

Stratford District Council
Water Supply Schemes
Monitoring Programme
Annual Report
2012-2013

Technical Report 2013-30

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Executive summary

The Stratford District Council (SDC) operates three water supply schemes in the Stratford district, which supply water to the town of Stratford and to the villages of Midhirst and Toko. This report for the period July 2012-June 2013 describes the monitoring programme implemented by the Taranaki Regional Council (TRC) to assess Stratford District Council's environmental performance during the period under review, and the results and environmental effects of their activities.

Stratford District Council holds a total of 10 resource consents in relation to water supplies, which include a total of 59 conditions setting out the requirements that the consent holder must satisfy. The consent holder holds four consents to allow it to take and use water, 3 consents to discharge filter backwash, and three consents to construct and maintain in-stream structures.

The Council's monitoring programme for the year under review included an inspection of each scheme, and the review of abstraction data. A sample was also taken from the Stratford Water Treatment Plant's (WTP) backwash pond.

As in previous years, the monitoring indicated that there appeared to be no adverse environmental effects resulting from the operation of Stratford District Council's water supply schemes. Despite drought conditions during the period under review, SDC demonstrated a high level of environmental performance and compliance with consent conditions.

Council received no complaints in regards to SDC's water treatment activities, nor were any incidents logged.

This report includes recommendations for the 2013-2014 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 the Annual Report for the period July 2012-June 2013 by the Council on the monitoring programme associated with resource consents held by Stratford District Council [SDC] for its water supply schemes. SDC operates three public water supplies servicing the Stratford, Midhirst and Toko areas.

This report covers the results and findings of the monitoring programme implemented by the Council in respect of the consents held by SDC that relate to abstractions and discharges of water, and the maintenance of in-stream structures for its water supply plants.

One of the intents of the Resource Management Act (1991) is that environmental management should be integrated across all media, so that a consent holder's use of water, air, and land should be considered from a single comprehensive environmental perspective. Accordingly, the Taranaki Regional Council generally implements integrated environmental monitoring programmes and reports the results of the programmes jointly. This report discusses the environmental effects of SDC's use of water and land, and is the 16th combined annual report by the Taranaki Regional Council for the SDC water supplies.

1.1.2. Structure of this report

Section 1 of this report is a background section. It sets out general information about compliance monitoring under the Resource Management Act and the Council's obligations and general approach to monitoring sites through annual programmes, the resource consents held by SDC in relation to its public water supplies, the nature of the monitoring programme in place for the period under review, and a description of the activities and operations conducted at SDC's water supply plants and associated structures.

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

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

Section 4 presents recommendations to be implemented in the 2013-2014 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 Resource Management Act 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 a discharger, and may include cultural and socio-economic 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 (e.g., recreational, cultural, or aesthetic);
- (e) risks to the neighbourhood or environment.

In drafting and reviewing conditions on discharge permits, and in implementing monitoring programmes, the Taranaki Regional Council is recognising the comprehensive meaning of 'effects' inasmuch as is appropriate for each discharge source. Monitoring programmes are not only based on existing permit conditions, but also on the obligations of the Resource Management Act to assess the effects of the exercise of consents. In accordance with section 35 of the Resource Management Act 1991, the Council undertakes compliance monitoring for consents and rules in regional plans; and maintains an overview of performance of resource users against regional plans and consents. Compliance monitoring, (covering both activity and impact) monitoring, also enables the Council to continuously assess its own performance in resource management as well as that of resource users particularly consent holders. It further 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 performance

Besides discussing the various details of the performance and extent of compliance by the SDC during the period under review, this report also assigns an overall rating. The categories used by the Council, and their interpretation, are as follows:

- a **high** level of environmental performance and compliance indicates that essentially there were no adverse environmental effects to be concerned about, and no, or inconsequential (such as data supplied after a deadline) non-compliance with conditions.
- a **good** level of environmental performance and compliance indicates that adverse environmental effects of activities during the monitoring period were negligible or minor at most, or, the Council did not record any verified unauthorised incidents involving significant environmental impacts and was not obliged to issue any abatement notices or infringement notices, or, there were perhaps some items noted on inspection notices for attention but these items were not urgent nor critical, and follow-up inspections showed they have been dealt with, and inconsequential non-compliances with conditions were resolved positively, co-operatively, and quickly.

- **improvement desirable** indicates that the Council may have been obliged to record a verified unauthorised incident involving measureable environmental impacts, or, there were measureable environmental effects arising from activities and intervention by Council staff was required, and there were matters that required urgent intervention, took some time to resolve, or remained unresolved at end of the period under review, and/or abatement notices may have been issued.
- **poor performance** indicates that the Council may have been obliged to record a verified unauthorised incident involving significant environmental impacts, or, there were adverse environmental effects arising from activities and there were grounds for prosecution or an infringement notice.

1.2. Process description

1.2.1. Stratford water supply

The municipal water supply is extracted from the Patea River (main supply) and the Konini Stream (auxiliary supply) by means of weirs on these watercourses. At the Cardiff Road water treatment plant the water is flocculated within filters and then treated with chlorine and fluoride for domestic supply before being pumped to a nearby reservoir. The water supply is reticulated to approximately 2,300 separate customers.

The water filters are backwashed at least once a day using treated water. These backwashes are discharged into a large settling pond that was previously a reservoir for the water supply prior to treatment. The outlet from the pond is an inverted pipe located at the opposite end of the pond from the inlet. The discharge from the pond emerges from a pipe to fall over a small waterfall. At the base of the waterfall the discharged water runs down a natural cobbled channel beneath native riparian vegetation for approximately 10 metres before entering the Patea River, downstream of the intake weir.

1.2.2. Midhirst water supply

The Midhirst community water treatment plant was originally the water treatment plant for the former Midhirst dairy factory. Water is pumped from the Te Popo Stream (through a small filter attached to a flexible hose within the stream), to a settling tank at the treatment plant. The pump is switched off when the Te Popo Stream is in fresh with a high level of suspended silt. After settling the water is filtered and treated with chlorine. Once treated, the water is pumped to a reservoir, which has a probe switch to initiate pumping at the treatment plant when the water level in the reservoir is low. The reservoir is believed to have capacity for five days' water for the Midhirst community. From the reservoir, the treated water returns to the treatment plant where a booster pump drives it into the Midhirst reticulation system at an acceptable mains pressure. A large storage tank onsite acts as a reservoir for fire fighting.

The filter at the treatment plant is backwashed once per week using treated water. The filter backwash is discharged to a soak hole next to the water treatment plant. The soak hole is filled with sealing chip and covered with soil and is of sufficient size to hold the backwash discharge.

1.2.3. Toko water supply

The Toko rural water supply was originally the water supply for the former Toko dairy factory.

Water is pumped from a bore to a small shed where it is chlorinated and then filtered. After it has been filtered, the water is pumped to two tanks on a hill above Toko. The tanks have probe switches to initiate pumping when the water levels in the tanks are low. The pumps are operated so as to work gradually for longer periods rather than at high rates for short periods.

The filter is backwashed once per week to a series of two soak holes. The capacity of the soak holes is more than adequate to deal with the volumes of backwash which they receive.

1.3. Resource consents

SDC holds various resource consents for the water supply plants and structures that it operates, including water abstraction permits, discharge permits and land use consents. These consents are listed in Table 1 and summarised below in Sections 1.3.1 to 1.3.3. Copies of all resource consents associated with the Stratford District Council water supply operations are attached to this report as Appendix I.

Table 1 Summary of consents held by SDC in relation to public water supplies

Water Supply Scheme	Consent No	Purpose	Issue Date	Next Review	Expiry
Stratford	0068-3	To discharge up to 140 cubic metres/day of settled filter backwash water from the Stratford Municipal Water Treatment Plant via a settling pond into the Patea River	24/02/1998	-	2016
	0195-2	To take and use water from the Patea River for Stratford town water supply purposes	20/07/1998	-	2016
	1421-2	To take and use water from the Konini Stream a tributary of the Paetahi Stream in the Patea catchment for Stratford town water supply purposes	20/07/1998	-	2016
	2452-2	To dam the Konini Stream a tributary of the Paetahi Stream in the Patea Catchment for the Stratford town water supply	20/07/1998	-	2016
	5353-1	To dam the Patea River for the Stratford town water supply	20/07/1998	-	2016
	6549-1	To repair and maintain an existing weir structure in the Konini Stream a tributary of the Paetahi Stream in the Patea catchment	31/01/2005	2016	2022
Midhirst	1276-3	To take a maximum of 70,000 cubic metres of water per year, with a maximum of 254 cubic metres/day in summer [1 November to 31 March] and 432 cubic metres/day in winter [1 April to 31 October], at a maximum rate of 5 litres/second, from the Te Popo Stream a tributary of the Manganui River in the Waitara catchment for Midhirst community public water supply purposes	09/06/2003	2015	2021

Water Supply Scheme	Consent No	Purpose	Issue Date	Next Review	Expiry
	1331-2	To discharge treated filter backwash water from the Midhirst Water Treatment Plant into the Te Popo Stream in the Waitara Catchment via a soak hole	21/08/1991	-	2016
Toko	1337-3	To take and use groundwater from a bore in the vicinity of the Toko Stream in the Patea catchment for Toko rural water supply purposes	17/06/2005	2016	2020
	6605-1	To discharge treated filter backwash water from the Toko Water Treatment Plant into the Toko Stream in the Patea catchment via soak holes	29/04/2005	2016	2020

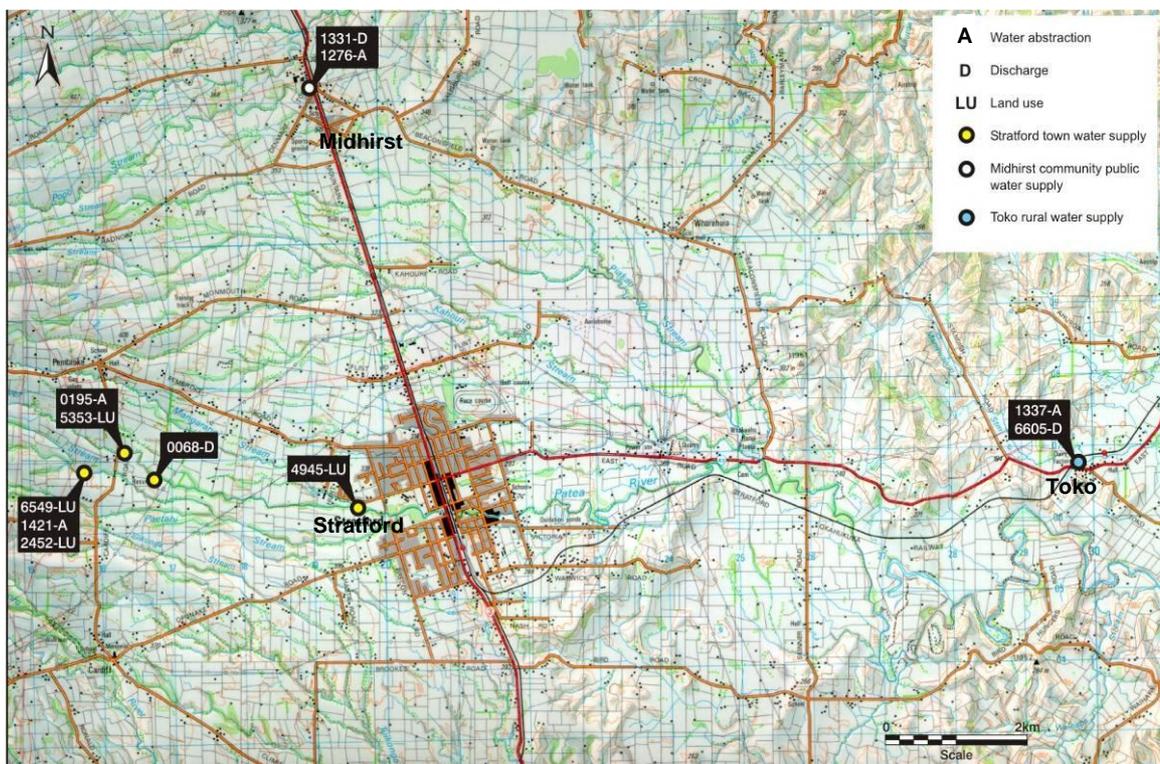


Figure 1 Location of water supply plants and structures in Stratford District

1.3.1. Water abstraction permits

Section 14 of the Resource Management Act 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.

SDC holds water permit **1276-3** to take water from the Te Popo Stream in the Waitara Catchment for Midhirst community public water supply purposes. This permit was issued by the Taranaki Regional Council on 9 June 2003 under Section 87(d) of the Resource Management Act. It is due to expire on 1 June 2015.

Condition 1 requires the consent to be exercised in accordance with the information submitted with the application.

Condition 2 requires the adoption of the best practicable option to minimise adverse environmental effects.

Condition 3 places a limit on the rate of the abstraction.

Condition 4 requires the screening of intake structures to prevent entrainment of fish.

Condition 5 requires the recording of daily abstraction rates and provision of abstraction data to Council.

Condition 6 allows the Council to suspend or reduce abstraction at times of low flow and condition 7 is a review provision.

SDC holds water permit **1337-2** to take water from a bore in the vicinity of Toko Stream in the Patea catchment for rural water supply purposes. This permit was renewed on 17 June 2005 under Section 87(d) of the Resource Management Act. It is due to expire on 1 June 2022.

Condition 1 requires the adoption of the best practicable option to minimise adverse environmental effects.

Condition 2 requires the consent to be exercised in accordance with the information supplied in support of the application.

Condition 3 requires notification of the Council prior to exercise of the consent.

Condition 4 places limits on the volume and rate of abstraction.

Condition 5 requires the recording of daily abstraction rates and provision of abstraction data to Council.

Condition 6 is a lapse provision.

Condition 7 is a review provision.

SDC holds water permit **0195-2** to take and use water from the Patea River for Stratford town water supply purposes. This permit was issued by the Taranaki Regional Council on 27 July 1998 and was reviewed in August 2004 to clarify abstraction rates. It is due to expire on 1 June 2016.

Condition 1 requires the recording of daily abstraction rates and provision of abstraction data to Council.

Conditions 2, 3 and 4 place limits on the rate of abstraction under various conditions.

Condition 5 requires the implementation of water conservation measures when flow is at or below MALF.

Condition 6 deals with donations to the Taranaki Tree Trust for riparian management.

Condition 7 allows the Council to require the suspension or reduction of the abstraction during times of low flow.

Condition 8 is a review provision.

SDC holds water permit **1421-2** to take and use water from the Konini Stream to supplement the Stratford town water supply. This permit was issued by the Taranaki Regional Council on 20 July 1998 under Section 87(d) of the Resource Management Act and was reviewed in August 2004 to clarify abstraction rates. It is due to expire on 1 June 2016.

Condition 1 requires the recording of daily abstraction rates and provision of abstraction data to Council.

Conditions 2 and 3 place limits on the rate of abstraction under various conditions.

Condition 4 allows the Council to require the suspension or reduction of abstraction during times of low flow.

Condition 5 is a review provision.

1.3.2. Water discharge permits

Section 15(1)(a) of the Resource Management Act 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.

SDC holds water discharge permit **1331-2** to discharge treated filter backwash water from the Midhurst community public water supply plant into the Te Popo Stream via a soak hole. This permit was issued by the Taranaki Regional Council on 21 August 1991 under Section 87(e) of the Resource Management Act. The conditions were varied in September 2000 when soakholes were installed. Prior to this the backwash was discharged directly to the stream. The consent is due to expire on 1 June 2016.

Condition 1 places a limit on the discharge volume.

Condition 2 requires the proper and efficient maintenance and operation of the soakhole system.

Condition 3 specifies effects which the discharge is prohibited to cause in the receiving waters.

Condition 4 places a limit on chlorine in the discharge.

Condition 5 is a review provision.

SDC holds water discharge permit **0068-3** to discharge settled filter backwash water from the Stratford municipal water treatment plant via a settling pond into the Patea River. This permit was issued by the Taranaki Regional Council on 24 February 1998 under Section 87(e) of the Resource Management Act. It is due to expire on 1 June 2016.

Condition 1 requires the proper and efficient maintenance and operation of the settlement pond system.

Condition 2 requires the relocation of the outlet from the settlement pond to prevent a short-circuit between the inlet and outlet.

Condition 3 specifies effects which the discharge is prohibited to cause in the receiving waters.

Condition 4 limits certain contaminants in the discharge.

Condition 5 is a review provision.

SDC holds water discharge permit **6605-1** to discharge filter backwash water from the Toko water supply plant into the Manawawiri Stream, a tributary of the Toko Stream via soak holes. This permit was issued by the Taranaki Regional Council on 29 April 2005 under Section 87(e) of the Resource Management Act. It is due to expire on 1 June 2022.

Condition 1 places a limit on the discharge volume.

Condition 2 requires the proper and efficient maintenance and operation of the soakhole system.

Condition 3 specifies effects which the discharge is prohibited to cause in the receiving waters.

Condition 4 limits chlorine in the discharge.

Condition 5 is a review provision.

1.3.3. Land use consents

Section 13(1)(a) of the Resource Management Act stipulates that no person may use, erect, reconstruct, place, alter, extend, remove, or demolish any structure or part of any structure in, on, under, or over the bed of any lake or river, unless the activity is expressly allowed for by a resource consent, or a rule in a Regional Plan and in any relevant proposed regional plan.

SDC holds land use consent **2452-2** to dam the Konini Stream in the Patea catchment for the Stratford town water supply. The consent was issued by the Taranaki Regional Council on 20 July 1998 under Section 87(a) of the Resource Management Act. It is due to expire on 1 June 2016.

Condition 1 provides for provision of fish passage.

Condition 2 requires the monitoring of the fish pass.

Condition 3 is a review provision.

SDC holds land use consent **6549-1** to repair and maintain an existing weir structure in the Konini Stream, a tributary of the Paetahi Stream in the Patea catchment. The consent was issued by the Taranaki Regional Council on 21 September 2004 under Section 87(a) of the Resource Management Act. It is due to expire on 1 July 2021.

Condition 1 requires notification of Council prior to maintenance works.

Condition 2 prohibits in-stream works between 1 May and 31 October without prior written permission.

Conditions 3 and 4 require the adoption of the best practicable option and minimisation of adverse effects on water quality.

Condition 5 requires the consent to be exercised in accordance with the information submitted with the application.

Condition 6 prohibits erosion of the river channel.

Condition 7 specifies effects which are prohibited in the Konini Stream.

Condition 8 is a review provision.

SDC holds land use consent **5353-1** to dam the Patea River for the Stratford town water supply. This permit was issued by the Taranaki Regional Council on 20 July 1998 under Section 87(a) of the Resource Management Act. The conditions related to fish passage were changed in March 2000 to allow for research and the formulation of a decision concerning trout access to the Patea River above the weir. The consent is due to expire on 1 June 2016.

Condition 1 provides for the provision of fish passage.

Condition 2 requires satisfactory maintenance and operation of the fish pass.

Condition 3 is a review provision.

1.4. Monitoring programme

1.4.1. Introduction

Section 35 of the Resource Management Act sets out obligation/s upon the Taranaki Regional Council to gather information, monitor, and conduct research on the exercise of resource consents, and the effects arising, within the Taranaki region and report upon these.

The Taranaki Regional 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 Stratford District Council's water supplies consisted of three primary components.

1.4.2. Programme liaison and management

There is generally a significant investment of time and resources by the Taranaki Regional Council in ongoing liaison with resource consent holders over consent conditions and their interpretation and application, in discussion over monitoring requirements, preparation for any reviews, renewals, or new consents, advice on the Council's environmental management strategies and the content of regional plans, and consultation on associated matters.

1.4.3. Site inspections

The three water supply schemes, and their associated structures, were each visited at least once during the monitoring period. With regard to consents for the abstraction of or discharge to water, the main points of interest were plant processes with potential or actual discharges to receiving watercourses. Sources of data being collected by the consent holder were identified and accessed, so that performance in respect of operation, internal monitoring, and supervision could be reviewed by the Council.

1.4.4. Chemical sampling

A sample of the filter backwash discharge from the Stratford WTP to the Patea River, could not be collected as the pond was not discharging and a sample was taken directly from the pond instead.



Photograph 1 Stratford WTP settling pond, showing location of outlet pipe

1.4.5. Data review

All of the water abstraction consents held by the SDC in regard to municipal water supply contain a condition which requires the SDC to keep records of abstraction volumes and make these records available to Council upon request. The data is reviewed to assess compliance in regard to volumes of water taken and flow conditions of the source stream or river.

2. Results

2.1. Inspections

Each of SDC's water supply schemes were inspected on 10 December 2012.

2.1.1 Stratford water supply

The Patea River was running clean and clear at a low to moderate flow. The abstraction rate was 170 m³/hour which was in compliance with the consent limit of 61 l/s (220 m³/hour). The backwash pond level was below the outlet pipe and no discharge was occurring. The intake weir was free of debris and no issues were noted.

The Konini Stream was running clean and clear and it was noted that there was a significant amount of debris in the fish pass which was obstructing flow. No water was being abstracted at the time.

The following action was to be taken:

- Clear away debris from the fish pass at the Konini weir



Photograph 2 Stratford WTP

2.1.2 Midhirst water supply

The Te Popo Stream was running clean and clear at a low to moderate flow. The abstraction rate was 150.7 m³/hour and discussions with the operator indicated that the plant abstracts for approximately 20 hours/day.

It was noted that the water meter was not installed to NES standards in regards to straight pipe length before the meter and this will have to be changed before 2016.

2.1.3 Toko water supply

No abstraction was occurring at the time of the inspection and the plant was running on approx. 2 x 2 hour runs per day. The filter is backwashed to a soak hole about once per week. It was noted that the water meter was not installed to NES standards in regards to straight pipe length, and this will have changed before 2016. The consent holder was instructed to ensure the meter is reinstalled correctly during the 2015 upgrade.

2.2. Results of discharge monitoring

A sample of the filter backwash discharge from the Stratford water treatment plant to the Patea River could not be collected as the pond level was below the discharge point. A sample from the pond itself was taken for analysis.

Table 2 Sample from backwash pond at Stratford WTP 27 June 2013 (site STW0003034)

Parameter	Unit	Result	Consent 0068 limits
Free chlorine	g/m ³	<0.1	0.1
pH	pH	7.6	-
Suspended solids	g/m ³	3	20
Turbidity	NTU	1.6	-
Temperature	Deg C	7.1	-

The results indicate that if a discharge was to occur it would be in compliance with consent conditions and not likely to have significant effects on water quality in the Patea River.

2.3. Data review

All abstraction consents held by SDC require that daily rates of abstraction are recorded and provided to the Council upon request.

2.3.1. Stratford water supply

Under normal operations the combined water abstraction from the Patea River and Konini Stream is not to exceed 61 L/s. Further, the abstraction from the Patea River is to be reduced to 41 L/s when the river is below 725 L/s, measured at Skinner Road. During the period under review Patea River flows (at Skinner Road) went below the 725 L/s threshold and the abstraction rate from the Patea River was reduced to below 41 L/s and the water was taken from the Konini Stream. All abstractions in regards to the Stratford WTP were in compliance with consent conditions.

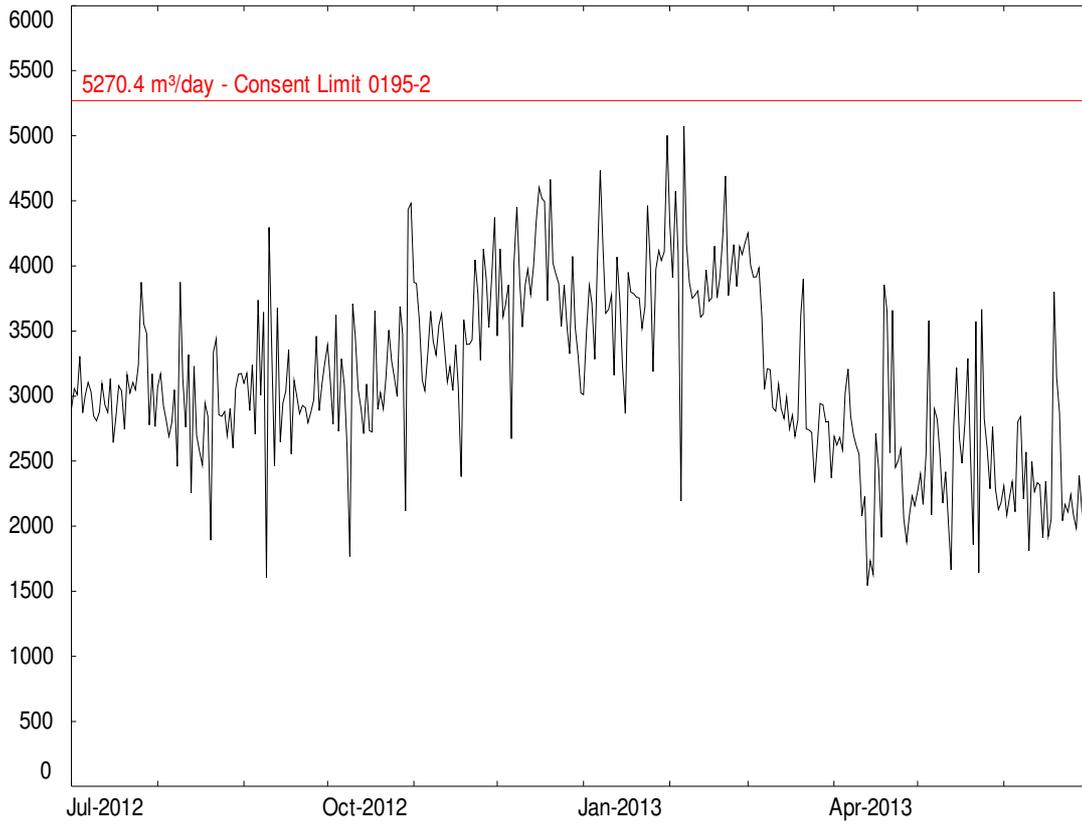


Figure 2 Graph showing the daily abstraction from the Patea River

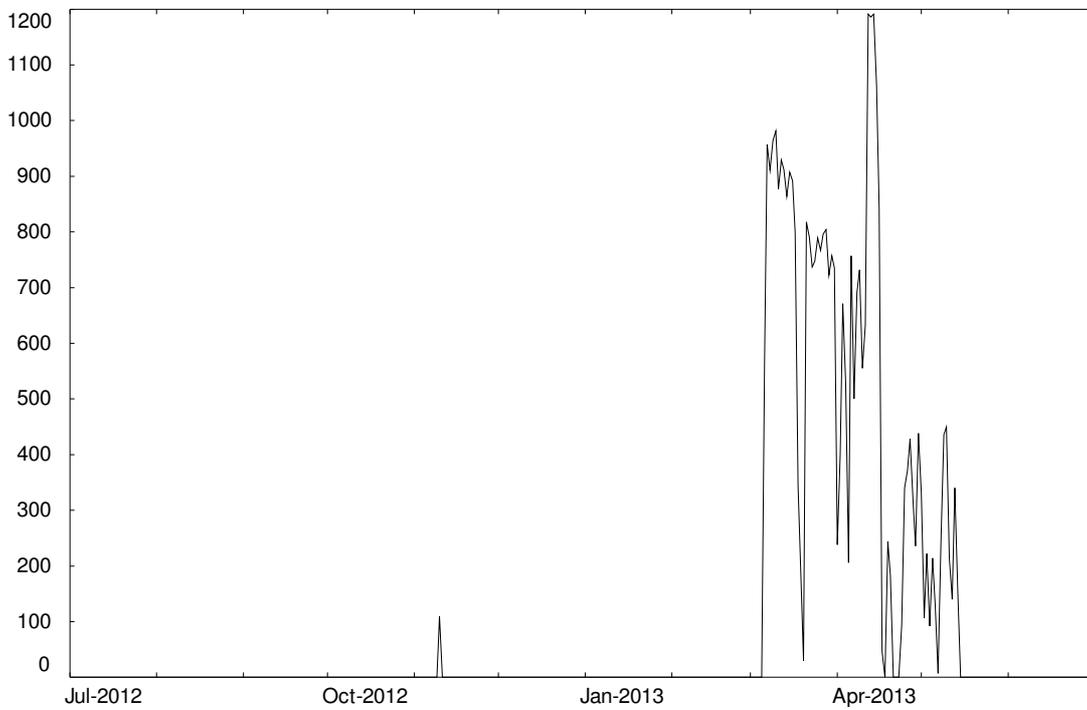


Figure 3 Graph showing the daily abstraction from the Konini River

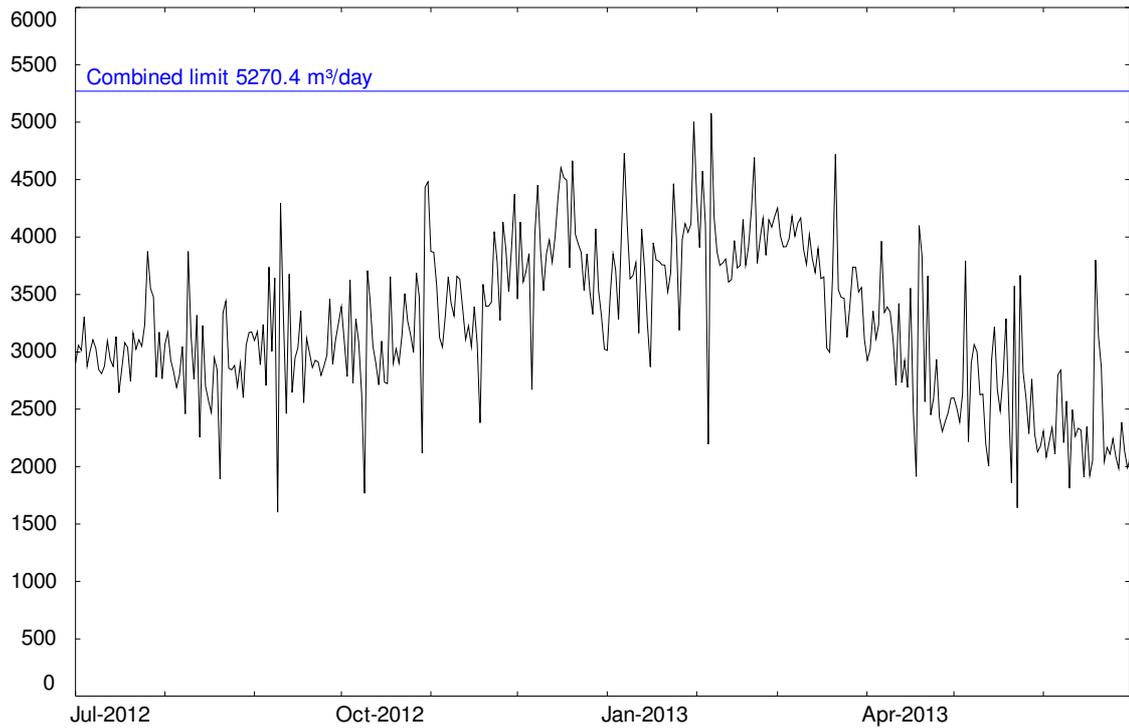


Figure 4 Graph showing the daily abstraction from the Patea River

2.3.2. Toko water supply

The maximum daily abstraction for the Toko WTP is 80 m³/day. Daily abstraction data is shown in Figure 4 and this shows that there were no exceedances during the period under review.

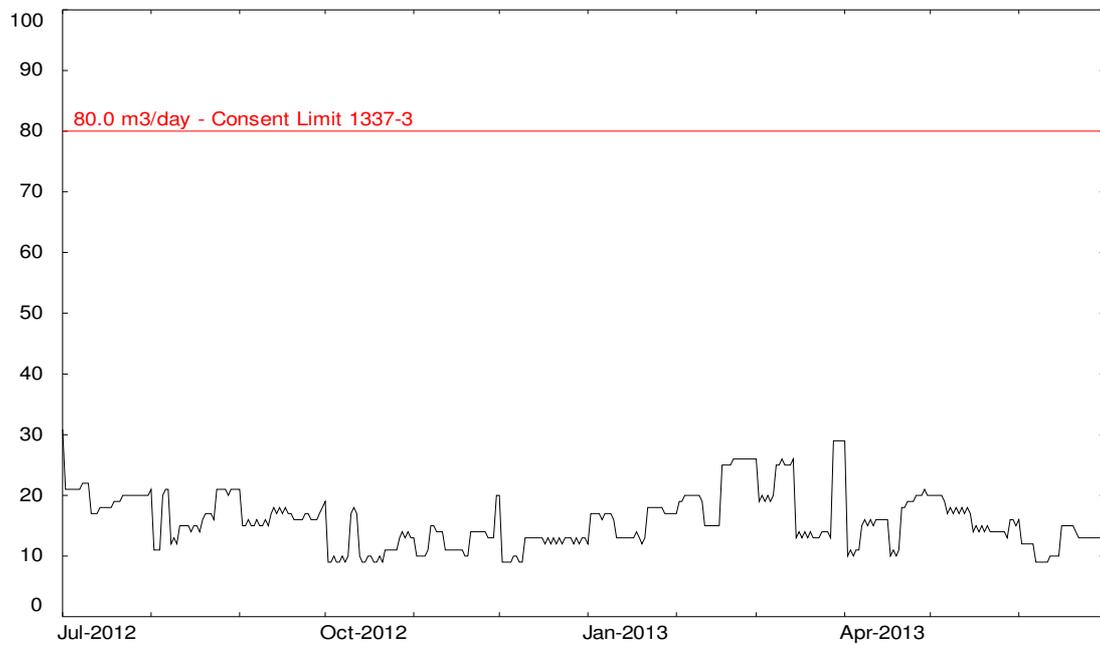


Figure 5 Graph showing the daily abstraction at the Toko WTP

2.3.3. Midhirst water supply

Consent 1276-3 allows for a maximum monthly average take of 254 m³/day in summer (1 November to 31 March) and an actual take of 432 m³/day in winter (1 April to 31 October). Daily and monthly abstraction data is given in Figure 3 and this shows that there were no exceedances during the period under review.

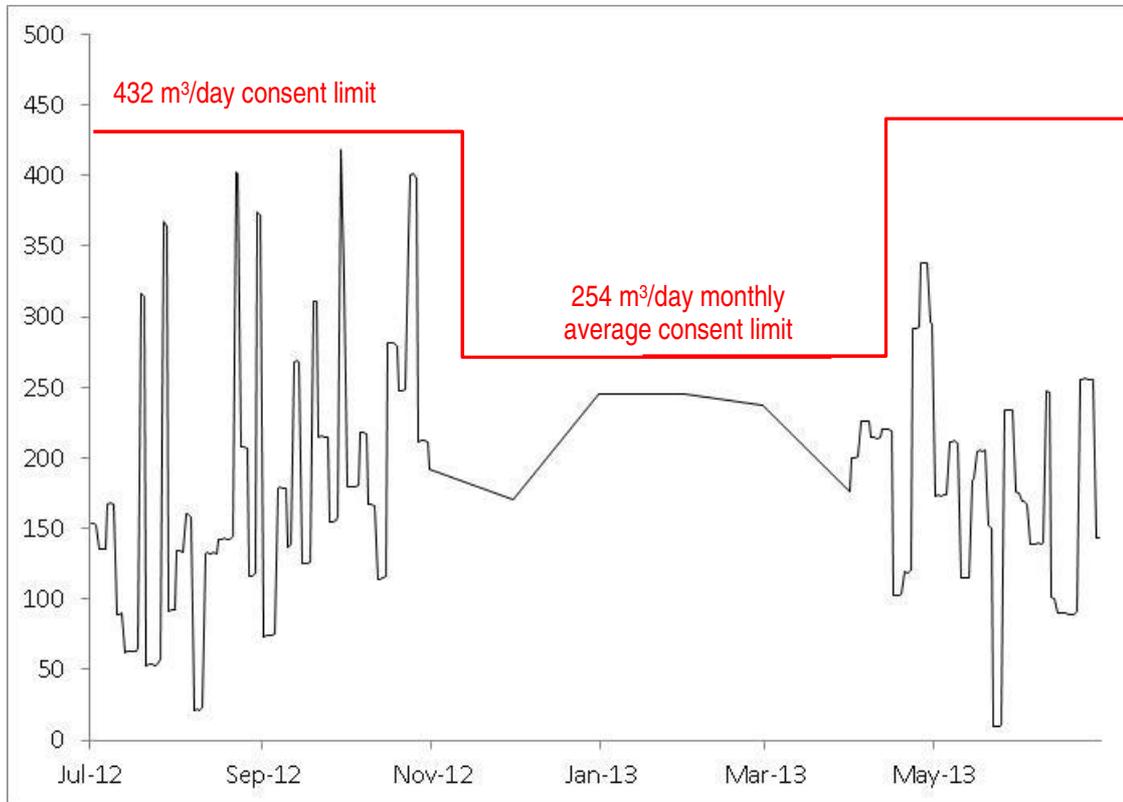


Figure 6 Graph showing the daily abstraction at the Midhirst WTP

2.4. Investigations, interventions, and incidents

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 eg 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.

The Taranaki Regional Council operates and maintains a register of all complaints or reported and discovered excursions from acceptable limits and practices, including non-compliance with consents, which may damage the environment. The Unauthorised Incident Register (UIR) includes events where the consent holder concerned has itself notified the Council. The register contains details of any investigation and corrective action taken.

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 consent holder is indeed the source of the incident (or that the allegation cannot be proven).

In the 2012-2013 year, it was not necessary for the Council to undertake significant additional investigations and interventions, or record incidents that were associated with non-compliance by SDC with conditions in resource consents or provisions in Regional Plans.

3. Discussion

3.1. Discussion of SDC performance

SDC demonstrated a high level of performance in regards to regularly providing abstraction data and complying with consent conditions that specify abstraction rates and volumes. This is especially of note as the Taranaki region experienced a significant drought in the period under review.

3.2. Environmental effects of exercise of consents

The combined abstraction from the Patea River and Konini Stream was well below that allowed by the consent. The backwash pond at the Stratford WTP rarely discharges due to the large capacity of the pond. A sample of the pond water indicated that it would not have any significant effects if it were to discharge.

The weir in the Patea River is likely to present a barrier to the passage of trout within the river. However, this effect may be beneficial in providing a trout-free reserve for native fish upstream of the weir. Consent 5353-1 required the installation of a structure at the weir that provides unrestricted passage of fish by 1 July 2005. However, as a requirement of the new consents granted for the Patea hydro-electric dam (located downstream of the weir), 'target species' juveniles are to be manually transferred into the headwaters of the Patea Catchment from the lower river. One of the release sites is located immediately upstream of the weir. The requirement for a fish pass at the weir is therefore currently on hold. The success of the upstream transfer programme will be assessed in approximately six years time, at which point, it will be determined whether this fish pass requirement should remain on hold. If the transfer of juvenile fish into the headwaters is abandoned, it is likely that a fish pass will need to be installed.

Monitoring of the Toko and Midhirst WTP's indicated that these plants were not having any adverse effects on the environment.

In general the SDC WTP schemes were well run and in compliance with consent conditions and are not having any significant adverse effect on river flow or water quality.

3.3. Evaluation of performance

3.3.1. Stratford water supply

A tabular summary of the consent holder's compliance record for the year under review is set out in Tables 3-12.

Table 3 Summary of performance for Consent 0068-3 To discharge settled filter backwash water from the Stratford Municipal Water Treatment Plant via a settling pond into the Patea River

Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Proper and efficient maintenance of settlement pond	Inspection	Yes
2. Re-location of outlet from pond to prevent short circuit between inlet and outlet within two months of granting of consent	Inspection	Yes

Condition requirement	Means of monitoring during period under review	Compliance achieved?
3. Discharge not to cause certain effects in the Patea River below the mixing zone	Inspection - not discharging	N/A
4. Limits on suspended solids and chlorine in the discharge	Sampling	Yes
5. Optional review provision re environmental effects	No further option for review prior to expiry	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		High

Table 4 Summary of performance for Consent 0195-2 To take and use water from the Patea River for Stratford town water supply purposes

Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Recording of abstraction rates and provision of data to Council	Data provided upon request	Yes
2. Limit on abstraction rates	Data review	Yes
3. Requirement to reduce abstraction when Patea flow is less than 725 L/s	Data review	Yes
4. Ability to maintain maximum abstraction rate to establish reservoir storage following plant failure	Liaison with consent holder – not exercised	N/A
5. Implementation of water conservation measures when flow in Patea at or below MALF	Liaison with consent holder and monitoring of stream flows	Yes
6. Mitigation of effects by riparian planting	Planting carried out as required in previous years	Yes
7. Right of Council to suspend or reduce abstraction during extreme low flows	Monitoring of flows	Not required
8. Optional review provision re environmental effects	No further option for review prior to expiry	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		High

Table 5 Summary of performance for Consent 1421-2 To take and use water from the Konini Stream a tributary of the Paetahi Stream in the Patea catchment for Stratford town water supply purposes

Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Recording of abstraction rates and provision of data to Council	Data provided upon request	Yes
2. Limit on abstraction rates	Review abstraction data	Yes
3. Implementation of water conservation measures when flow in Patea at or below MALF	Liaison with consent holder and monitoring of stream flows	Yes

Condition requirement	Means of monitoring during period under review	Compliance achieved?
4. Right of Council to suspend or reduce abstraction during extreme low flows	Monitoring of flows	Not required
5. Optional review provision re environmental effects	No further option for review prior to expiry	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		High

Table 6 Summary of performance for Consent 2452-2 To dam the Konini Stream a tributary of the Paetahi Stream in the Patea Catchment for the Stratford town water supply

Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Maintenance of a fish pass at the weir	Inspection and liaison with consent holder. No maintenance required in monitoring year under review	Yes
2. Monitoring of effectiveness of the fish pass	Inspection	Yes
3. Optional review provision re environmental effects	No further option for review prior to expiry	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		High

Table 7 Summary of performance for Consent 5353-1 To dam the Patea River for the Stratford town water supply

Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Maintenance of a fish pass at the weir	Inspection and liaison with consent holder – no fish pass at weir - on hold	N/A
2. Construction of fish pass by 1 July 2005 with no disturbance of the River bed between 1 May and 31 October. Maintenance of the fish pass to the satisfaction of the Council	Inspection and liaison with consent holder – no fish pass at weir - on hold	N/A
3. Optional review provision re environmental effects	No further option for review prior to expiry	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		N/A

Table 8 Summary of performance for Consent 6549-1 To repair and maintain an existing weir structure in the Konini Stream a tributary of the Paetahi Stream in the Patea catchment

Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Notification of Council prior to maintenance works	Liaison with consent holder and inspection – no maintenance carried out in year under review	N/A
2. In-stream works to only take place between 1 November and 30 April	Liaison with consent holder and inspection – no maintenance carried out in year under review	N/A

Condition requirement	Means of monitoring during period under review	Compliance achieved?
3. Adoption of best practicable option	Liaison with consent holder and inspection – no maintenance carried out in year under review	Yes
4. Minimisation of disturbance of riverbed and reinstatement of disturbed areas	Liaison with consent holder and inspection – no maintenance carried out in year under review	N/A
5. Consent to be exercised in accordance with application documentation	Liaison with consent holder and inspection	Yes
6. Structure not to cause erosion of the river channel	Inspection	Yes
7. Certain effects not permitted in the Konini Stream	Inspection	Yes
8. Optional review provision re environmental effects	Next option for review in June 2016	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		High

3.3.2. Midhirst water supply

Table 9 Summary of performance for Consent 1276-3 To take from the Te Popo Stream a tributary of the Manganui River in the Waitara catchment for Midhirst community public water supply purposes

Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Exercise of consent in accordance with information submitted in support of application	Inspection and liaison with consent holder	Yes
2. Adoption of best practicable option	Inspection and liaison with consent holder	Yes
3. Limit on abstraction rate	Data review	Yes
4. Screening of intake structures	Inspection	Yes
5. Recording of abstraction rates and provision of data to Council	Data provided upon request	Yes
6. Right of Council to suspend or reduce abstraction during extreme low flows	Monitoring of flows – no extreme low flows in monitoring year	N/A
7. Optional review provision re environmental effects	Next option for review in June 2015	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		High

Table 10 Summary of performance for Consent 1331-2 To discharge treated filter backwash water from the Midhirst Water Treatment Plant into the Te Popo Stream in the Waitara Catchment via a soakhole

Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Limit on discharge rates	Inspection	Yes
2. Proper and efficient maintenance of soak hole system	Inspection	Yes
3. Discharge not to cause certain effects in the Te Popo Stream below the mixing zone	Inspection	Yes
4. Limit on chlorine in discharge	Not sampled	N/A
5. Optional review provision re environmental effects	No further option for review prior to expiry	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		High

3.3.3. Toko water supply

Table 11 Summary of performance for Consent 1337-3 To take and use groundwater from a bore in the vicinity of the Toko Stream in the Patea catchment for Toko rural water supply purposes

Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Adoption of best practicable option	Inspection	Yes
2. Consent to be exercised in accordance with the application	Inspection	Yes
3. Notification of Council prior to exercise of consent	Not applicable	N/A
4. Limit on abstraction rate and volume	Review abstraction data	Yes
5. Installation and operation of meter to record abstraction rates and provide data	Data provided upon request	Yes
6. Lapse provision	Not applicable	N/A
7. Optional review provision re environmental effects	Next option for review in June 2016	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		High

Table 12 Summary of performance for Consent 6605-1 To discharge treated filter backwash water from the Toko Water Treatment Plant into the Toko Stream in the Patea catchment via soak holes

Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Limit on discharge volume	Inspection	Yes
2. Maintenance and operation of soak hole system to ensure compliance with consent conditions	Inspection	Yes
3. Discharge not to cause certain effects in the Toko Stream below the mixing zone	Inspection	Yes
4. Limit on chlorine in the discharge	Not sampled in this monitoring period	N/A
5. Optional review provision re environmental effects	Next option for review in June 2016	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		High

In the 2012-2013 period SDC demonstrated a high level of environmental performance and compliance with the resource consents. In comparison to previous monitoring periods, there was a considerable level of improvement in consent compliance, in terms of better reporting of data from SDC to the Council.

3.4. Recommendations from the 2011-2012 Annual Report

In the 2011-2012 Annual Report, it was recommended:

THAT the monitoring programme for consents associated with Stratford District Council's water supply schemes in the 2012-2013 monitoring year remain unchanged from that for 2011-2012.

This recommendation was implemented in full.

3.5. Alterations to monitoring programmes for 2013-2014

In designing and implementing the monitoring programmes for air/water discharges in the region, the Taranaki Regional Council has taken into account the extent of information made available by previous authorities, its relevance under the Resource Management Act, the obligations of the Act in terms of monitoring emissions/discharges and effects, and subsequently reporting to the regional community, 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 emitting to the atmosphere/discharging to the environment.

It is proposed that for 2013-2014 the programme remain unchanged from that for 2012-2013. A recommendation to this effect is attached to this report.

3.6. Exercise of optional review of consent

None of the resource consents covered by this report provide for an optional review in June 2014.

4. Recommendation

THAT the monitoring programme for consents associated with Stratford District Council's water supply schemes in the 2013-2014 monitoring year remain unchanged from that for 2012-2013.

Glossary of common terms and abbreviations

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

Al*	aluminium
As*	arsenic
Biomonitoring	assessing the health of the environment using aquatic organisms
BOD	biochemical oxygen demand. A measure of the presence of degradable organic matter, taking into account the biological conversion of ammonia to nitrate
BODF	biochemical oxygen demand of a filtered sample
bund	a wall around a tank to contain its contents in the case of a leak
CBOD	carbonaceous biochemical oxygen demand. A measure of the presence of degradable organic matter, excluding the biological conversion of ammonia to nitrate
cfu	colony forming units. A measure of the concentration of bacteria usually expressed as per 100 millilitre sample
COD	chemical oxygen demand. A measure of the oxygen required to oxidise all matter in a sample by chemical reaction.
Condy	Conductivity, an indication of the level of dissolved salts in a sample, usually measured at 20°C and expressed in mS/m
Cu*	copper
Cumec	A volumetric measure of flow- 1 cubic metre per second (1 m ³ s ⁻¹)
DO	dissolved oxygen
DRP	dissolved reactive phosphorus
<i>E.coli</i>	<i>Escherichia coli</i> , an indicator of the possible presence of faecal material and pathological micro-organisms. Usually expressed as colony forming units per 100 millilitre sample
Ent	Enterococci, an indicator of the possible presence of faecal material and pathological micro-organisms. Usually expressed as colony forming units per 100 millilitre of sample
F	Fluoride
FC	Faecal coliforms, an indicator of the possible presence of faecal material and pathological micro-organisms. Usually expressed as colony forming units per 100 millilitre sample
fresh	elevated flow in a stream, such as after heavy rainfall
g/m ³	grammes per cubic metre, and equivalent to milligrammes 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
l/s	litres per second (1 l/s = 86.4 m ³ /day)

MALF	mean annual low flow
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
mS/m	millisiemens per metre
mixing zone	the zone below a discharge point where the discharge is not fully mixed with the receiving environment. For a stream, conventionally taken as a length equivalent to 7 times the width of the stream at the discharge point.
NH ₄	ammonium, normally expressed in terms of the mass of nitrogen (N)
NH ₃	unionised ammonia, normally expressed in terms of the mass of nitrogen (N)
NO ₃	nitrate, normally expressed in terms of the mass of nitrogen (N)
NTU	Nephelometric Turbidity Unit, a measure of the turbidity of water
O&G	oil and grease, defined as anything that will dissolve into a particular organic solvent (e.g. hexane). May include both animal material (fats) and mineral matter (hydrocarbons)
Pb*	lead
pH	a numerical system for measuring acidity in solutions, with 7 as neutral. Numbers lower than 7 are increasingly acidic and higher than 7 are increasingly alkaline. The scale is logarithmic i.e. a change of 1 represents a ten-fold change in strength. For example, a pH of 4 is ten times more acidic than a pH of 5.
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
PM ₁₀	relatively fine airborne particles (less than 10 micrometre diameter)
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;
UI	Unauthorised Incident
UIR	Unauthorised 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

*an abbreviation for a metal or other analyte may be followed by the letters 'As', to denote the amount of metal recoverable in acidic conditions. This is taken as indicating the total amount of metal that might be solubilised under extreme environmental conditions. The abbreviation may alternatively be followed by the letter 'D', denoting the amount of the metal present in dissolved form rather than in particulate or solid form.

For further information on analytical methods, contact the Council's laboratory

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- Taranaki Regional Council, 2010: Stratford District Council Water Supply Schemes, Monitoring Programme Annual Report 2009-2010. Technical Report 2010-34
- Taranaki Regional Council, 2011: Stratford District Council Water Supply Schemes, Monitoring Programme Annual Report 2010-2011. Technical Report 2010-17
- Taranaki Regional Council, 2012: Stratford District Council Water Supply Schemes, Monitoring Programme Annual Report 2011-2012. Technical Report 2012-34

Appendix I

Resource consents held by Stratford District Council for the Stratford, Midhirst and Toko Water Supply Schemes

Stratford

TRK980068



DISCHARGE PERMIT

Pursuant to the RESOURCE MANAGEMENT ACT 1991
a resource consent is hereby granted by the
Taranaki Regional Council

PRIVATE BAG 713
47 CLOTON ROAD
STRATFORD
NEW ZEALAND
PHONE 0-6-765 7127
FAX 0-6-765 5097

Name of
Consent Holder: STRATFORD DISTRICT COUNCIL
PO BOX 320 STRATFORD

Renewal
Granted Date: 24 February 1998

CONDITIONS OF CONSENT

Consent Granted: TO DISCHARGE UP TO 140 CUBIC METRES/DAY OF SETTLED
FILTER BACKWASH WATER FROM THE STRATFORD
MUNICIPAL WATER TREATMENT PLANT VIA A SETTLING
POND INTO THE PATEA RIVER AT OR ABOUT GR:
Q20:167-068

Expiry Date: 1 June 2016

Review Date[s]: June 2004 and June 2010

Site Location: CARDIFF ROAD STRATFORD

Legal Description: PT SEC 53A BLK I NGAERE SD

Catchment: PATEA 343.000

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

TRK980068

General conditions

- a) That on receipt of a requirement from the General Manager, Taranaki Regional Council (hereinafter the General Manager), the consent holder shall, within the time specified in the requirement, supply the information required relating to the exercise of this consent.
- b) That unless it is otherwise specified in the conditions of this consent, compliance with any monitoring requirement imposed by this consent must be at the consent holder's own expense.
- c) That the consent holder shall pay to the Council all required administrative charges fixed by the Council pursuant to section 36 in relation to:
 - i) the administration, monitoring and supervision of this consent; and
 - ii) charges authorised by regulations.

Special Conditions

- 1. THAT the consent holder shall properly and efficiently maintain and operate the settlement pond system.
- 2. THAT the consent holder shall undertake to re-locate the outlet from the settlement pond to a suitable position for the purposes of preventing a short-circuit between the inlet and outlet, and provision of improved settlement of sediment within the pond; the relocation work to be completed within two months of the granting of the consent.
- 3. THAT after allowing for a mixing zone of 50 metres downstream of the discharge, the discharge shall not give rise to any of the following effects in the Patea River:
 - i) the production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials;
 - ii) any conspicuous change in the colour or visual clarity;
 - iii) any emission of objectionable odour;
 - iv) the rendering of fresh water unsuitable for consumption by farm animals; and
 - v) any significant adverse effects on aquatic life;
- 4. THAT the discharge quality shall not exceed the following limits at all times:

Suspended solids	20 gm ⁻³
Free available chlorine	0.1 gm ⁻³
- 5. THAT the Taranaki Regional Council may review any or all of the conditions of this consent by giving notice of review during the month of June 2004 and/or June 2010, for the purpose of ensuring that the conditions adequately deal with the environmental effects arising from the exercise of this consent, which were not foreseen at the time the application was considered and which it was not appropriate to deal with at that time.

Signed at Stratford on 24 February 1998

For and on behalf of
TARANAKI REGIONAL COUNCIL



DIRECTOR - RESOURCE MANAGEMENT



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

CHIEF EXECUTIVE
PRIVATE BAG 713
47 CLOTEN ROAD
STRATFORD
NEW ZEALAND
PHONE 06-765 7127
FAX 06-765 5097

Please quote our file number
on all correspondence

Name of
Consent Holder: Stratford District Council
P O Box 320
STRATFORD

Review Completed Date: 5 August 2004 [Granted: 20 July 1998]

Conditions of Consent

Consent Granted: To take and use water from the Patea River for Stratford town water supply purposes at or about GR: Q20:163-071

Expiry Date: 1 June 2016

Review Date(s): June 2004, June 2010

Site Location: Cardiff Road, Pembroke, Stratford

Legal Description: Road Reserve Blk I Ngaere SD

Catchment: Patea

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

www.trc.govt.nz

General conditions

- a) On receipt of a requirement from the Chief Executive, Taranaki Regional Council the consent holder shall, within the time specified in the requirement, supply the information required relating to the exercise of this consent.
- b) Unless it is otherwise specified in the conditions of this consent, compliance with any monitoring requirement imposed by this consent must be at the consent holder's own expense.
- c) The consent holder shall pay to the Council all required administrative charges fixed by the Council pursuant to section 36 in relation to:
 - i) the administration, monitoring and supervision of this consent; and
 - ii) charges authorised by regulations.

Special conditions

1. The consent holder shall record daily rates of abstraction and shall make such records available to the Taranaki Regional Council upon request.
2. During normal operations the combined water abstraction including water from the Konini Stream [consent 1421] shall not exceed 61 litres/second and the combined maximum of 81 litres/second may only be used for temporary periods to re-establish reservoir storage following a plant failure. The consent holder shall notify the Taranaki Regional Council whenever the peak abstraction is to be exercised.
3. The consent holder shall reduce the abstraction from the Patea River to no more than 41 litres/second when the river is under mean annual low flow conditions or less, equivalent to a flow of 725 litres/second or less measured at Skinner Road [Q20:260-064].
4. Notwithstanding condition 3, the consent holder may temporarily maintain the maximum abstraction rate of 61 litres/second to establish reservoir storage following plant failure in accordance with condition 2.
5. The consent holder shall implement water conservation measures to reduce the water demand at times when the Patea River is under mean annual low flow conditions or less, equivalent to a flow of 725 litres/second or less measured at Skinner Road [Q20:260-064].
6. The consent holder shall mitigate the effects of the abstraction by promoting and undertaking riparian management in the Patea River catchment by:
 - i) a donation of \$9,000 to the Taranaki Tree Trust by 1 January 1999;
 - ii) a contribution of \$9,000 (apportioned over the term of the consent), for riparian works by the consent holder in a manner approved by the Taranaki Regional Council. Further, by 30 June 2004, any remaining funds shall be paid in full to the Taranaki Tree Trust or any other water conservation project approved by the Taranaki Regional Council.

Consent 0195-2

7. The Taranaki Regional Council reserves the right to temporarily suspend or reduce the abstraction during extreme low flow events, in order to protect the biological communities in the stream, in accordance with section 329 of the Resource Management Act 1991.
8. The Taranaki Regional Council may review any or all of the conditions of this consent by giving notice of review during the month of June 2004 and/or 2010, 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 consent, which were not foreseen at the time the application was considered and which it was not appropriate to deal with at that time.

Signed at Stratford on 5 August 2004

For and on behalf of
Taranaki Regional Council



Director-Resource Management



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

CHIEF EXECUTIVE
PRIVATE BAG 713
47 CLOTEN ROAD
STRATFORD
NEW ZEALAND
PHONE 06-765 7127
FAX 06-765 5097

Please quote our file number
on all correspondence

Name of
Consent Holder: Stratford District Council
P O Box 320
STRATFORD

Review Completed Date: 5 August 2004 [Granted: 20 July 1998]

Conditions of Consent

Consent Granted: To take and use water from the Konini Stream a tributary of the Paetahi Stream in the Patea catchment for Stratford town water supply purposes at or about GR: Q20:157-068

Expiry Date: 1 June 2016

Review Date(s): June 2004, June 2010

Site Location: Cardiff Road, Pembroke, Stratford

Legal Description: DP 3278 Pt Sec 25 Pt DP 3759 Pt Secs 25 & 26 Blk IV
Kaupokonui SD

Catchment: Patea

Tributary: Paetahi
Konini

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

General conditions

- a) On receipt of a requirement from the Chief Executive, Taranaki Regional Council the consent holder shall, within the time specified in the requirement, supply the information required relating to the exercise of this consent.
- b) Unless it is otherwise specified in the conditions of this consent, compliance with any monitoring requirement imposed by this consent must be at the consent holder's own expense.
- c) The consent holder shall pay to the Council all required administrative charges fixed by the Council pursuant to section 36 in relation to:
 - i) the administration, monitoring and supervision of this consent; and
 - ii) charges authorised by regulations.

Special conditions

1. The consent holder shall record daily rates of abstraction and shall make such records available to the Taranaki Regional Council upon request.
2. During normal operations the combined water abstraction including water from the Patea River [consent 0195] shall not exceed 61 litres/second and that the combined maximum of 81 litres/second may only be used for temporary periods to re-establish reservoir storage following a plant failure. The consent holder shall notify the Taranaki Regional Council whenever the peak abstraction is to be exercised.
3. The consent holder shall implement water conservation measures to reduce the water demand at times when the Patea River is under mean annual low flow conditions or less, equivalent to a flow of 725 litres/second or less measured at Skinner Road [Q20:260-064].
4. The Taranaki Regional Council reserves the right to temporarily suspend or reduce the abstraction during extreme low flow events, in order to protect the biological communities in the stream, in accordance with section 329 of the Resource Management Act 1991.

Consent 1421-2

5. The Taranaki Regional Council may review any or all of the conditions of this consent by giving notice of review during the month of June 2004 and/or June 2010, 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 consent, which were not foreseen at the time the application was considered and which it was not appropriate to deal with at that time.

Signed at Stratford on 5 August 2004

For and on behalf of
Taranaki Regional Council



Director-Resource Management

TRK982452

General conditions

- a) That on receipt of a requirement from the General Manager, Taranaki Regional Council (hereinafter the General Manager), the consent holder shall, within the time specified in the requirement, supply the information required relating to the exercise of this consent.
- b) That unless it is otherwise specified in the conditions of this consent, compliance with any monitoring requirement imposed by this consent must be at the consent holder's own expense.
- c) That the consent holder shall pay to the Council all required administrative charges fixed by the Council pursuant to section 36 in relation to:
 - i) the administration, monitoring and supervision of this consent; and
 - ii) charges authorised by regulations.

Special conditions

- 1. THAT the consent holder shall maintain a structure at the weir to provide for the unrestricted passage of native fish, juvenile and adult trout.
- 2. THAT the consent holder shall monitor the effectiveness of the fish pass in providing for the passage of adult trout.
- 3. THAT the Taranaki Regional Council may review any or all of the conditions of this consent by giving notice of review during the month of June 2004 and/or June 2010, 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 consent, which were not foreseen at the time the application was considered and which it was not appropriate to deal with at that time.

Signed at Stratford on 20 July 1998

For and on behalf of
TARANAKI REGIONAL COUNCIL



DIRECTOR, RESOURCE MANAGEMENT

TRK985353



LAND USE CONSENT

**Pursuant to the RESOURCE MANAGEMENT ACT 1991
a resource consent is hereby granted by the
Taranaki Regional Council**

PRIVATE BAG 713
47 CLOTEN ROAD
STRATFORD
NEW ZEALAND
PHONE 0-6-765 7127
FAX 0-6-765 5097

Name of
Consent Holder: **STRATFORD DISTRICT COUNCIL
PO BOX 320 STRATFORD**

Consent
Granted Date: **20 July 1998**

CONDITIONS OF CONSENT

Consent Granted: **TO DAM THE PATEA RIVER FOR THE STRATFORD TOWN
WATER SUPPLY AT OR ABOUT GR: Q20:163-070**

Expiry Date: **1 June 2016**

Review Date[s]: **June 2004 and June 2010**

Site Location: **CARDIFF ROAD, STRATFORD**

Legal Description: **RIVER RESERVE BLK I NGAERE SD**

Catchment: **PATEA 343.000**

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

TRK985353

General conditions

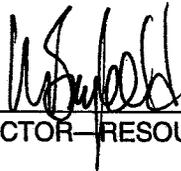
- a) That on receipt of a requirement from the General Manager, Taranaki Regional Council (hereinafter the General Manager), the consent holder shall, within the time specified in the requirement, supply the information required relating to the exercise of this consent.
- b) That unless it is otherwise specified in the conditions of this consent, compliance with any monitoring requirement imposed by this consent must be at the consent holder's own expense.
- c) That the consent holder shall pay to the Council all required administrative charges fixed by the Council pursuant to section 36 in relation to:
 - i) the administration, monitoring and supervision of this consent; and
 - ii) charges authorised by regulations.

Special conditions

1. THAT the consent holder shall design and install a structure at the weir to provide for the unrestricted passage of native fish, juvenile and adult trout.
2. THAT the fish pass structure, required by condition 1, shall be constructed by 1 July 1999, and thereafter be maintained and operated to the satisfaction of the General Manager. In constructing the fish pass structure, there shall be no disturbance of any part of the bed covered by water between 1 May and 31 October.
3. THAT the Taranaki Regional Council may review any or all of the conditions of this consent by giving notice of review during the month of June 2004 and/or June 2010, 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 consent, which were not foreseen at the time the application was considered and which it was not appropriate to deal with at that time.

Signed at Stratford on 20 July 1998

For and on behalf of
TARANAKI REGIONAL COUNCIL



DIRECTOR - RESOURCE MANAGEMENT



Land Use Consent

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

PRIVATE BAG 713
47 CLOTEN ROAD
STRATFORD
NEW ZEALAND
PHONE 0-6-765 7127
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Name of
Consent Holder: Stratford District Council
P O Box 320
STRATFORD

Change To
Conditions Date:  22 March 2000 [Granted: 20 July 1998]

Conditions of Consent

Consent Granted: To dam the Patea River for the Stratford town water supply
at or about GR: Q20:163-070

Expiry Date: 1 June 2016

Review Date(s): June 2004, June 2010

Site Location: Cardiff Road, Cardiff, Stratford

Legal Description: River Reserve Blk I Ngaere SD

Catchment: Patea

General conditions

- a) That on receipt of a requirement from the General Manager, Taranaki Regional Council (hereinafter the General Manager), the consent holder shall, within the time specified in the requirement, supply the information required relating to the exercise of this consent.
- b) That unless it is otherwise specified in the conditions of this consent, compliance with any monitoring requirement imposed by this consent must be at the consent holder's own expense.
- c) That the consent holder shall pay to the Council all required administrative charges fixed by the Council pursuant to section 36 in relation to:
 - i) the administration, monitoring and supervision of this consent; and
 - ii) charges authorised by regulations.

Special conditions



1. THAT the consent holder shall design and install a structure at the weir to provide for the unrestricted passage of fish. The species of fish that the fish pass is to be designed for shall be determined prior to its installation, to the approval of the General Manager, Taranaki Regional Council.
2. THAT the fish pass structure, required by condition 1, shall be constructed by 1 July 2005, and thereafter be maintained and operated to the satisfaction of the General Manager. In constructing the fish pass structure, there shall be no disturbance of any part of the bed covered by water between 1 May and 31 October.
3. THAT the Taranaki Regional Council may review any or all of the conditions of this consent by giving notice of review during the month of June 2004 and/or June 2010, 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 consent, which either were 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 22 March 2000

For and on behalf of
Taranaki Regional Council

Director-Resource Management



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

CHIEF EXECUTIVE
PRIVATE BAG 713
47 CLOTEN ROAD
STRATFORD
NEW ZEALAND
PHONE 06-765 7127
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Please quote our file number
on all correspondence

Name of
Consent Holder: Stratford District Council
P O Box 320
STRATFORD

Consent Granted
Date: 31 January 2005

Conditions of Consent

Consent Granted: To repair and maintain an existing weir structure in the
Konini Stream a tributary of the Paetahi Stream in the
Patea catchment at or about GR: Q20:157-068

Expiry Date: 1 June 2022

Review Date(s): June 2010, June 2016

Site Location: Cardiff Road, Cardiff, Stratford

Legal Description: Pt Secs 25 DP 3759 Blk IV Kaupokonui SD

Catchment: Patea

Tributary: Paetahi
Konini

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

General conditions

- a) On receipt of a requirement from the Chief Executive, Taranaki Regional Council the consent holder shall, within the time specified in the requirement, supply the information required relating to the exercise of this consent.
- b) Unless it is otherwise specified in the conditions of this consent, compliance with any monitoring requirement imposed by this consent must be at the consent holder's own expense.
- c) The consent holder shall pay to the Council all required administrative charges fixed by the Council pursuant to section 36 in relation to:
 - i) the administration, monitoring and supervision of this consent; and
 - ii) charges authorised by regulations.

Special conditions

1. The consent holder shall notify the Taranaki Regional Council at least 48 hours prior to the commencement and upon completion of the initial activity and again prior to and upon completion of any subsequent maintenance works which would involve disturbance of or deposition to the riverbed or discharges to water.
2. Any instream works shall take place only between 1 November and 30 April inclusive, except where this requirement is waived in writing by the Chief Executive, Taranaki Regional Council.
3. The consent holder shall adopt the best practicable option, as defined in section 2 of the Resource Management Act 1991, to avoid or minimise the discharge of silt or other contaminants into water or onto the riverbed and to avoid or minimise the disturbance of the riverbed and any adverse effects on water quality.
4. The consent holder shall ensure that the area and volume of riverbed disturbance shall, so far as is practicable, be minimised and any areas which are disturbed shall, so far as practicable, be reinstated.
5. The exercise of this consent shall be under taken generally in accordance with the documentation submitted in support of application 3542. In the case of any contradiction between the documentation submitted in support of application 3542 and the conditions of this consent, the conditions of this consent shall prevail.
6. The structure[s] which are the subject of this consent shall not cause erosion of the river channel, and measures shall be taken by the consent holder to prevent erosion of the river channel.

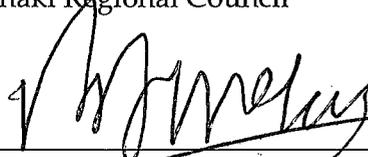
Consent 6549-1

7. After allowing for reasonable mixing, being a mixing zone extending seven times the width of the Konini Stream at the point of discharge, any discharge of contaminants shall not give rise to any of the following effects in the Konini Stream:
 - a) the production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials;
 - b) any conspicuous change in the colour or visual clarity;
 - c) any emission of objectionable odour;
 - d) the rendering of fresh water unsuitable for consumption by farm animals;
 - e) any significant adverse effects on aquatic life.

8. 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 2010 and/or June 2016, 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 31 January 2005

For and on behalf of
Taranaki Regional Council



Director-Resource Management

Midhirst



TARANAKI
REGIONAL
COUNCIL
CHIEF EXECUTIVE
PRIVATE BAG 713
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Please quote our file number
on all correspondence

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

Name of
Consent Holder: Stratford District Council
P O Box 320
STRATFORD 4352



Decision Date
[Change]: 24 May 2011

Commencement
Date [Change]: 24 May 2011 [Granted: 9 June 2003]

Conditions of Consent



Consent Granted: To take water from the Te Popo Stream a tributary of the Manganui River in the Waitara catchment for Midhirst community public water supply purposes at or about (NZTM) 1708930E-5650525N

Expiry Date: 1 June 2021

Review Date(s): June 2015

Site Location: Mountain Road, Midhirst

Legal Description: Lot 7 DP 14836 Blk XIII Huiroa SD [Site of take]

Catchment: Waitara

Tributary: Manganui
Te Popo

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

General conditions

- a) On receipt of a requirement from the Chief Executive, Taranaki Regional Council (hereinafter the Chief Executive), the consent holder shall, within the time specified in the requirement, supply the information required relating to the exercise of this consent.
- b) Unless it is otherwise specified in the conditions of this consent, compliance with any monitoring requirement imposed by this consent must be at the consent holder's own expense.
- c) The consent holder shall pay to the Council all required administrative charges fixed by the Council pursuant to section 36 in relation to:
 - i) the administration, monitoring and supervision of this consent; and
 - ii) charges authorised by regulations.



Special conditions

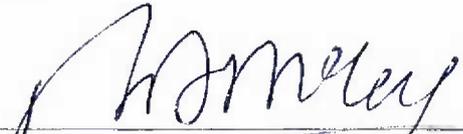
1. The exercise of this consent shall be conducted in accordance with the information submitted in support of application nos. 84/51, 91/162, 2233 and 6750, and to ensure that the conditions of the consent are met at all times.
2. The consent holder shall at all times adopt the best practicable option, as defined in section 2 of the Resource Management Act 1991, to avoid or minimise any adverse effects on the environment as a result of the exercise of this consent.
3. The peak extraction rate shall not exceed 5 litres/second.
4. The amount of water taken in summer [1 November to 31 March] shall not exceed an average of 254 cubic metres/day during any calendar month.
5. The amount of water taken in winter [1 April to 31 October] shall not exceed 432 cubic metres/day.
6. The amount of water taken during any year ending 30 June shall not exceed 90,000 m³.
7. The consent holder shall, on an annual basis, provide a report detailing:
 - a) the work done to detect and minimise leaks in the area supplied, and
 - b) water use efficiency and conservation measures undertaken in the area supplied.

The report shall be provided to the Chief Executive, Taranaki Regional Council before 1 September each year and cover the previous 1 July to 30 June period. The first report shall be provided by 1 September 2011.
8. All intake structures shall be screened to avoid the entrainment of fish.

9. The consent holder shall install and operate a measuring device capable of accurately recording daily rates of abstraction and shall measure, record and make such records available to the Chief Executive, Taranaki Regional Council, upon request.
10. That the Taranaki Regional Council reserves the right to temporarily suspend or reduce the abstraction during extreme low flow events, in order to protect the biological communities in the stream, in accordance with 329 of the Resource Management Act 1991.
11. 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 2009 and/or June 2015 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 24 May 2011

For and on behalf of
Taranaki Regional Council



Director-Resource Management



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

PRIVATE BAG 713
47 CLOTEN ROAD
STRATFORD
NEW ZEALAND
PHONE 0-6-765 7127
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Name of
Consent Holder: Stratford District Council
P O Box 320
STRATFORD

Change To
Conditions Date: 12 September 2000 [Granted: 21 August 1991]

Conditions of Consent

Consent Granted: To discharge treated filter backwash water from the Midhirst Water Treatment Plant into the Te Popo Stream in the Waitara Catchment via a soak hole at or about GR:Q2O 190-122

Expiry Date: 1 June 2016

Review Date(s): June 2004, June 2010

Site Location: Midhirst Water Treatment Plant, Mountain Road (SH3), Midhirst

Legal Description: Lot A DP 14836 Blk XIII Huiroa SD

Catchment: Waitara

Tributary: Te Popo

Consent 1331-2

General conditions

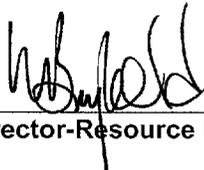
- a) That on receipt of a requirement from the Chief Executive, Taranaki Regional Council (hereinafter the Chief Executive), the consent holder shall, within the time specified in the requirement, supply the information required relating to the exercise of this consent.
- b) That unless it is otherwise specified in the conditions of this consent, compliance with any monitoring requirement imposed by this consent must be at the consent holder's own expense.
- c) That the consent holder shall pay to the Council all required administrative charges fixed by the Council pursuant to section 36 in relation to:
 - i) the administration, monitoring and supervision of this consent; and
 - ii) charges authorised by regulations.

Special conditions

1. The discharge shall not exceed 35 cubic metres/day.
2. The consent holder shall properly and efficiently maintain and operate the soak hole system so as to meet the conditions of this consent.
3. After allowing for reasonable mixing, within a mixing zone extending 20 metres below the discharge point, the discharge shall not give rise to any of the following effects in the Te Popo Stream:
 - (a) the production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials;
 - (b) any conspicuous change in the colour or visual clarity;
 - (c) any emission of objectionable odour;
 - (d) the rendering of fresh water unsuitable for consumption by farm animals;
 - (e) any significant adverse effects on aquatic life, habitats, or ecology.
4. The discharge shall not exceed 0.1gm^{-3} free available chlorine at all times.
5. The Taranaki Regional Council may review any or all of the conditions of this consent by giving notice of review during June 2004 and/or June 2010, for the purpose of ensuring that the conditions are adequate to deal with any significant adverse effects on the environment arising from the exercise of this consent, which either were 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 12 September 2000

For and on behalf of
Taranaki Regional Council



Director-Resource Management

Toko



CHIEF EXECUTIVE
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47 CLOTEN ROAD
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Please quote our file number
on all correspondence

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

Name of
Consent Holder: Stratford District Council
P O Box 320
STRATFORD

Consent Granted
Date: 17 June 2005

Conditions of Consent

Consent Granted: To take and use groundwater from a bore in the vicinity of
the Toko Stream in the Patea catchment for Toko rural
water supply purposes at or about GR: Q20:298-068

Expiry Date: 1 June 2022

Review Date(s): June 2010, June 2016

Site Location: East Road, Toko

Legal Description: Lot 1 DP 15670 Blk III Ngaere SD

Catchment: Patea

Tributary: Toko

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

General conditions

- a) On receipt of a requirement from the Chief Executive, Taranaki Regional Council the consent holder shall, within the time specified in the requirement, supply the information required relating to the exercise of this consent.
- b) Unless it is otherwise specified in the conditions of this consent, compliance with any monitoring requirement imposed by this consent must be at the consent holder's own expense.
- c) The consent holder shall pay to the Council all required administrative charges fixed by the Council pursuant to section 36 in relation to:
 - i) the administration, monitoring and supervision of this consent; and
 - ii) charges authorised by regulations.

Special conditions

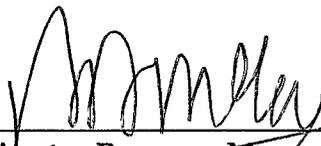
1. The consent holder shall at all times adopt the best practicable option, as defined in section 2 of the Resource Management Act 1991, to prevent or minimise any adverse effects on the environment from the exercise of this consent.
2. The exercise of this consent shall be undertaken generally in accordance with the documentation submitted in support of application 2743 and shall ensure efficient and effective use of water. In the case of any contradiction between the documentation submitted in support of application 2743 and the conditions of this consent, the conditions of this consent shall prevail.
3. The consent holder shall notify the Chief Executive, Taranaki Regional Council, in writing at least seven days prior to the exercise of this consent.
4. The volume of groundwater abstracted shall not exceed 80 cubic metres per day at a rate not exceeding 5.6 litres per second.
5. The consent holder shall install and operate a device capable of accurately recording daily rates of abstraction and shall measure, record and make such records available to the Chief Executive, Taranaki Regional Council, upon request.
6. This consent shall lapse on the expiry of five years after the date of issue of this consent, unless the consent is given effect to before the end of that period or the Taranaki Regional Council fixes a longer period pursuant to section 125(1)(b) of the Resource Management Act 1991.

Consent 1337-3

7. 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 2010 and/or June 2016, 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 17 June 2005

For and on behalf of
Taranaki Regional Council



Director-Resource Management





Discharge Permit
Pursuant to the Resource Management Act 1991
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Taranaki Regional Council

CHIEF EXECUTIVE
PRIVATE BAG 713
47 CLOTEN ROAD
STRATFORD
NEW ZEALAND
PHONE 06-765 7127
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Please quote our file number
on all correspondence

Name of
Consent Holder: Stratford District Council
P O Box 320
STRATFORD

Consent Granted
Date: 29 April 2005

Conditions of Consent

Consent Granted: To discharge treated filter backwash water from the Toko
Water Treatment Plant into the Toko Stream in the Patea
catchment via soak holes at or about GR: Q20:298-068

Expiry Date: 1 June 2022

Review Date(s): June 2010, June 2016

Site Location: East Road, Toko

Legal Description: Lot 1 DP 15670 Blk III Ngaere SD

Catchment: Patea

Tributary: Toko

General conditions

- a) On receipt of a requirement from the Chief Executive, Taranaki Regional Council the consent holder shall, within the time specified in the requirement, supply the information required relating to the exercise of this consent.
- b) Unless it is otherwise specified in the conditions of this consent, compliance with any monitoring requirement imposed by this consent must be at the consent holder's own expense.
- c) The consent holder shall pay to the Council all required administrative charges fixed by the Council pursuant to section 36 in relation to:
 - i) the administration, monitoring and supervision of this consent; and
 - ii) charges authorised by regulations.

Special conditions

1. The discharge shall not exceed 4 cubic meters per day, per soak hole.
2. The consent holder shall properly and efficiently maintain and operate the soak hole system so as to meet the conditions of this consent.
3. After allowing for reasonable mixing, with a mixing zone extending 20 meters below the discharge point, the discharge shall not give rise to any of the following effects in the Toko Stream:
 - a) the production of any conspicuous oil or grease films, scum or foams, or floatable or suspended materials;
 - b) any conspicuous change in the colour or visual clarity;
 - c) any emission of objectionable odour;
 - d) the rendering of fresh water unsuitable for consumption by farm animals;
 - e) any significant adverse effects on aquatic life, habitats, or ecology.
4. The discharge shall not exceed 0.1 g/m³ cubic meters free available chlorine at all times.

Consent 6605-1

5. 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 June 2010 and/or June 2016, 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 29 April 2005

For and on behalf of
Taranaki Regional Council



Director-Resource Management

