information	Drinking Water Standards for New Zealand 2005 (Revised2008) Part 2A Health Act 1956 GDC monthly reports, weekly sheets, summary spreadsheets and log book records.
Site of Assessment	1 st Floor, Tangata Rite Building, 110 Peel St, Gisborne
Omissions from proposed assessment	Nil
Sub-contracted work	Nil
Document checked by:	Reynold Ball IANZ Accredited Drinking Water Assessor Date: 10/10/2018
Release of report authorised by:	Reynold Ball IANZ Accredited Drinking Water Assessor  Signature: Date: 10/10/2018

If you do not agree with the findings of this report a written appeal must be lodged with the Technical Manager *Peter Wood, MidCentral DHB, PO Box 11036, Palmerston North 4442*, within 2 months of receipt of this report. The Technical Manager will arrange for a review to be undertaken using the Ministry of Health appeals procedure.