# **Oaonui Water Supply Ltd**

Monitoring Programme
Annual Report
2019-2020

Technical Report 2020-100





Taranaki Regional Council Private Bag 713 Stratford

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# **Executive summary**

The Oaonui Water Supply Ltd (OWSL) operates a rural water supply scheme located on Arawhata Road, Oaonui in the Oaonui catchment. This report for the period July 2019 to June 2020 describes the monitoring programme implemented by the Taranaki Regional Council (the Council) to assess OWSL's environmental and consent compliance performance during the period under review. The report also details the results of the monitoring undertaken and assesses the environmental effects of OWSL's activities.

The Oaonui Water Supply Ltd holds three resource consents, which include a total of 26 conditions setting out the requirements that OWSL must satisfy. OWSL holds one consent to allow it to take and use water, one consent to maintain a weir, and one consent to discharge contaminants from intake sluicing.

# During the monitoring period, Oaonui Water Supply Ltd demonstrated an overall level of environmental performance that required improvement.

The Council's monitoring programme for the year under review included one inspection, a review of water abstraction data, two macroinvertebrate surveys, one fish survey and various stream gaugings. A significant amount of time was also spent liaising with the consent holder via meetings, phone calls, and emails.

An improvement was required in OWSL's level of environmental and administrative performance with the resource consents as defined in Section 1.1.4. The abstraction rate of 50 L/s as set by consent 0231-4 was breached multiple times. OWSL made adjustments to the rate of take and were compliant by the end of the monitoring period. There were also multiple breaches of consent 10314-1 whereby OWSL continued to operate when flows were less than 151 L/s downstream of the weir. This low water flow generally occurred as a result of sluicing. An abatement notice was issued directing OWSL to undertake measures to address this issue and they are currently working with a consultant to find a solution. Reporting requirements of consent 10314-1 were not met by 1 June 2020, despite OWSL having three years to prepare the required report (Note: this report has subsequently been submitted).

For reference, in the 2019-2020 year, consent holders were found to achieve a high level of environmental performance and compliance for 81% of the consents monitored through the Taranaki tailored monitoring programmes, while for another 17% of the consents, a good level of environmental performance and compliance was achieved.

In terms of overall environmental and compliance performance by the consent holder over the last several years, this report shows that the consent holder's performance continues to require improvement.

This report includes recommendations for the 2020-2021 year.

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# 1 Introduction

# 1.1 Compliance monitoring programme reports and the Resource Management Act 1991

#### 1.1.1 Introduction

This report is for the period July 2019 to June 2020 by the Taranaki Regional Council (the Council) and describes the monitoring programme associated with resource consents held by the Oaonui Water Supply Ltd (OWSL). OWSL operates a rural water supply scheme situated on Arawhata Road, Oaonui.

This report covers the results and findings of the monitoring programme implemented by the Council in respect of the consents held by OWSL that relate to abstractions and discharges of water in the Taungatara catchment. This is the fourth dedicated annual report to be prepared by the Council to cover OWSL's water abstractions and structures. Previously the OWSL compliance monitoring was reported in the joint South Taranaki Water Supplies report.

# 1.1.2 Structure of this report

Section 1 of this report is a background section. It sets out general information about:

- consent compliance monitoring under the *Resource Management Act 1991* (RMA) and the Council's obligations;
- the Council's approach to monitoring sites though annual programmes;
- the resource consents held by OWSL in the Oaonui catchment;
- the nature of the monitoring programme in place for the period under review; and
- a description of the activities and operations conducted at the site.

**Section 2** presents the results of monitoring during the period under review, including scientific and technical data.

Section 3 discusses the results, their interpretations, and their significance for the environment.

**Section 4** presents recommendations to be implemented in the 2020-2021 monitoring year.

A glossary of common abbreviations and scientific terms, and a bibliography, are presented at the end of the report.

## 1.1.3 The Resource Management Act 1991 and monitoring

The RMA primarily addresses environmental 'effects' which are defined as positive or adverse, temporary or permanent, past, present or future, or cumulative. Effects may arise in relation to:

- a. the neighbourhood or the wider community around an activity, and may include cultural and socialeconomic effects;
- b. physical effects on the locality, including landscape, amenity and visual effects;
- c. ecosystems, including effects on plants, animals, or habitats, whether aquatic or terrestrial;
- d. natural and physical resources having special significance (for example recreational, cultural, or aesthetic); and
- e. risks to the neighbourhood or environment.

In drafting and reviewing conditions on discharge permits, and in implementing monitoring programmes, the Council is recognising the comprehensive meaning of 'effects' inasmuch as is appropriate for each

activity. Monitoring programmes are not only based on existing permit conditions, but also on the obligations of the RMA to assess the effects of the exercise of consents. In accordance with Section 35 of the RMA, the Council undertakes compliance monitoring for consents and rules in regional plans, and maintains an overview of the performance of resource users and consent holders. Compliance monitoring, including both activity and impact monitoring, enables the Council to continually re-evaluate its approach and that of consent holders to resource management and, ultimately, through the refinement of methods and considered responsible resource utilisation, to move closer to achieving sustainable development of the region's resources.

# 1.1.4 Evaluation of environmental and administrative performance

Besides discussing the various details of the performance and extent of compliance by OWSL, this report also assigns them a rating for their environmental and administrative performance during the period under review.

Environmental performance is concerned with <u>actual or likely effects</u> on the receiving environment from the activities during the monitoring year. Administrative performance is concerned with OWSL's approach to demonstrating consent compliance <u>in site operations and management</u> including the timely provision of information to Council (such as contingency plans and water take data) in accordance with consent conditions.

Events that were beyond the control of the consent holder <u>and</u> unforeseeable (that is a defence under the provisions of the RMA can be established) may be excluded with regard to the performance rating applied. For example loss of data due to a flood destroying deployed field equipment.

The categories used by the Council for this monitoring period, and their interpretation, are as follows:

#### **Environmental Performance**

**High:** No or inconsequential (short-term duration, less than minor in severity) breaches of consent or regional plan parameters resulting from the activity; no adverse effects of significance noted or likely in the receiving environment. The Council did not record any verified unauthorised incidents involving environmental impacts and was not obliged to issue any abatement notices or infringement notices in relation to such impacts.

**Good:** Likely or actual adverse effects of activities on the receiving environment were negligible or minor at most. There were some such issues noted during monitoring, from self reports, or during investigations of incidents reported to the Council by a third party but these items were not critical, and follow-up inspections showed they have been dealt with. These minor issues were resolved positively, co-operatively, and quickly. The Council was not obliged to issue any abatement notices or infringement notices in relation to the minor non-compliant effects; however abatement notices may have been issued to mitigate an identified potential for an environmental effect to occur.

# For example:

- High suspended solid values recorded in discharge samples, however the discharge was to land or to receiving waters that were in high flow at the time;
- Strong odour beyond boundary but no residential properties or other recipient nearby.

**Improvement required**: Likely or actual adverse effects of activities on the receiving environment were more than minor, but not substantial. There were some issues noted during monitoring, from self reports, or during investigations of incidents reported to the Council by a third party. Cumulative adverse effects of a persistent minor non-compliant activity could elevate a minor issue to this level. Abatement notices and infringement notices may have been issued in respect of effects.

**Poor:** Likely or actual adverse effects of activities on the receiving environment were significant. There were some items noted during monitoring, from self reports, or during investigations of incidents reported to the Council by a third party. Cumulative adverse effects of a persistent moderate non-compliant activity could elevate an 'improvement required' issue to this level. Typically there were grounds for either a prosecution or an infringement notice in respect of effects.

#### Administrative performance

**High:** The administrative requirements of the resource consents were met, or any failure to do this had trivial consequences and were addressed promptly and co-operatively.

**Good:** Perhaps some administrative requirements of the resource consents were not met at a particular time, however this was addressed without repeated interventions from the Council staff. Alternatively adequate reason was provided for matters such as the no or late provision of information, interpretation of 'best practical option' for avoiding potential effects, etc.

**Improvement required:** Repeated interventions to meet the administrative requirements of the resource consents were made by Council staff. These matters took some time to resolve, or remained unresolved at the end of the period under review. The Council may have issued an abatement notice to attain compliance.

**Poor:** Material failings to meet the administrative requirements of the resource consents. Significant intervention by the Council was required. Typically there were grounds for an infringement notice.

For reference, in the 2019-2020 year, consent holders were found to achieve a high level of environmental performance and compliance for 81% of the consents monitored through the Taranaki tailored monitoring programmes, while for another 17% of the consents, a good level of environmental performance and compliance was achieved.<sup>1</sup>

# 1.2 Process description

Water is abstracted from the Oaonui Stream via gravity fed intake situated behind a large weir. The water then flows via a settling pond to a small treatment shed where chlorine is added prior to being distributed to rural customers. Water is also supplied to the Maui production station for fire-fighting purposes. Once a day the intakes are sluiced to clear accumulated silt.

<sup>1</sup> The Council has used these compliance grading criteria for 15 years. They align closely with the 4 compliance grades in the MfE Best Practice Guidelines for Compliance, Monitoring and Enforcement, 2018

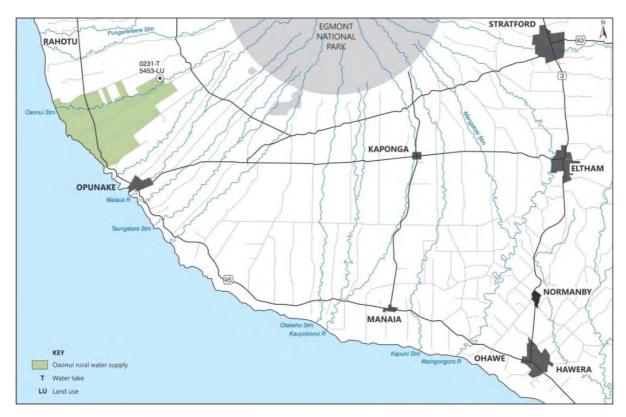


Figure 1 Oaonui Water Supply Ltd's water service area

# 1.3 Resource consents

Oaonui Water Supply Ltd holds three resource consents the details of which are summarised in the table below. Summaries of the conditions attached to each permit are set out in Section 3 of this report.

A summary of the various consent types issued by the Council is included in Appendix I, as are copies of all permits held by OWSL during the period under review.

Table 1 Resource consents held by OWSL

Consent number	Purpose	Granted	Review	Expires		
	Water abstraction permits					
0231-4	To take and use water from the Oaonui Stream for a rural community water supply scheme including the Maui Production Station	May 2017	June 2022	June 2036		
	Water discharge permits					
10314-1	To discharge water and contaminants into the Oaonui Stream from sluicing a weir	May 2017	June 2022	June 2036		
	Land use permits					
5453-2	To use and maintain a weir and water intake structure on the bed of the Oaonui Stream, and to dam water, for water supply purposes	May 2017	June 2022	June 2036		

# 1.4 Monitoring programme

#### 1.4.1 Introduction

Section 35 of the RMA sets obligations upon the Council to gather information, monitor and conduct research on the exercise of resource consents within the Taranaki region. The Council is also required to assess the effects arising from the exercising of these consents and report upon them.

The Council may therefore make and record measurements of physical and chemical parameters, take samples for analysis, carry out surveys and inspections, conduct investigations and seek information from consent holders.

The monitoring programme for OWSL's site consisted of six primary components.

# 1.4.2 Programme liaison and management

There is generally a significant investment of time and resources by the Council in:

- ongoing liaison with resource consent holders over consent conditions and their interpretation and application;
- · discussion over monitoring requirements;
- preparation for any consent reviews, renewals or new consent applications;
- advice on the Council's environmental management strategies and content of regional plans; and
- consultation on associated matters.

# 1.4.3 Site inspections and meetings

The site was visited once during the monitoring period. With regard to consents for the abstraction of, or discharge to water, the main points of interest were the sluicing regime, intake structures, and water metering equipment. Sources of data being collected by OWSL were identified and accessed, so that performance in respect of operation, internal monitoring, and supervision could be reviewed by the Council. The neighbourhood was surveyed for environmental effects.

#### 1.4.4 Data review

Abstraction rate and volume data was supplied by OWSL and reviewed by Council staff. Stream stage and residual flow data is also reviewed.

## 1.4.5 Fish surveys

Fish surveys are carried out every three years to assess the effectiveness of the fish pass on the weir. The next scheduled survey is due to be carried out in the 2021-2022 monitoring year.

# 1.4.6 Macroinvertebrate surveys

Council undertook two macroinvertebrate survey to assess effects (if any) of OWSL's activities and structures on macroinvertebrate communities in the Oaonui Stream.

# 1.4.7 Hydrological gauging

Council staff undertook four gaugings at the telemetered stage recording site to establish a ratings curve for the site.

# 2 Results

# 2.1 Inspections and meetings

#### 21 November 2019

A meeting was held at Council's office in regards to an abatement notice issued on 24 October 2019 in relation to the ongoing lack of sufficient residual flow due to the current sluicing procedure. Present were Jonti Owen, Victoria McKay and Bruce Pope (Council) and Bryan Roach and Leigh Horton (OWSL). Discussion was held around how the current sluicing procedure is causing the flow to drop below the low flow limit threshold, and that consent conditions (of consent 10314-1) require OWSL to stop sluicing for three days and apply water restrictions when flows drop below 151 L/s. It was decided that OWSL must choose a contractor that is able to provide advice and a plan with steps towards making the scheme compliant. It was emphasised that the contractor must consider the entire scheme including abstraction rates and pond flows, not just the discharge. The plan was to be provided to Council within two weeks of the meeting. If the plan was considered reasonable, but extra time was required, Council would consider extending the abatement notice.

#### 29 June 2020

The site was visited to conduct a compliance monitoring inspection. A sluice was completed to observe the new procedure, though the impacts of this procedure were difficult to distinguish due to higher than usual flows. No abstraction occurred during inspection due to the sluice, this matched the flow meter and telemetered data. A sensor has recently been installed in order to better control overflow at the entrance to the pond. The intake screen, weir and fish pass were inspected and no issues were noted.

## 2.2 Abstraction and stream flow data

### 2.2.1 Abstraction

During the monitoring period OWSL supplied daily volumes of water taken and this was reviewed by Council staff.

OWSL complied with the consent limit for volume of take of 28,000 m<sup>3</sup> over seven days (Figure 2).



Figure 2 Seven-day volume (consent limit 28,000 m<sup>3</sup>)

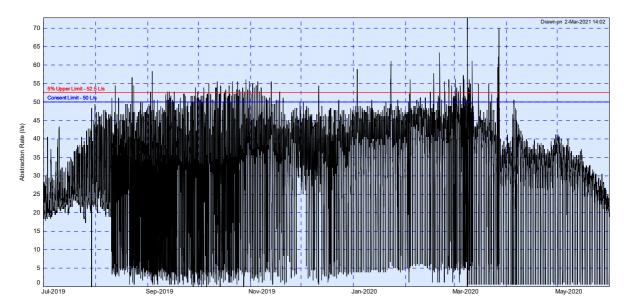


Figure 3 Daily abstraction rate (consent limit 50 L/s)

As per an abatement notice issued during the 2018-2019 monitoring period, the flowmeter was repositioned to accurately measure the rate of water abstraction (as required by consent conditions and national regulations). Previously the reservoir was between the flow meter and point of abstraction so whilst the meter was recording volumes of water consumed by the scheme, it was not able to measure the rate at which water is being abstracted from the Oaonui Stream. The change of the meter location (and hence accurate recordings) coincided with the rate of take of 50 L/s being breached frequently during the monitoring period (Figure 3). OWSL made adjustments to the system in March 2020 and the rate of take was complied with for the remainder of the year.

### 2.2.2 Stream flow

Condition 3 of consent 10314-1 specifies that the consent may not be exercised (ie. abstraction, including sluicing, must cease) if, at any time on each of the three previous days, the flow in the Oaonui Stream downstream of the weir has been less than 151 L/s. A ratings curve was derived for the staff gauge at the site during 2019, and after applying the rating curve to the existing data it showed that sluicing regularly caused the stream to go below 151 L/s. Additionally there had been periods (prior to the 2019-2020 monitoring period) where the stream was already lower than the 151 L/s residual limit and sluicing was still occurring.

As a result, an abatement notice was issued on 2 October 2019, for breach of conditions of consent 10314-1, to be complied with by 15 November 2019. OWSL attempted to modify the sluicing procedure in various ways in order to comply with consent conditions. While engaging consultants to investigate the effects on the ecology of the Oaonui Stream (as per condition 5 of the consent) OWSL also sought some ideas on how to improve the sluicing procedure in order to become compliant.

Improvements recommended by the consultants and implemented by OWSL thus far include:

- Increasing the time gap between closing of the sluice gate and opening of the intake gate to decrease the time for the stream flow over the weir. OWSL are still looking to improve/increase the time gap.
- Sluicing now completed at midnight, i.e. now completed at low demand times to reduce effects of sluicing on the reticulation supply.
- Implemented partial closing of the sluice gate to maintain some stream flow whilst the stream level builds up to overtop the weir.

The consultants also completed a review of existing consent conditions, in order to identify current conditions that may require review or variation.

# 2.3 Macroinvertebrate surveys

The Council's 'kick-sampling' technique was used at two sites on two occasions to collect streambed macroinvertebrates from the Oaonui Stream in relation to the consents held by OWSL. Samples have provided data to assess any potential impacts the consented water abstraction and discharges may have had on the macroinvertebrate communities of this stream. Samples were processed to provide number of taxa (richness), MCI, and SQMCI scores for each site.

The MCI is a measure of the overall sensitivity of the macroinvertebrate community to the effects of nutrient pollution in streams. It is based on the presence/absence of taxa with varying degrees of sensitivity to pollution. The SQMCI takes into account taxa abundance as well as sensitivity to pollution, and may reveal more subtle changes in macroinvertebrate communities. Significant differences in either the MCI or the SQMCI between sites indicate the degree of adverse effects (if any) of the discharges being monitored and enable the overall health of the macroinvertebrate communities to be determined.

#### 2 December 2019

Macroinvertebrate taxa richness was moderate at both sites and was similar to the median recorded by 'control' sites at similar streams at comparable altitudes across the region. Taxa richness was also similar to that recorded in the previous survey. Macroinvertebrate community composition was similar; both sites shared the same seven dominant taxa, and there was only one significant change in individual taxon abundance between the two sites.

MCI scores categorised site 1 as having 'good' macroinvertebrate community health and site 2 as having 'fair' health, however the scores were not significantly different to one another. The MCI scores recorded in the current survey were significantly higher than those recorded by the previous survey, which can be attributed to subtle habitat changes, including decreased nuisance periphyton and to an increase in flow recorded in the current survey.

A SQMCI score of 5.3 units was recorded at site 1 and a SQMCI score of 4.9 units was recorded at site 2, which was again reflective of 'good' and 'fair' macroinvertebrate health at the two sites respectively (Figure 4). These SQMCI scores were not significantly different to one another. Both sites recorded SQMCI scores that were significantly higher than the previous survey scores, which can be attributed to an increase in flow and to a reduction of nuisance filamentous periphyton in the current survey.

Overall, the survey results were reflective of 'good' macroinvertebrate community health at site 1 and 'fair' health at site 2. MCI and SQMCI scores were not significantly different to one another and macroinvertebrate community compositions were similar between sites. There was no strong evidence that the Oaonui Stream Weir had caused any significant adverse impacts on the macroinvertebrate communities of the Oaonui Stream.

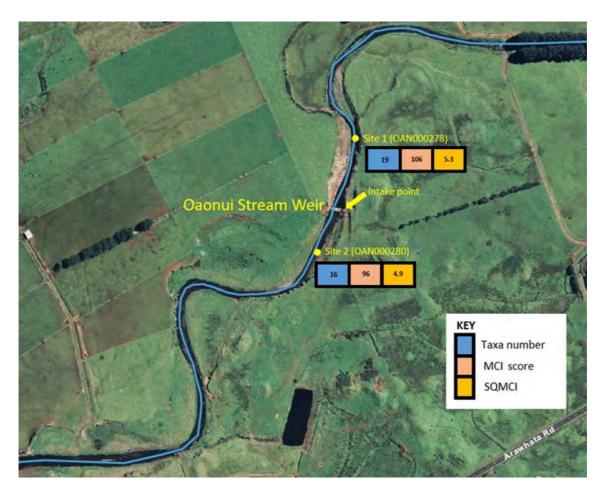


Figure 4 Macroinvertebrate index results recorded in the Oaonui Stream in relation to the OWSL Stream Weir, 2 December 2019

#### 27 January 2020

Macroinvertebrate taxa richness was moderately low (15 and 14 taxa, at sites 1 and 2 respectively), and was lower than that recorded in the previous two surveys (Figure 5). Macroinvertebrate community compositions were relatively similar between sites, with four dominant taxa, characteristic to both sites. Additionally, between the two sites, there were no significant changes to individual taxon abundances.

MCI scores categorised site 1 as having 'fair' macroinvertebrate community health and site 2 as having 'poor' macroinvertebrate community health. The MCI score recorded at site 2 was significantly lower than that at site 1 (by 12 MCI units). Both MCI scores in the current survey were significantly lower than those recorded in the previous spring survey, which can be attributed to lower flow conditions and to an increase of nuisance periphyton coverage at both sites. MCI scores were also significantly lower than the median MCI score recorded by 'control' sites at streams at a similar altitude.

The SQMCI score at site 1 was 5.6 units, which was substantially higher than the score of 4.8 units recorded at site 2 (by 0.8 unit). Both SQMCI scores were similar to the previous survey scores of 5.3 and 4.9 units, at sites 1 and 2 respectively. Neither of the current SQMCI scores were significantly different to the median score recorded by 'control' sites elsewhere in the region.

Overall, MCI scores were reflective of 'fair' macroinvertebrate community health at site 1, and 'poor' health at site 2. The MCI score was significantly higher, and the SQMCI score substantially higher, at site 1 in comparison to site 2. Despite this, the macroinvertebrate community composition was similar, with four dominant taxa shared between the two sites. In addition, there were no significant changes to individual

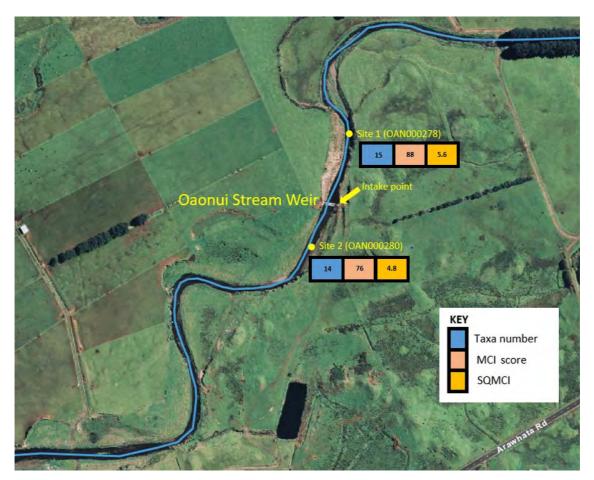


Figure 5 Macroinvertebrate index results recorded in the Oaonui Stream in relation to the OWSL Stream Weir, 27 January 2020

taxon abundances between sites. Therefore, the difference in MCI and SQMCI scores can be explained by numerous changes to 'rare' taxa between sites, which were insignificant. At the time of this survey, both sites were impacted by low flow conditions. Extensive mats and filaments of nuisance periphyton were present at both sites in the current survey and have likely impacted upon macroinvertebrate communities, by reducing habitat available for 'sensitive' taxa. It is possible that the impacts of low flows have been exacerbated at site 2, through the Oaonui Stream Weir water abstraction activities. However, macroinvertebrate community composition was similar between sites and SQMCI scores were not significantly different to one another. As such, there was no strong evidence that the Oaonui Stream Weir had caused any significant adverse impacts on the macroinvertebrate communities of the Oaonui Stream.

It was recommended that spring and summer macroinvertebrate sampling of the two Oaonui Stream sites continue; to gather more data, for the purposes of determining whether the Oaonui Stream Weir and related activities is having any significant impacts on the macroinvertebrate communities of the Oaonui Stream.

# 2.4 Incidents, investigations, and interventions

The monitoring programme for the year was based on what was considered to be an appropriate level of monitoring, review of data, and liaison with the consent holder. During the year matters may arise which require additional activity by the Council, for example provision of advice and information, or investigation of potential or actual causes of non-compliance or failure to maintain good practices. A pro-active approach, that in the first instance avoids issues occurring, is favoured.

For all significant compliance issues, as well as complaints from the public, the Council maintains a database record. The record includes events where the individual/organisation concerned has itself notified the Council. Details of any investigation and corrective action taken are recorded for non-compliant events.

Complaints may be alleged to be associated with a particular site. If there is potentially an issue of legal liability, the Council must be able to prove by investigation that the identified individual/organisation is indeed the source of the incident (or that the allegation cannot be proven).

Table 2 below sets out details of any incidents recorded, additional investigations, or interventions required by the Council in relation to the consent holder's activities during the 2019-2020 period. This table presents details of all events that required further investigation or intervention regardless of whether these were found to be compliant or not.

Table 2 Incidents, investigations, and interventions summary table

Date	Details	Compliant (Y/N)	Enforcement Action Taken?	Outcome
24 Oct 2019	Insufficient residual flow due to sluicing procedure.	Investigation continuing	Abatement	Consultant engaged to provide advice in order to become compliant with residual flow conditions.
1 June 2020	Ecological report not received prior to 1 June 2020 as per condition 5 of consent 10314-1	N	N/A	The report was delayed due to COVID-19 restriction and contractors being unable to get out to the site.  Note: This has subsequently been provided.

# 3 Discussion

# 3.1 Discussion of site performance

During the monitoring period it was identified that the measurement of abstraction rates and volumes were not meeting the national water metering regulations. A new compliant meter was installed and more accurate data has been received since August 2019.

The scheme was compliant at all times with the seven-day volume limit of 28,000 m<sup>3</sup>.

The abstraction rate of 50 L/s was frequently breached following installation of the new meter (ie. the placement of the old meter was not accurately recording the abstraction rate). OWSL have adjusted their rate of take and this has since been compliant.

The issue of sluicing causing the flow downstream of the weir to drop below 151 L/s, and OWSL continuing to operate despite consent 10314-1 requiring them to cease abstraction, is ongoing and OWSL is working with a consultant in order to find a solution.

An ecological report was not provided by 1 June 2020 as required by condition 5 of consent 10314-1. This has subsequently been provided (October 2020) and the findings/recommendations from this report will be discussed in the 2020-2021 annual report.

# 3.2 Environmental effects of exercise of consents

Macroinvertebrate surveys found no direct evidence of adverse effects as a result of the Company's activities. It is noted however that the sluicing of the intake on a daily basis, resulting in very low water levels below the weir, may be affecting the ecology downstream. In order to further investigate any potential effects macroinvertebrate surveys have been increased from one to two (spring and summer) and an additional site has been added downstream (from two sites to three).

# 3.3 Evaluation of performance

A tabular summary of the consent holder's compliance record for the year under review is set out in Tables 3-5.

Table 3 Summary of performance for Consent 0231-4

	Purpose: To take and use water from the Oaonui Stream for a rural community water supply scheme and the Maui Production Station				
	Condition requirement	Means of monitoring during period under review	Compliance achieved?		
1.	Permitted uses of water	Inspection and liaison with consent holder	Yes		
2.	Permitted rates and volume of abstraction	Telemetered data	No. There were frequent abstraction rate breaches		
3.	Install and maintain a water meter and data logger	Data received and meter inspected	Yes		
4.	Certfication of equipment	Notice of verification received October 2019, next due October 2024	Yes		
5.	Notifcation of equipment failure	Liaison with consent holder	Yes		

# Purpose: To take and use water from the Oaonui Stream for a rural community water supply scheme and the Maui Production Station

	Condition requirement	Means of monitoring during period under review	Compliance achieved?
6.	Accessibility of metering equipment	Inspection	Yes
7.	Measurement of stream flow	Telemetered data	Yes
8.	Provision of records	Telemetered data	Yes
9.	Restriction of water use during low flows	Telemetered data	No
10.	Restriction of water use at Maui Production Station during low flow periods	Not assessed during monitoring period	N/A
11.	Provision of report identifying uses of water to ensure human and animal health by 1 December 2017	Report submitted previously	Yes
12.	Financial contributions of \$2,200 per year	Payment received	Yes
13.	Notification of hydrotesting at Maui Production Station	No notification received	N/A
14.	Intake to adequately screen to prevent entrainment of fish	Inspection, fish survey	Yes
15.	Provision of an efficiency report	Submitted September 2018	Yes
16.	Review condition	Next option for review June 2022	N/A
of t	erall assessment of consent compliance and his consent erall assessment of administrative performa	Improvement required High	

# N/A = not applicable

Table 4 Summary of performance for Consent 5453-2

	Purpose: To use and maintain a weir and water intake structure on the bed of the Oaonui Stream, and to dam water, for water supply purposes				
	Condition requirement	Means of monitoring during period under review	Compliance achieved?		
1.	Maintain weir to be fit for purpose	Inspection, fish survey	Yes		
2.	Repair erosion or scour caused by weir	Inspection	Yes		
3.	Provide fish passage	Inspection and fish surveys	Yes		

Purpose: To use and maintain a weir and water intake structure on the bed of the Oaonui Stream, and to dam water, for water supply purposes				
Condition requirement	Means of monitoring during period under review	Compliance achieved?		

Condition requirement	Means of monitoring during period under review	Compliance achieved?
4. Review provision	Next option for review in June 2022	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent  Overall assessment of administrative performance in respect of this consent		High High

N/A = not applicable

Table 5 Summary of performance for Consent 10314-1

	ipose. To disentinge water and e	ontaminants into the Oaonui Stream from sluici	I I
	Condition requirement	Means of monitoring during period under review	Compliance achieved?
1.	Adopt best practice	Inspection and liaison with consent holder	Yes
2.	Effects on receiving environment	Macroinvertebrate and fish surveys, inspection	Yes
3.	Consent not to be exercised if flow below weir drops below 151 L/s at any time on the three previous days	Telemetered data	No. Multiple breaches
4.	Sluicing to be managed so that stream is flowing over the weir within 2 minutes of sluicing gate being closed.	Sluice observed and video footage taken	Yes
5.	Provide report on effects on ecology	Report due June 2020	No
6.	Review provision	Next option for review June 2022	N/A
	erall assessment of consent com pect of this consent	Improvement required	
	erall assessment of administrativ	Improvement required	

N/A = not applicable

Overall, an improvement was required in OWSL's level of environmental and administrative performance with the resource consents as defined in Section 1.1.4.

# 3.4 Recommendations from the 2018-2019 Annual Report

In the 2018-2019 Oaonui Water Supplies Ltd Monitoring Report it was recommended:

1. THAT in the first instance, monitoring of consented activities at OWSL in the 2019-2020 year continue as that undertaken in the 2018-2019 period, with the exception of the triennial fish survey which is next scheduled for the 2021-2022 period.

2. THAT should there be issues with environmental or administrative performance in 2019-2020, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.

These recommendations were implemented.

# 3.5 Alterations to monitoring programmes for 2020-2021

In designing and implementing the monitoring programmes for air/water discharges in the region, the Council has taken into account:

- the extent of information already made available through monitoring or other means to date;
- its relevance under the RMA;
- the Council's obligations to monitor consented activities and their effects under the RMA;
- the record of administrative and environmental performances of the consent holder; and
- reporting to the regional community.

The Council also takes into account the scope of assessments required at the time of renewal of permits, and the need to maintain a sound understanding of industrial processes within Taranaki exercising resource consents.

It is proposed that for 2020-2021 period, that monitoring of OWSL continue at a similar level as that undertaken in the 2019-2020 period. However, it is recommended that the number of macroinvertebrate monitoring sites is increased from two to three, and that a spring survey is formally added to the programme.

It should be noted that the proposed programme represents a reasonable and risk-based level of monitoring for the site in question. The Council reserves the right to subsequently adjust the programme from that initially prepared, should the need arise if potential or actual non-compliance is determined at any time during 2020-2021.

# 4 Recommendations

- 1. THAT in the first instance, monitoring of consented activities at OWSL in the 2020-2021 year continue at a similar level as in 2019-2020, with the number of macroinvertebrate monitoring sites increased from two to three, and a spring survey formally added to the programme.
- 2. THAT should there be issues with environmental or administrative performance in 2020-2021, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.

# Glossary of common terms and abbreviations

The following abbreviations and terms may be used within this report:

DO Dissolved oxygen.

Fresh Elevated flow in a stream, such as after heavy rainfall.

g/m³ Grams per cubic metre, and equivalent to milligrams per litre (mg/L). In water, this is

also equivalent to parts per million (ppm), but the same does not apply to gaseous

mixtures.

Incident An event that is alleged or is found to have occurred that may have actual or

potential environmental consequences or may involve non-compliance with a consent or rule in a regional plan. Registration of an incident by the Council does

not automatically mean such an outcome had actually occurred.

Intervention Action/s taken by Council to instruct or direct actions be taken to avoid or reduce

the likelihood of an incident occurring.

Investigation Action taken by Council to establish what were the circumstances/events

surrounding an incident including any allegations of an incident.

Incident register The incident register contains a list of events recorded by the Council on the basis

that they may have the potential or actual environmental consequences that may

represent a breach of a consent or provision in a Regional Plan.

L/s Litres per second.

MCI Macroinvertebrate community index; a numerical indication of the state of biological

life in a stream that takes into account the sensitivity of the taxa present to organic

pollution in stony habitats.

Physicochemical Measurement of both physical properties (e.g. temperature, clarity, density) and

chemical determinants (e.g. metals and nutrients) to characterise the state of an

environment.

Resource consent Refer Section 87 of the RMA. Resource consents include land use consents (refer

Sections 9 and 13 of the RMA), coastal permits (Sections 12, 14 and 15), water

permits (Section 14) and discharge permits (Section 15).

RMA Resource Management Act 1991 and including all subsequent amendments.

SS Suspended solids.

SQMCI Semi quantitative macroinvertebrate community index.

Temp Temperature, measured in °C (degrees Celsius).

For further information on analytical methods, contact a Science Services Manager.

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# Appendix I

# Resource consents held by Oaonui Water Supplies Limited

(For a copy of the signed resource consent please contact the TRC Consents department)

## Water abstraction permits

Section 14 of the RMA stipulates that no person may take, use, dam or divert any water, unless the activity is expressly allowed for by a resource consent or a rule in a regional plan, or it falls within some particular categories set out in Section 14. Permits authorising the abstraction of water are issued by the Council under Section 87(d) of the RMA.

### Water discharge permits

Section 15(1)(a) of the RMA stipulates that no person may discharge any contaminant into water, unless the activity is expressly allowed for by a resource consent or a rule in a regional plan, or by national regulations. Permits authorising discharges to water are issued by the Council under Section 87(e) of the RMA.

### Air discharge permits

Section 15(1)(c) of the RMA stipulates that no person may discharge any contaminant from any industrial or trade premises into air, unless the activity is expressly allowed for by a resource consent, a rule in a regional plan, or by national regulations. Permits authorising discharges to air are issued by the Council under Section 87(e) of the RMA.

### Discharges of wastes to land

Sections 15(1)(b) and (d) of the RMA stipulate that no person may discharge any contaminant onto land if it may then enter water, or from any industrial or trade premises onto land under any circumstances, unless the activity is expressly allowed for by a resource consent, a rule in a regional plan, or by national regulations. Permits authorising the discharge of wastes to land are issued by the Council under Section 87(e) of the RMA.

### Land use permits

Section 13(1)(a) of the RMA stipulates that no person may in relation to the bed of any lake or river use, erect, reconstruct, place, alter, extend, remove, or demolish any structure or part of any structure in, on, under, or over the bed, unless the activity is expressly allowed for by a resource consent, a rule in a regional plan, or by national regulations. Land use permits are issued by the Council under Section 87(a) of the RMA.

## Coastal permits

Section 12(1)(b) of the RMA stipulates that no person may erect, reconstruct, place, alter, extend, remove, or demolish any structure that is fixed in, on, under, or over any foreshore or seabed, unless the activity is expressly allowed for by a resource consent, a rule in a regional plan, or by national regulations. Coastal permits are issued by the Council under Section 87(c) of the RMA.

# Water Permit Pursuant to the Resource Management Act 1991 a resource consent is hereby granted by the Taranaki Regional Council

Name of Oaonui Water Supply Limited

Consent Holder: PO Box 3157

New Plymouth 4347

Decision Date: 5 April 2017

Commencement Date: 1 May 2017

# **Conditions of Consent**

Consent Granted: To take and use water from the Oaonui Stream for a rural

community water supply scheme including the Maui

**Production Station** 

Expiry Date: 1 June 2036

Review Date(s): June 2019 and 3-yearly intervals thereafter

Site Location: Arawhata Road, Oaonui

Grid Reference (NZTM) 1676831E-5641435N

Catchment: Oaonui

For General, Standard and Special conditions pertaining to this consent please see reverse side of this document

#### **General condition**

a. The consent holder shall pay to the Taranaki Regional Council all the administration, monitoring and supervision costs of this consent, fixed in accordance with section 36 of the Resource Management Act 1991.

# **Special conditions**

- 1. This consent authorises taking water only for the purposes of providing:
  - (a) a general supply for domestic and farm use within the scheme area;
  - (b) water for general domestic uses and firefighting training at the Maui Production Station; and
  - (c) water for testing of bunds and tanks at the Maui Production Station.
- 2. The rate of taking shall not exceed 50 litres per second, and the volume taken in any 7 day period ending at midnight (New Zealand Standard Time) shall not exceed 28,000 cubic metres.
- 3. Before exercising this consent the consent holder shall install, and thereafter maintain a water meter and a datalogger at the site of taking (or a nearby site in accordance with Regulation 10 of the *Resource Management (Measurement and Reporting of Water Takes) Regulations 2010.* The water meter and datalogger shall be tamper-proof and shall measure and record the rate and volume of water taken to an accuracy of ± 5%. Records of the date, the time and the rate and volume of water taken at intervals not exceeding 15 minutes, shall be made available to the Chief Executive, Taranaki Regional Council at all reasonable times.

Note: Water meters and dataloggers must be installed, and regularly maintained, in accordance with manufacturer's specifications in order to ensure that they meet the required accuracy. Even with proper maintenance water meters and dataloggers have a limited lifespan.

- 4. The consent holder shall provide the Chief Executive, Taranaki Regional Council with a document from a suitably qualified person certifying that water measuring and recording equipment required by the conditions of this consent ('the equipment'):
  - (a) has been installed and/or maintained in accordance with the manufacturer's specifications; and/or
  - (b) has been tested and shown to be operating to an accuracy of  $\pm 5\%$ .

The documentation shall be provided:

- (i) within 30 days of the installation of a water meter or datalogger;
- (ii) at other times when reasonable notice is given and the Chief Executive, Taranaki Regional Council has reasonable evidence that the equipment may not be functioning as required by this consent; and
- (iii) no less frequently than once every five years.

- 5. If any measuring or recording equipment breaks down, or for any reason is not operational, the consent holder shall advise the Chief Executive, Taranaki Regional Council immediately. Any repairs or maintenance to this equipment must be undertaken by a suitably qualified person and a maintenance report provided to the Chief Executive, Taranaki Regional Council within 30 days of the work occurring.
- 6. Any water meter or datalogger shall be accessible to Taranaki Regional Council officers at all reasonable times for inspection and/or data retrieval. In addition the data logger shall be designed and installed so that Taranaki Regional Council officers can readily verify that it is accurately recording the required information.
- 7. From 1 December 2017, for flows less than 500 litres per second, the consent holder shall measure and record the flow in the Oaonui Stream at the take site at intervals not exceeding 15 minutes to an accuracy of ±10%.
- 8. The records of water taken (condition 3) and of the stream flow (condition 7) shall:
  - (a) be in a format that, in the opinion of the Chief Executive, Taranaki Regional Council, is suitable for auditing;
  - (b) specifically record the water taken as 'zero' when no water is taken; and
  - (c) from 1 December 2017, be transmitted directly to the Taranaki Regional Council's computer system, within 2 hours of being recorded.
- 9. When the flow in the Oaonui Stream, measured immediately downstream of the intake point, has at any time on each of the three previous days been less than 151 litres per second, the taking of water shall be restricted to the minimum amount necessary to maintain the health and safety of people and animals (i.e. garden watering and other non-essential uses are prohibited).
- 10. No water shall be used for testing bunds or product storage tanks at the Maui Production Station when the flow in the Oaonui Stream, measured immediately downstream of the intake, has at any time on each of the three previous days been less than 151 litres per second.
- 11. Before 1 December 2017 the consent holder shall provide a report to the Chief Executive, Taranaki Regional Council that:
  - (a) identifies uses of water that are necessary to maintain the health and safety of people and animals; and
  - (b) details methods that the consent holder will use to ensure that only those uses identified in condition 11(a) will occur when the flow immediately downstream of the intake is less than  $151 \, \text{L/s}$ .

The consent holder shall also provide a copy of this report to Te Kahui o Taranaki Trust and to Fish and Game.

- 12. The consent holder shall mitigate or offset the environmental effects of the take by making annual payments of \$2200 (plus GST) to the Taranaki Regional Council as a financial contribution for the purpose of funding environmental enhancement projects. The environmental enhancement projects are, as first priority, to be in the Oaonui Stream catchment, and would include: enhancing, fencing and protection of wetlands, small streams and habitats of indigenous species. The amount to be paid shall be adjusted annually according to the consumer price index, or similar, to account for the effects of inflation, and be made no later than 1 September each year.
- 13. The consent holder shall notify the Taranaki Regional Council when the Maui Production station is undertaking testing on vessels and bunds. Notification shall include the consent number and shall detail the amount of water needed, type of test and test date and be emailed to <a href="worknotification@trc.govt.nz">worknotification@trc.govt.nz</a>.
- 14. The consent holder shall ensure that the intake at the weir is designed to avoid fish entering the intake or being trapped against the screen.
- 15. Before 31 August 2018 the consent holder shall provide an 'Efficiency Audit Report', prepared by a suitably qualified independent person, to the Chief Executive, Taranaki Regional Council. The report shall have the following objectives:
  - (a) characterising 'efficient water use' in the context of the Oaonui Water Supply;
  - (b) describing the current level of efficiency of the Oaonui Water Supply Scheme;
  - (c) identifying any barriers to efficient water use; and
  - (d) identifying how efficient water use can be achieved, including a timetable.

The report shall include as a minimum:

- (i) any work that could be undertaken to detect and minimise leaks;
- (ii) identification of water use efficiency and conservation measures that shall be practiced by individual users in order to achieve an appropriate level of efficiency;
- (iii) water use benchmarking data for the region, how the Oaonui Water Supply Scheme compares and reason for any significant differences;
- (iv) an assessment of the costs and benefits of individual metering;
- (v) the types of shed washdown methods used by farms in the scheme and how those methods contribute to efficient water use; and
- (vi) Recommendations to achieve efficient water use as appropriate.

The consent holder shall also provide a copy of this report to Te Kahui o Taranaki Trust and to Fish and Game.

### Consent 0231-4.0

- 16. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review during the month of June 2019 and at 3-yearly intervals thereafter for the purposes of:
  - (a) ensuring efficient water use; and/or
  - (b) ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time.

Signed at Stratford on 5 April 2017

For and on behalf of Taranaki Regional Council

\_\_\_\_\_

A D McLay

**Director - Resource Management** 

# Land Use Consent Pursuant to the Resource Management Act 1991 a resource consent is hereby granted by the Taranaki Regional Council

Name of Oaonui Water Supply Limited

Consent Holder: PO Box 3157

New Plymouth 4347

Decision Date: 5 April 2017

Commencement Date: 1 May 2017

# **Conditions of Consent**

Consent Granted: To use and maintain a weir and water intake structure on the

bed of the Oaonui Stream, and to dam water, for water

supply purposes

Expiry Date: 1 June 2036

Review Date(s): June 2019 and 3-yearly intervals thereafter

Site Location: Arawhata Road, Oaonui

Grid Reference (NZTM) 1676822E-5641433N

Catchment: Oaonui

For General, Standard and Special conditions pertaining to this consent please see reverse side of this document

#### **General condition**

a. The consent holder shall pay to the Taranaki Regional Council all the administration, monitoring and supervision costs of this consent, fixed in accordance with section 36 of the Resource Management Act 1991.

# **Special conditions**

- 1. The consent holder shall maintain the weir so that it remains sound and fit for purpose.
- 2. The consent holder shall repair any erosion or scour of the river bed or banks caused by the weir and take reasonable steps to stop it recurring.
- 3. The weir shall not restrict the passage of fish.
- 4. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review during the month of June 2019, and 3-yearly intervals thereafter for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time.

For and on behalf of

Signed at Stratford on 5 April 2017

Taranaki Regional Council					
A D McLay					
Director - Resource Management					

# Discharge Permit Pursuant to the Resource Management Act 1991 a resource consent is hereby granted by the Taranaki Regional Council

Name of Oaonui Water Supply Limited

Consent Holder: PO Box 3157

New Plymouth 4347

Decision Date: 5 April 2017

Commencement Date: 1 May 2017

# **Conditions of Consent**

Consent Granted: To discharge water and contaminants into the Oaonui

Stream from sluicing a weir

Expiry Date: 1 June 2036

Review Date(s): June 2019 and 3-yearly intervals thereafter

Site Location: Arawhata Road, Oaonui

Grid Reference (NZTM) 1676828E-5641424N (sluicing discharge)

1676624E-5641124N (sand trap discharge)

Catchment: Oaonui

For General, Standard and Special conditions pertaining to this consent please see reverse side of this document

#### **General condition**

a. The consent holder shall pay to the Taranaki Regional Council all the administration, monitoring and supervision costs of this consent, fixed in accordance with section 36 of the Resource Management Act 1991.

## **Special conditions**

- 1. The consent holder shall at all times adopt the best practicable option, as defined in section 2 of the Resource Management Act 1991, to prevent or minimise any actual or likely adverse effect on the environment associated with the discharge and the activity generally, including by appropriately managing the timing, frequency and duration of sluicing.
- 2. The exercise of this consent shall not give rise to any of the following effects in the Oaonui Stream beyond a distance of 50 metres downstream of a discharge point:
  - (a) any conspicuous change in the colour or visual clarity;
  - (b) any emission of objectionable odour;
  - (c) the rendering of fresh water unsuitable for consumption by farm animals; and
  - (d) any significant adverse effects on aquatic life.
- 3. This consent shall not be exercised if, at any time on each of the three previous days, the flow in the Oaonui Stream downstream of the weir has been less than 151 litres per second.
- 4. The sluicing shall be managed to ensure that within 2 minutes of the sluice gate being closed the stream is flowing over the weir.
- 5. The consent holder shall ensure that an investigation is undertaken into the effects on the ecology of Oaonui Stream resulting from the exercise of this consent in combination with the damming authorised by consent 5453-2.0 and the taking authorised by consent 0231-4.0. A report on that investigation shall be provided to the Chief Executive, Taranaki Regional Council before 1 June 2020. The investigation shall be based on MCI and fish surveys.

The consent holder shall provide a copy of this report to Te Kahui o Taranaki Trust and to Fish and Game.

# Consent 10314-1.0

6. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review during the month of June 2019 and at 3-yearly intervals thereafter, for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time.

Signed at Stratford on 5 April 2017

For and on behalf of Taranaki Regional Council

A D McLay

**Director - Resource Management**