

New Plymouth District Council
Water Supplies
Monitoring Programme
Annual Report
2012-2013

Technical Report 2013-39

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Taranaki Regional Council
Private Bag 713
STRATFORD

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Executive summary

New Plymouth District Council operates four water supply schemes in the New Plymouth District. This report for the period July 2012-June 2013 describes the monitoring programme implemented by the Taranaki Regional Council to assess the consent holder's environmental performance during the period under review, and the results and environmental effects of the consent holder's activities.

New Plymouth District Council holds 22 resource consents, which include a total of 139 conditions setting out the requirements that the consent holder must satisfy. There are 7 consents to take and use water, 5 consents to discharge to water, 9 consents to maintain structures, and one consent to discharge sludge onto and into land.

The Council's monitoring programme for the year under review included an annual inspection of each water supply scheme, an assessment of the abstraction data provided, and two fish surveys.

The monitoring showed that overall the NPDC water schemes are well operated and maintained and appeared to be having no adverse effects on the environment. There were no incidents recorded by the Council that were associated with resource consents held by NPDC for its water supply schemes.

The abstraction data that was provided by NPDC was sufficient to assess compliance with the various consented abstraction rates. The data showed that all daily abstraction limits were complied with.

During the year, the consent holder demonstrated a high level of environmental performance and compliance with its resource consents. There are however on-going non-compliances with regulations in regards to National Environmental Standards for water measurement. NPDC is acting cooperatively with Council and currently undertaking investigations and allocating funding to address these compliance issues.

For reference in the 2012-2013 year, 35% of consent holders in Taranaki monitored through tailored compliance monitoring programmes achieved a **high** level of environmental performance and compliance with their consents, while another 59% demonstrated a **good** level of environmental performance and compliance with their consents.

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 Taranaki Regional Council [Council] on the monitoring programme associated with resource consents held by New Plymouth District Council [NPDC] for their various water supply schemes.

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

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 the NPDC's use of water and land, and is the 15th combined annual report by the Council for NPDC in relation to their water supply schemes.

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 NPDC in relation to their water supply schemes, the nature of the monitoring programme in place for the period under review, and a description of the activities and operations conducted by NPDC in relation to water supplies.

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 (eg, 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, including 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, 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 Company/companies in the catchment 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, cooperatively, and quickly.
- **improvement desirable** indicates that the Council may have been obliged to record a verified unauthorised incident involving measurable environmental impacts, or, there were measurable 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.

For reference in the 2012-2013 year, 35% of consent holders in Taranaki monitored through tailored compliance monitoring programmes achieved a high level of environmental performance and compliance with their consents, while another 59% demonstrated a good level of environmental performance and compliance with their consents.

1.2. Process description

The water treatment plants operated by the NPDC generally operate in the following manner. Raw water is abstracted, coarse screened, and passed through clarifiers for coagulation and flocculation (aided by the addition of a chemical flocculent at some plants) and filtration. At one plant water is passed through cartridge filters. Chemicals are then used to adjust pH and chlorinate the water prior to distribution.

The waste products from backwashing of the filters (and clarifier bleed at some sites) are either discharged to land or to a surface waterway via a settling pond (or tank), or are contained in cartridges disposed of at landfills.

1.3. Resource consents

Section 14 of the Resource Management Act, 1991 (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.

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.

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.

NPDC hold various resource consents for water abstraction, water and sludge discharges, and structures. These consents are listed in Table 1 with a brief process description for each plant, and locations are shown in Figure 1. Consent details are summarised in Sections 1.3.1 to 1.3.6.

Copies of all resource consents held by NPDC in relation to their water supply schemes are included in Appendix I.

Table 1 Summary of resource consents and processes

| Water Supply Scheme | Resource consent | Next Review | Expires | Activity | Process |
|---------------------|------------------|-------------------------------|---------|---|---|
| New Plymouth | 0672 - Discharge | 2014 | 2026 | To discharge wastewater from a water treatment plant into an unnamed tributary of the Mangorei Stream. | Raw water is abstracted from the Waiwhakaiho River via Lake Mangamahoe. The Waiwhakaiho River is diverted through a tunnel to augment the supply of Lake Mangamahoe. The consent for this diversion (2053) is held by Trust Power Ltd - Taranaki Generation and monitoring of this is included in the Mangamahoe Power Scheme monitoring programme. Two intakes in Lake Mangamahoe supply the NP water treatment plant. Flocculent is added and water passes through clarifiers then sand filters. Water is disinfected (chlorine gas), pH buffered (lime) and fluoridated. Clarifier bleed and filter backwash is discharged to settling ponds in front of plant. Supernatant is returned to the treatment plant. Accumulated sludge is periodically discharged to land. |
| | 0673 - Discharge | 2014 | 2026 | To discharge stormwater from a water treatment plant into an unnamed tributary of the Mangorei Stream. | |
| | 2055 – Take | 2016 | 2021 | Take up to 60,480 m ³ /day, at a maximum rate of 740 L/sec, from Lake Mangamahoe. | |
| | 5699 – Land use | 2014 | 2020 | To erect, place and maintain a pipe bridge over the Mangorei Stream. | |
| | 5700 – Land use | 2014 | 2020 | To disturb the bed of the Mangorei Stream by trenching to place and maintain a pipeline under the Mangorei Stream. | |
| | 6643 – Land use | 2014 | 2020 | To erect, place and maintain a weir in the Mangorei Stream. | |
| Inglewood | 3934 - Take | No more reviews before expiry | 2015 | Take up to 5,000 m ³ /day at 70 L/sec from the Ngatoro Stream via a weir as a contingency supply. Take up to 400 m ³ /day at 5 L/sec throughout the year for farm supply purposes. | Raw water is abstracted via an infiltration gallery in the bed of the Ngatoro Stream located near Dudley Road, approximately 4.5km south west of Inglewood. There is also a contingency take via a weir (with a fish pass) located approximately 3km further upstream near the end of Dudley Road. A flocculent is added to the raw water which is then passed through clarifiers and sand filters. The water is pH buffered (lime) and disinfected (chlorine gas). A new 4,500 m ³ reservoir was commissioned in July 2003. Clarifier bleed and filter backwash are discharged to a modified reservoir (1,250m ³) which discharges to the Ngatoro Stream. |
| | 4509 – Land use | 2015 | 2027 | To maintain a water supply intake infiltration gallery in and adjacent to the Ngatoro Stream and to maintain a pipeline from the gallery to the water treatment station. | |
| | 4510 – Take | 2015 | 2021 | To take up to 4,850 m ³ /day at 56 L/sec from the Ngatoro Stream. | |
| | 5188 – Land use | No more reviews before expiry | 2015 | To license and maintain an existing weir structure in the Ngatoro Stream. | |

| Water Supply Scheme | Resource consent | Next Review | Expires | Activity | Process |
|---------------------|------------------|-------------------------------|--------------------------|---|--|
| | 5869 – Discharge | No more reviews before expiry | 2015 | To discharge clarifier bleed and filter backwash supernatant overflow from the Inglewood water treatment plant into the Ngatoro Stream. | Plant internal areas and chemical storage areas are drained to a sump which has a slide valve which blocks off a pipe leading to the nearby roadside drain. Probes are also contained within the sump to monitor the level of its contents. Water in the tank is tested and discharged to stormwater if appropriate. Otherwise the tank is emptied by a contractor to an appropriate facility. |
| Oakura | 1277 – Discharge | 2013 | 2025 | To discharge filter backwash from the Oakura Water Treatment Plant onto and into land in the vicinity of the Wairau Stream. | Since April 2004 water is taken from a secure bore. The water is treated with sodium hypochlorite followed by lime injection for pH adjustment. Previously water was taken from weir (with a fish pass) in the Wairau Stream. The surface water take and backwash discharge consents have been retained for contingency purposes. |
| | 1278 – Take | No more reviews before expiry | 2013 | Take up to 2,300 m ³ /day at 27 L/sec from the Wairau Stream. | |
| | 5713– Land use | No more reviews before expiry | 2013 | To erect, place and maintain a weir in the Wairau Stream. | |
| | 6114 - Take | 2014 | 2020 | To take up to 3,715 m ³ /day at 35 L/s (45 L/s combined) of groundwater from two bores. | |
| Okato | 0026 – Take | 2013 | 2019 | To take up to 1,000 m ³ /day at 13.8 L/sec from the Mangatete Stream. | Water taken from infiltration gallery and weir (with fish pass) on Mangatete Stream. Passed through cartridge filters (no flocculent or backwashing), pH buffered (lime) and disinfected (chlorine gas). |
| | 4805 – Land use | No more reviews before expiry | 2013 | To place and maintain an infiltration gallery structure in the Mangatete Stream. | |
| Waitara Industrial | 0126 – Take | No more reviews before expiry | 2012 - Under application | To take up to 6,000 m ³ /day at 69.4 L/sec from the Waiongana Stream. | This supply is not currently used and has been retained for contingency purposes. Raw water is diverted from the Waiongana Stream via a weir (with a fish pass) near Mountain Road, approximately 9km south of Waitara. Water is gravity fed through a settling pond system to a reservoir. There is no chemical treatment of water. The water is used for cooling water at a cool store in Waitara. In 2000 NPDC installed a new control system on the water take. A magnetic flow meter now closes the valve on the take as it nears the consent limit. The settling pond system is emptied periodically to land and the scouring discharge from the settling pond system is discharged to the Waiongana Stream periodically. |
| | 4816 – Land use | 2014 | 2020 | To use and maintain an existing weir, fish pass and associated intake structures on the Waiongana Stream. | |
| | 4817 – Discharge | 2014 | 2020 | Discharge up to 250 L/sec of water and sediment from intake pipe cleaning and draining of settlement ponds into the Waiongana Stream. | |
| Urenui | 5989 – Land Use | 2015 | 2021 | To modify and maintain an existing earth retention structure (dam) on the Kakapo Stream. | Treatment plant decommissioned and removed, now supplied from the NPWTP. The weir has a fish pass. |

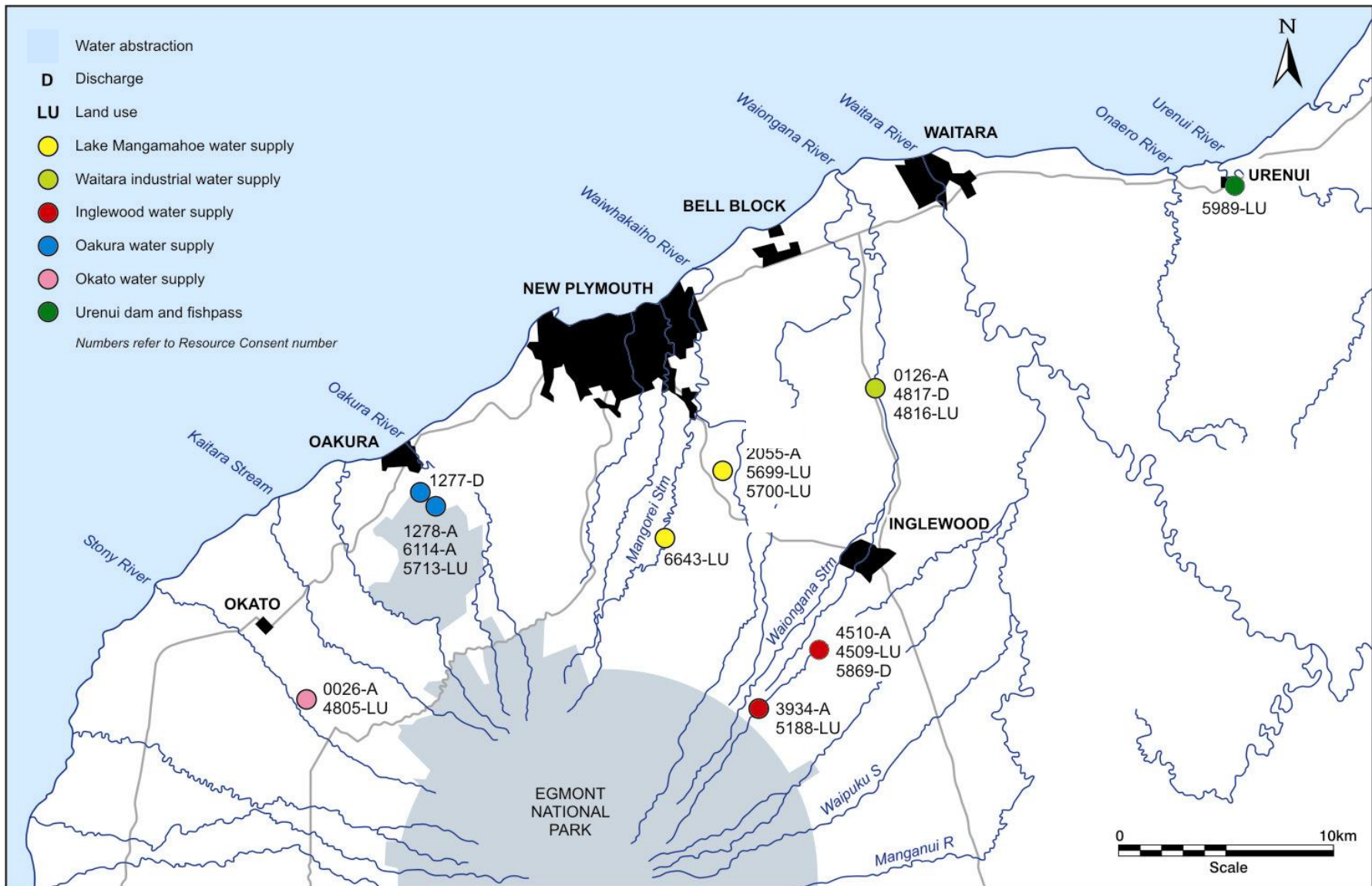


Figure 1 Location of New Plymouth District Council water supply plants and structures

1.3.1. New Plymouth water supply

1.3.1.1. Water abstraction permit

NPDC hold water permit **2055-3** to cover the abstraction of up to 60,480 m³/day, at a maximum rate of 740 L/sec, of water from Lake Mangamahoe. This consent was issued by the Taranaki Regional Council under Section 87(d) of the Resource Management Act on 25 June 2002. It expires on 1 June 2021.

Condition 1 requires the exercise of the consent to be in accordance with the information supplied in support of the application.

Condition 2 requires the adoption of the best practicable option to avoid or minimise any adverse effects on the environment.

Condition 3 requires screening of intake structures to avoid entrainment of fish.

Condition 4 requires the measuring of daily rates of abstraction and provides for the supply of abstraction data to the Council.

Condition 5 is a review provision.

1.3.1.2. Discharge permits

NPDC hold discharge permit **0672-3** to discharge wastewater from a water treatment plant into an unnamed tributary of the Mangorei Stream in the Waiwhakaiho catchment. This consent was issued by the Taranaki Regional Council under Section 87(d) of the Resource Management Act on 30 May 2008. It expires on 1 June 2026.

Conditions 1 and 2 relate to adoption of the best practicable option and exercising in accordance with the application.

Conditions 3 and 4 relate to effects on surface water.

Conditions 5 and 6 are lapse and review conditions.

NPDC hold discharge permit **0673-3** to discharge wastewater from a water treatment plant into an unnamed tributary of the Mangorei Stream in the Waiwhakaiho catchment. This consent was issued by the Taranaki Regional Council under Section 87(d) of the Resource Management Act on 30 May 2008. It expires on 1 June 2026.

Conditions 1 and 2 relate to adoption of the best practicable option and exercising in accordance with the application.

Conditions 3 to 6 relate to catchment area, stormwater management and contingency plans, and hazardous substances.

Conditions 7 and 8 relate to effects on surface water.

Conditions 9 and 10 are lapse and review conditions.

1.3.1.3. Land use permits

NPDC hold land use permit **5699-1** to erect, place and maintain a pipe bridge over the Mangorei Stream in the Waiwhakaiho catchment. This resource consent was issued by the Taranaki Regional Council under Section 87(a) of the Resource Management Act on 9 November 2000. It expires on 1 June 2020.

Condition 1 requires notification of the Council prior to major construction and maintenance works.

Condition 2 requires the structure to be constructed in accordance with the documentation supporting the original application.

Condition 3 requires the adoption of best practicable option to avoid or minimise any adverse effects.

Condition 4 requires the minimising of area and volume of riverbed and bank disturbance and reinstatement of disturbed areas.

Condition 5 deals with the removal of the structure when no longer required.

Condition 6 is a review provision.

NPDC hold land use permit **5700-1** to disturb the bed of the Mangorei Stream by trenching to erect, place and maintain a pipeline under the Mangorei Stream in the Waiwhakaiho catchment. This resource consent was issued by the Taranaki Regional Council under Section 87(a) of the Resource Management Act on 30 January 2001. It expires on 1 June 2020.

Condition 1 requires notification prior to construction or maintenance works.

Condition 2 requires the structure to be constructed in accordance with the documentation supporting the original application.

Condition 3 restricts major in-stream works to the period 1 November to 30 April.

Condition 4 requires adoption of best practical option to avoid or minimise any adverse effects.

Condition 5 requires the minimising of area and volume of riverbed and bank disturbance and reinstatement of disturbed areas.

Condition 6 deals with the removal of the structure when no longer required.

Condition 7 is a review provision.

NPDC hold land use permit **6643-1** to erect, place and maintain a weir in the Mangorei Stream in the Waiwhakaiho catchment. This resource consent was issued by the Taranaki Regional Council under Section 87(a) of the Resource Management Act on 1 August 2005. It expires on 1 June 2020.

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

Condition 2 requires the consent to be exercised in accordance with the documentation supporting the application.

Condition 3 allows for a review should monitoring show that densities of brown trout upstream are increasing.

Condition 4 requires annual inspections of the structure by the consent holder and the provision of a report to the Council.

Condition 5 requires notification of the Council prior to any maintenance works.

Condition 6 requires the adoption of best practicable option during maintenance works to minimise adverse effects.

Condition 7 prohibits maintenance works between 1 May to 31 October.

Conditions 8 and 9 are lapse and review provisions.

1.3.2. Inglewood water supply

1.3.2.1. Water abstraction permits

NPDC hold water permit **3934-2** to abstract up to 5,000 m³/day, at a maximum rate of 70 L/sec, of water from a weir on the Ngatoro Stream as a contingency supply and for the abstraction of 400 m³/day of water at a maximum rate of 5 L/sec throughout the year for farm supply purposes. This resource consent was issued by the Taranaki Regional Council under Section 87(d) of the Resource Management Act on 23 March 1994. It expires on 1 June 2015.

Condition 1 limits the volume and rate of abstraction of the two takes combined.

Condition 2 requires the measuring of daily rates of abstraction and provides for the supply of abstraction data to the Council.

Condition 3 is a review provision.

NPDC hold water permit **4510-2** to take and use water from the Ngatoro Stream a tributary of the Manganui River in the Waitara catchment, for Inglewood urban water supply purposes. This resource consent was issued by the Taranaki Regional Council under Section 87(d) of the Resource Management Act on 12 June 2009. It expires on 1 June 2021.

Condition 1 specifies the volume and rate of abstraction.

Conditions 2 and 4 relate to records.

Condition 3 concerns the abstraction rate in an emergency.

Condition 5 requires the efficient and conservative use of water.

Condition 6 requires fish screening.

Conditions 7 and 8 concern lapse and review.

1.3.2.2. Discharge permit

NPDC hold water discharge permit **5869-1** to discharge up to 48 L/sec of clarifier bleed and filter backwash supernatant overflow from the Inglewood water treatment plant into the Ngatoro Stream, a tributary of the Manganui River in the Waitara catchment. This resource consent was issued by the Taranaki Regional Council under Section 87(e) of the Resource Management Act on 23 October 2001. It expires on 1 June 2015.

Condition 1 limits the discharge rate.

Condition 2 deals with the management of the settlement facility.

Condition 3 prohibits certain effects in the receiving waters.

Condition 4 places limits on certain contaminants in the discharge.

Condition 5 is a review provision.

1.3.2.3. Land use permits

NPDC hold land use permit **4509-2** to maintain a water supply intake infiltration gallery in and adjacent to the Ngatoro Stream, a tributary of the Manganui River in the Waitara catchment and to maintain a pipeline from the gallery to the water treatment station for Inglewood urban water supply purposes. This resource consent was issued by the Taranaki Regional Council under Section 87(a) of the Resource Management Act on 12 June 2009. It expires on 1 June 2027.

Conditions 1 to 4 relate to riverbed disturbance and sediment.

Condition 5 requires removal and reinstatement when the structure is no longer required.

Condition 6 states that fish passage shall not be restricted.

Conditions 7 and 8 concern lapse and review.

NPDC hold land use permit **5188-1** to license and maintain an existing weir structure in the Ngatoro Stream. This resource consent was issued by the Taranaki Regional Council under Section 87(a) of the Resource Management Act on 19 August 1997. It expires on 1 June 2015.

Condition 1 requires the provision of fish passage.

Condition 2 is a review provision.

1.3.3. Oakura water supply

1.3.3.1. Water abstraction permits

NPDC hold water permit **1278-3** to abstract up to 2,300 m³/day, at a maximum rate of 27 L/sec, of water from the Wairau Stream for water supply purposes. This resource consent was issued by the Taranaki Regional Council under Section 87(d) of the Resource Management Act on 13 June 2001. It expires on 1 June 2013.

Condition 1 places limits on the volume and rate of abstraction.

Condition 2 requires the measuring of daily rates of abstraction and provides for the supply of abstraction data to the Council.

Condition 3 concerns donations to the Taranaki Tree Trust for riparian management.

Condition 4 deals with maintaining a residual flow below the abstraction weir.

Condition 5 allows the consent holder to apply for a change or cancellation.

Condition 6 is a review provision.

NPDC hold water permit **6114-1** to take and use groundwater from two bores for water supply purposes at a maximum rate of 3,715 cubic metres per day at an individual bore rate of 35 litres per second or a combined rate of 43 litres per second between the two bores. This resource consent was issued by the Taranaki Regional Council under Section 87(d) of the Resource Management Act on 19 March 2003. It expires on 1 June 2020.

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

Conditions 2 and 4 require the adoption of best practicable option and the minimising of adverse environmental effects.

Condition 3 places limits on the volume and rate of abstraction.

Condition 5 requires the measuring of daily rates of abstraction and provides for the supply of abstraction data to the Council.

Condition 6 is a review provision.

1.3.3.2. Discharge permit

NPDC hold water discharge permit **1277-3** to discharge up to 40 m³/day of filter backwash from the Oakura water treatment plant to an unnamed tributary of the Wairau Stream. This resource consent was issued by the Taranaki Regional Council under Section 87(e) of the Resource Management Act on 12 December 2006. It expires on 1 June 2025.

Condition 1 requires the adoption of the best practicable option.

Condition 2 requires the consent to be exercised in accordance with the application documentation.

Condition 3 places limits on certain components of the discharge.

Condition 4 prohibits certain effects on the receiving waters.

Condition 5 is a review provision.

1.3.3.3. Land use permit

NPDC hold land use permit **5713-1** to erect, place and maintain a weir in the Wairau Stream for Oakura water supply purposes. This resource consent was issued by the Taranaki Regional Council under Section 87(a) of the Resource Management Act on 13 June 2001. It expires on 1 June 2013.

Condition 1 requires construction to be in accordance with submitted plans.

Condition 2 requires the Council to be notified prior to construction and maintenance works.

Condition 3 requires the structure to be maintained to ensure conditions of the consent are met.

Condition 4 requires screening of intake to avoid entrapment of fish.

Condition 5 requires the provision of fish passage.

Condition 6 requires adoption of best practicable option to minimise any adverse effects on water quality.

Condition 7 deals with removal of the structure when no longer required and the reinstatement of the area.

Condition 8 requires that the fish pass be installed between 1 November and 30 April.

Condition 9 is a review provision.

1.3.4. Okato water supply

1.3.4.1. Water abstraction permit

NPDC hold water permit **0026-3** to abstract up to 1,000 m³/day, at a maximum rate of 13.8 L/sec, of water from the Mangatete Stream for water supply purposes. This resource consent was issued by the Taranaki Regional Council under Section 87(d) of the Resource Management Act on 14 June 2007. It expires on 1 June 2013 and as the consent holder had applied for renewal, they continued to operate under the expired consent under section 124 of the Resource Management Act.

Condition 1 requires the adoption of the best practicable option.

Condition 2 requires the consent to be exercised in accordance with the application documentation.

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

Condition 4 requires the consent holder to notify the Council of faults or incidents which lead to abstraction over the limit.

Condition 5 deals with the installation of a staff gauge.

Condition 6 requires water conservation measures to be put in place when flows are reduced to a particular level.

Condition 7 requires restriction of abstraction to an absolute minimum when flow is reduced to a particular level.

Condition 8 requires the keeping of abstraction records and the forwarding of these to the Council.

Condition 9 requires the emergency intake structure be appropriately screened to avoid entrapment of fish.

Conditions 10 and 11 are lapse and review provisions.

1.3.4.2. Land use permit

NPDC hold land use permit **4805-1** to construct and maintain an infiltration gallery in the Mangatete Stream for water supply purposes. This resource consent was issued by the Taranaki Regional Council under Section 87(a) of the Resource Management Act on 20 October 1995. It expires on 1 June 2013 and as the consent holder had applied for renewal, they continued to operate under the expired consent under section 124 of the Resource Management Act.

Conditions 1 and 3 require maintenance of the structure to be in accordance with plans provided.

Condition 2 requires notification of the Council prior to maintenance works.

Condition 4 is a review provision.

1.3.5. Waitara industrial water supply

1.3.5.1. Water abstraction permit

NPDC hold water permit **0126-4** to abstract up to 6,000 m³/day, at a maximum rate of 110 L/sec, of water from the Waiongana River for Waitara industrial water supply purposes. This resource consent was issued by the Taranaki Regional Council under Section 87(d) of the Resource Management Act on 14 June 2007. It expires on 1 June 2019.

Condition 1 requires the adoption of the best practicable option.

Condition 2 places a limit on the rate and volume of abstraction.

Condition 3 requires water conservation measures at times of low flow.

Condition 4 requires the cessation of abstraction when flow in the Waiongana reaches a specified flow.

Condition 5 requires records of abstraction volumes to be kept by the consent holder.

Condition 6 allows the Regional Council to suspend or reduce the abstraction during low flow events.

Conditions 7 and 8 are lapse and review provisions.

1.3.5.2. Discharge permit

NPDC hold water discharge permit **4817-2** to discharge up to 250 L/sec of water and sediment from intake pipe cleaning and draining of settling ponds into the Waiongana Stream. This resource consent was issued by the Taranaki Regional Council under Section 87(e) of the Resource Management Act on 15 July 2003. It expires on 1 June 2020.

Condition 1 requires records of cleaning and draining operations to be kept and forwarded to the Council.

Condition 2 requires notification prior to discharge.

Condition 3 details flow conditions when discharge is permitted. Discharge under other flow conditions is only permitted with prior written approval.

Conditions 4 and 5 prohibit certain effects in the receiving waters.

Condition 6 is a review provision.

1.3.5.3. Land use permit

NPDC hold land use permit **4816-2** to undertake modifications and upgrade the water supply intake, weir, fish pass and associated structures within the Waiongana Stream. This work has been completed. This resource consent was issued by the Taranaki Regional Council under Section 87(a) of the Resource Management Act on 16 June 2003. It expires on 1 June 2020.

Condition 1 requires notification of the Council prior to maintenance works.

Condition 2 requires adoption of best practicable option to avoid or minimise any adverse effects.

Condition 3 requires the area of disturbance caused by maintenance works to be minimised and disturbed areas reinstated.

Condition 4 prohibits maintenance works during 1 May to 31 October without prior

written approval.

Condition 5 requires the structure to be maintained to ensure consent compliance. Condition 6 requires provision of fish passage.

Condition 7 deals with the removal of the structure when no longer required.

Condition 8 is a review provision.

1.3.6. Urenui dam

1.3.6.1. Land use permit

NPDC hold land use permit **5989-1** to modify and maintain an existing earth retention structure (dam) on the Kakapo Stream. This resource consent was issued by the Taranaki Regional Council under Section 87(a) of the Resource Management Act on 9 April 2002. It expires on 1 June 2021.

Condition 1 requires notification of the Council prior to maintenance works.

Condition 2 requires provision of fish passage.

Conditions 3 and 4 require adoption of best practicable option and minimising of adverse environmental effects.

Condition 5 requires maintenance of the structure to ensure compliance with consent conditions.

Condition 6 requires the removal of the structure when no longer required and the reinstatement of the area.

Condition 7 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 NPDC's water supplies consisted of four 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 NPDC water supplies and associated structures were each visited 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, including contaminated stormwater and process wastewaters. 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. The neighbourhood was surveyed for environmental effects.

1.4.4. Fish surveys

During the monitoring period, one fish survey was conducted in the Ngatoro Stream.



Photograph 1 Ngatoro Stream weir

2. Results

2.1. Inspections

An annual inspection of NPDC's water treatment activities was made on 18 December 2012. Inspection focused on the conditions of the water ways, structures, discharges and abstraction rates. Flow meters and piping was also inspected to determine compliance with National Environmental Standards (NES) water metering regulations.

2.1.1. New Plymouth

No issues were noted in regards to intake structures or discharges. The plant was abstracting 367000 m³ per day at the time of the inspection which was within consent conditions. A review of the 2012-2013 abstraction data to date showed that no exceedances had occurred. The NES inspection found that the water meter was in compliance in terms of head works installation, however NPDC would have to apply for approval to have the flow meter located away from the point of abstraction.

2.1.2. Inglewood

No abstraction was occurring at the time of the inspection as the plant was backwashing. The Ngatoro Stream was at high flow and turbid. There was adequate flow down the contingency supply weir fish pass. No issues were noted. A review of the 2012-2013 abstraction data to date showed that no exceedances have occurred. The NES inspection found that as the water meter measures abstractions from two consented takes and with farmer off-takes upstream of the meter that it was not compliant with NES regulations.

2.1.3. Oakura

The abstraction rate at the time of the inspection was 30m³/hour (consent limit 35 l/s = 126 m³/hour). The stream was running clean and clear at low-moderate flow, with adequate flow down the fish pass. A review of the 2012-2013 abstraction data to date showed that no exceedances have occurred. The NES inspection found that the water meter on one of the bores was compliant, whilst the other may have had insufficient straight pipe upstream of the meter. It was also found that the contingency water take water meter was in compliance in terms of head works installation, however NPDC would have to apply for approval to have meter located away from the point of abstraction.

2.1.4. Okato

No abstraction was occurring due to high turbid flow in the Mangatete. The boulders placed against the damaged section weir were in place. A review of the 2012-2013 abstraction data to date showed that no exceedances have occurred. The NES inspection found that the water meter was installed at the output side of the water plant and that this was not compliant with NES regulations.

2.2. Abstraction data

As a condition of their resource consents to abstract water, NPDC are required to record the daily volumes abstracted at each site. This data is to be made available to the Council on request. This data was forwarded to the Council and is presented in graph form in Figures 2 - 5. In all cases abstractions complied with the consent limits.

2.2.1. New Plymouth water supply

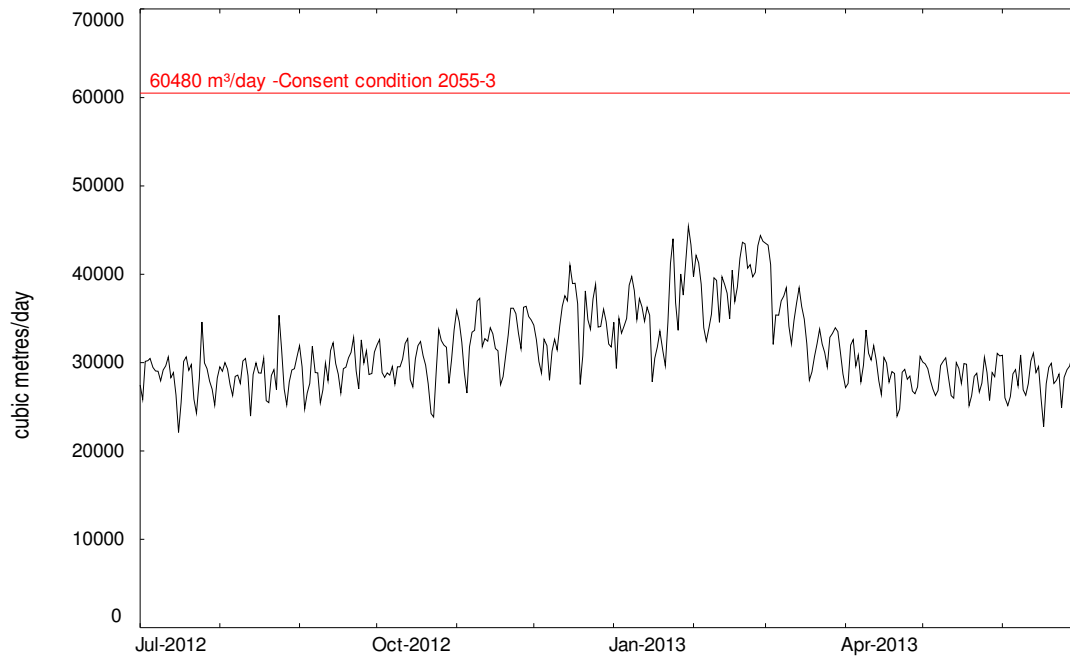


Figure 2 Graph of the daily abstraction at the New Plymouth WTP

2.2.2. Inglewood water supply

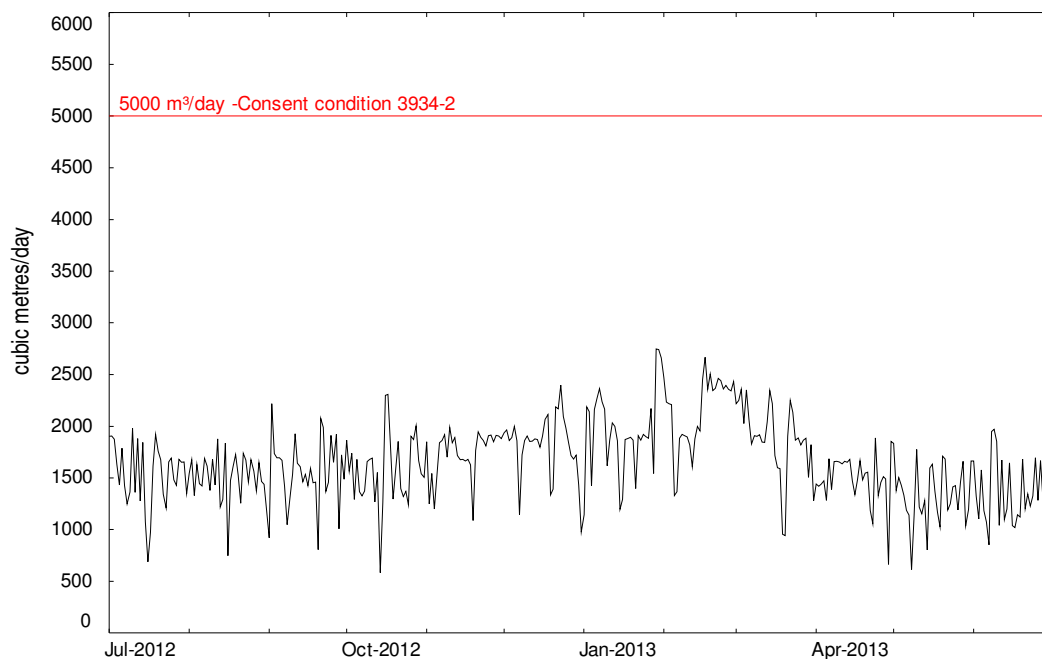


Figure 3 Graph of the daily abstraction at the Inglewood WTP

2.2.3. Oakura water supply

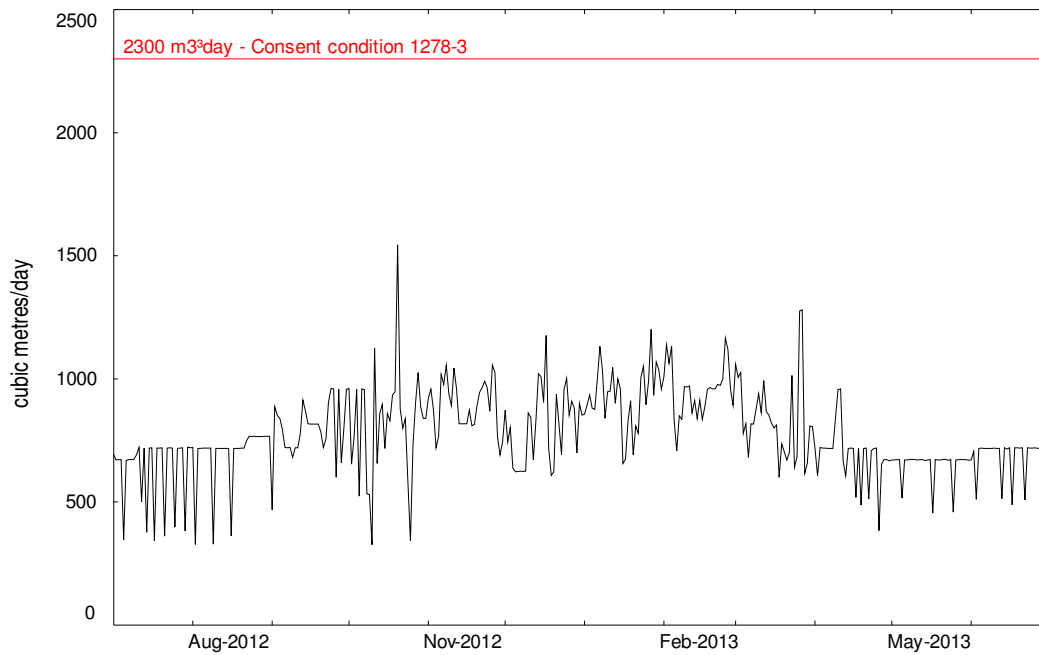


Figure 4 Graph of the daily abstraction at the Oakura WTP

2.2.4. Okato water supply

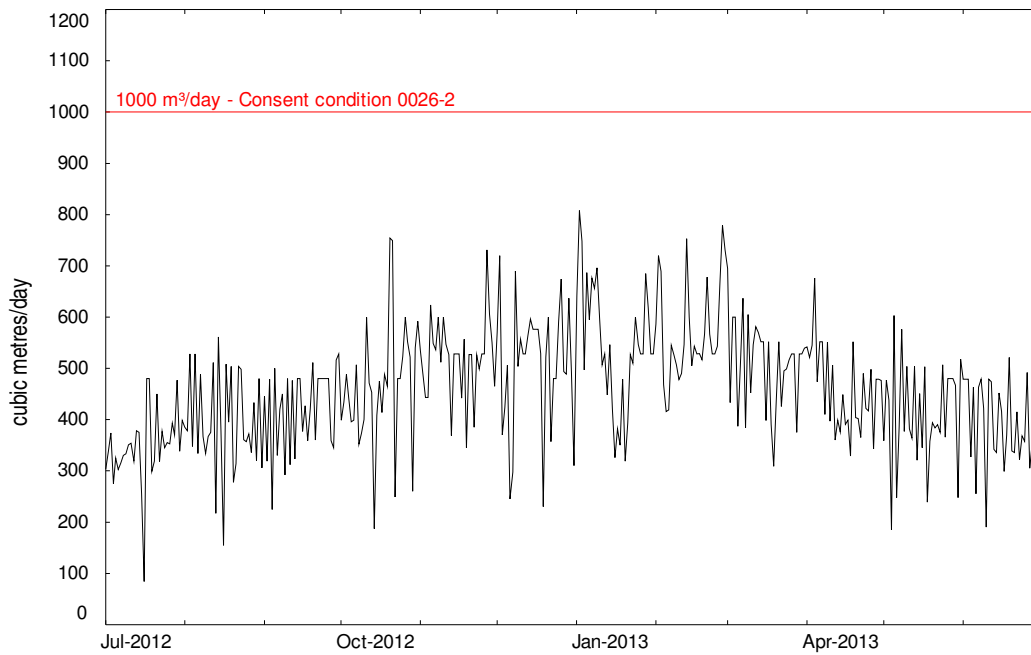


Figure 5 Graph of the daily abstraction at the Okato WTP

2.2.5. Waitara industrial supply

There were no abstractions from the Waiongana Stream for the 2012-2013 monitoring period.

2.3. Stream flow data

Consent 0026-3, to take water from the Mangatete Stream in the Kaihihi catchment for public water supply purposes, includes the following two conditions:

6. When the flow in the Mangatete Stream, measured immediately downstream of the weir, is less than 180 litres/second, water conservation practices are to be put in place by the consent holder (i.e. garden water only to be used every second day).
7. When the flow in the Mangatete Stream, measured immediately downstream of the weir, is less than 120 litres/second [2/3 habitat], taking of water shall be restricted to the minimum amount necessary to maintain the health of people and animals (i.e. garden water and other non-essential uses are prohibited).

NPDC monitor the stage of the Mangatete Stream at the Saunders Road bridge and from this calculate the stream flow (refer to Figure 6). In addition, the Council conducts three gaugings per year to maintain a rating curve.

Flow data derived from the stage sensors and the rating curve show that residual flow in the Mangatete approached the 180 l/s trigger for conservation measures during the late summer drought. NPDC instigated water conservation measures from 4 March 2013 to 17 April 2013. Gaugings undertaken during the drought period indicated flows as low as 131 L/s, which was lower than the flow calculated from the stage readings. This indicates that at very low flow the current rating curve may not be accurate and continued gaugings are recommended.

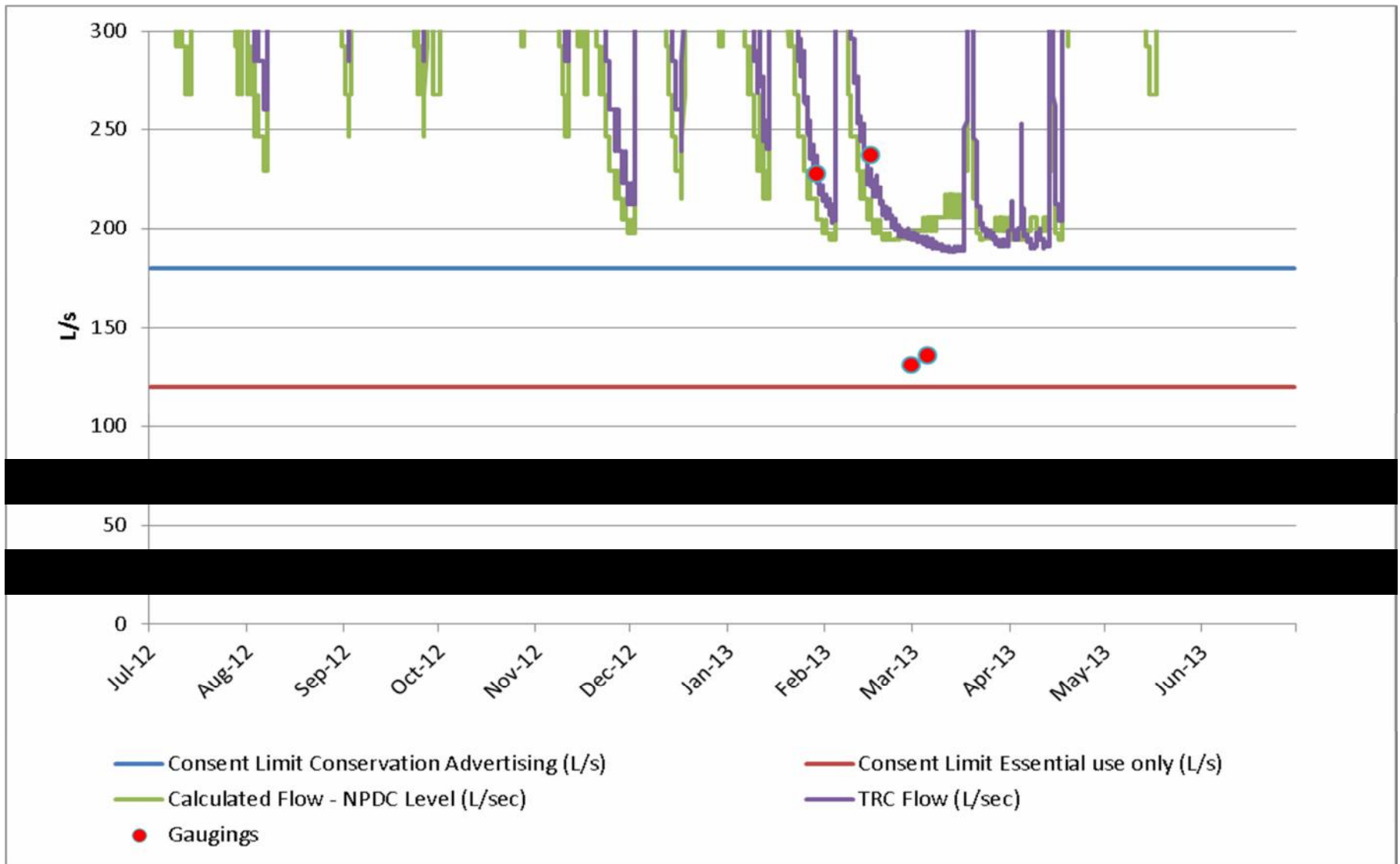


Figure 6 Graph showing the Mangatete Steam flow

2.4. Fish surveys

2.4.1. Mangatete Stream (Okato WTP)

On 30 June 2013, a spotlighting survey was undertaken at two sites in the Mangatete Stream, so as to assess the NPDC weir in terms of fish passage. This weir is not to restrict fish passage, in order to meet the permitted activity rule for existing structures (rule 52 in the Regional Freshwater Plan for Taranaki).

A low species richness was recorded during this survey, with only three species recorded in total. The absence of torrentfish in the Mangatete Stream is unusual, and may indicate the presence of a barrier to fish passage further downstream.

Species richness and abundance was higher upstream than downstream indicating that the weir is not a barrier to these species. Work undertaken by the Department of Conservation in the headwaters of the Mangatete Stream also indicates that the weir is not a barrier to the passage of banded and shortjaw kokopu. The presence of a healthy population of giant kokopu as confirmed in the current survey indicates that the headwaters of the Mangatete Stream support a very significant native fish community. Visual observation indicates that the pass is too shallow to provide passage of trout, but it is considered that adult trout will be able to jump over the weir itself, especially in the higher flows that usually initiate trout migration.

With regard to whether the weir meets the fish passage condition of permitted activity rule 52 of the Regional Freshwater Plan for Taranaki, it appears that there is no restriction of fish passage. Therefore it is considered that the weir meets this condition. However, it may be worthwhile for NPDC to hold consent for this weir, as this will provide a greater degree of flexibility for management e.g. planning and maintenance works etc.

2.4.2. Wairau Stream (Oakura WTP)

A fish survey was conducted on 7 June 2013 upstream and downstream of the Wairau Stream weir. Fish diversity was lower downstream of the weir, compared with that recorded upstream of the weir, although by only one species. This is a similar result to that recorded in the 2006 survey. The greater amount of undercut bank in the reach downstream of the weir provided good cover, and as such nocturnal species may be under represented in the results. This is the likely explanation for the absence of shortjaw kokopu, which were relatively abundant at this site in the last survey, which used the spotlighting method.

Upstream of the weir three species were confirmed as present. There were no new species recorded above the weir, and although no shortjaw kokopu were recorded, they may have been present, but did not come out from cover. The presence of banded kokopu and koaro above the weir is an indication that the weir is operating in compliance with special condition 5 of resource consent 5713.

While there were some differences between the fish populations upstream of the weir with those downstream of the weir, these differences are more likely to have been influenced by the habitat available to the fish. It is not thought to be related to the presence of the weir. On this day an additional survey was undertaken downstream

of State Highway 45, and this indicated that the SH45 road culvert is a barrier to the passage of at least one species, and may also be a partial barrier to those species recorded upstream. Once this is resolved, it is likely that species richness and potentially abundance will increase upstream.

The monitoring of the Wairau Stream indicates that fish passage on the NPDC weir is likely to provide fish passage for all fish present in the monitored reach. Provided that regular inspections of the fish pass confirms that it is operating as required and being maintained, it is recommended that the fish monitoring be conducted once every three years as per the scheduled monitoring programme currently implemented.

2.5. Monitoring of upstream discharge consents

NPDC have indicated that the Inglewood WTP and Okato WTP are particularly susceptible to any event which may affect the incoming raw water quality. At their request, this section has been included to summarise the monitoring of consents upstream of these water treatment plants, where there is a potential for the discharge of contaminants to water.

2.5.1. Ngatoro catchment (Inglewood WTP)

There are four discharge consents upstream of the Inglewood WTP abstraction point on the Ngatoro Stream, which are monitored by the Council. Details are summarised in Table 2.

Table 2 Discharge consents upstream of the Inglewood WTP

| Consent No. | Purpose | Monitoring | Compliance achieved? |
|-------------|---|-------------------|----------------------------|
| 1351-3 | To discharge dairy effluent from an oxidation pond treatment system into the Ngatoro Stream | Annual inspection | Yes |
| 1477-3 | To discharge dairy effluent from an oxidation pond treatment system into the Ngatoro Stream | Annual inspection | Yes |
| 2266-3 | To discharge dairy effluent from an oxidation pond treatment system into an unnamed tributary of the Ngatoro Stream | Annual inspection | Yes |
| 5763-1 | To discharge untreated farm dairy effluent by spray irrigation onto and into land and/or to discharge treated farm dairy effluent from an oxidation pond treatment system into the Ngatoro Stream | Annual inspection | Yes but cow seen in stream |

There were no incidents recorded by the Council that were related to discharges to water upstream of the Inglewood WTP abstraction point on the Ngatoro Stream.

2.5.2. Mangatete catchment (Okato WTP)

There are four discharge consents upstream of the Okato WTP abstraction point on the Mangatete Stream, which are monitored by the Council. Details are summarized in Table 3.

Table 3 Discharge consents upstream of the Okato WTP

| Consent No. | Purpose | Monitoring | Compliance achieved? |
|-------------|---|-------------------|----------------------|
| 1001-3 | To discharge treated dairy shed effluent by oxidation ponds into the Mangatete Stream | Annual inspection | Yes |
| 2379-2 | To discharge untreated farm dairy effluent by spray irrigation onto and into land | Annual inspection | Yes |
| 3969-2 | To discharge dairy effluent from an oxidation pond treatment system and a wetland into the Mangatete Stream | Annual inspection | Yes |
| 4991-1 | To discharge partially treated farm dairy effluent by holding pond and spray irrigation onto and into land | Annual inspection | Yes |

There was also one incident recorded by the Council that was related to discharges upstream of the Okato WTP abstraction point on the Mangatete Stream.

8 November 2012

Self notification was received of an effluent discharge into the Mangatete Stream from the spray irrigation system. Inspection found that ponding was occurring in the paddock where the pods had been. The effluent had flowed down the race and into a spring which discharges into the Mangatete Stream. At the time of inspection the spring was still slightly discoloured. There was a minimal visual impact on the receiving waters, the river cleared up within 1 metre as good dilution was available. The District Council had been notified of the discharge and the inlet to the water supply for Okato had been switched off.

2.6. 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 e.g. 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 NPDC with conditions in resource consents or provisions in Regional Plans.

3. Discussion

3.1. Discussion of plant performance

During the monitoring period the plants were well run and organised. Abstraction data was provided to Council in a timely manner and all daily abstraction volumes were in compliance with consent conditions.

3.2. NES requirements

NES flow meter requirements can be met at the New Plymouth, Oakura, and Waitara industrial plants with minor modifications and/or approvals from Council to locate a meter away from the point of abstraction. The flow meter at the Okato plant however does not comply with NES requirements as it is located downstream of the treatment plant and at the very least will have to be moved upstream of the plant (i.e. between the point of abstraction and the plant).

The flow meter at the Inglewood plant does not comply with NES standards as a single meter measures the take from two separate consents and there is also a rural unmetered off-take above the meter.

NPDC is currently undertaking investigations and allocating funding to address these compliance issues

3.3. Environmental effects of exercise of consents

Inspections of abstraction and discharge points, and supply weirs indicated that there were no adverse impacts on the environment, occurring from the exercise of resource consents held by NPDC in relation to their water supply schemes.

Fish surveys carried out in the Wairau and Mangatete Streams showed that fish passage was being provided.

3.4. Evaluation of performance

A tabular summary of the consent holder's compliance record for the year under review is set out in Tables 4-24.

3.4.1. New Plymouth water supply

Table 4 Summary of performance for Consent 0672-3 To discharge wastewater from a water treatment plant into an unnamed tributary of the Mangorei Stream in the Waiwhakaiho catchment

| Condition requirement | Means of monitoring during period under review | Compliance achieved? |
|---|--|----------------------|
| 1. Adoption of best practicable option | No discharge in monitoring year | N/A |
| 2. Exercise of consent in accordance with information submitted in support of application | No discharge in monitoring year | N/A |
| 3. Limits not to be exceeded in the discharge | No discharge in monitoring year | N/A |
| 4. Discharge not to cause certain effects in the receiving waters | No discharge in monitoring year | N/A |
| 5. Lapse provision | Not applicable | N/A |
| 6. Optional review provision re environmental effects | Next option to review in June 2014 | N/A |
| Overall assessment of consent compliance and environmental performance in respect of this consent | | N/A |

Table 5 Summary of performance for Consent 0673-3 To discharge stormwater from a water treatment plant into an unnamed tributary of the Mangorei Stream in the Waiwhakaiho catchment

| Condition requirement | Means of monitoring during period under review | Compliance achieved? |
|---|---|----------------------|
| 1. Adoption of best practicable option | Inspection and liaison with consent holder | Yes |
| 2. Exercise of consent in accordance with information submitted in support of application | Inspection and liaison with consent holder | Yes |
| 3. Catchment area not to exceed 2 ha | Inspection | Yes |
| 4. Requirement for a Management Plan | WTP Emergency Management Plan - 15 Sep 2010 | Yes |
| 5. Requirement for a Contingency Plan | WTP Emergency Management Plan - 15 Sep 2010 | Yes |
| 6. Hazardous substance storage areas to be bunded | Inspection | Yes |
| 7. Limits not to be exceeded in the discharge | Sampling - not sampled during monitoring period | N/A |
| 8. Discharge not to cause certain effects in the receiving waters | Inspection | Yes |
| 9. Lapse provision | Not applicable | N/A |
| 10. Optional review provision re environmental effects | No review required | N/A |
| Overall assessment of consent compliance and environmental performance in respect of this consent | | High |

Table 6 Summary of performance for Consent 2055-3 To take up to 60,480 cubic metres per day at a maximum rate of 740 litres/ second of water from Lake Mangamahoe in the Waiwhakaiho Catchment for municipal water supply purposes

| Condition requirement | Means of monitoring during period under review | Compliance achieved? |
|---|--|----------------------|
| 1. To take up to 60,480 m ³ /day at a maximum rate of 740 l/s. | Review of abstraction data | Yes |
| 2. Exercise of consent in accordance with information submitted in support of application | Inspection and liaison with consent holder | Yes |
| 3. Adoption of best practicable option | Inspection and liaison with consent holder | Yes |
| 4. Screening of intake structures | Inspection | Yes |
| 5. Recording of abstraction rates and provision of data to Council | Data forwarded to Council and reviewed | Yes |
| 6. Optional review provision re environmental effects | Next option for review 2016 | Yes |
| Overall assessment of consent compliance and environmental performance in respect of this consent | | High |

Table 7 Summary of performance for Consent 5699-1 To erect, place and maintain a pipe bridge over the Mangorei Stream in the Waiwhakaiho catchment

| Condition requirement | Means of monitoring during period under review | Compliance achieved? |
|--|--|----------------------|
| 1. Notification of Council prior to construction and maintenance works | No maintenance in monitoring year | N/A |
| 2. Exercise of consent in accordance with information submitted in support of application | No maintenance in monitoring year | N/A |
| 3. Adoption of best practicable option | No maintenance in monitoring year | N/A |
| 4. Minimise disturbance of riverbed and bank and reinstatement of areas disturbed | No maintenance in monitoring year | N/A |
| 5. Removal of structure when no longer required and reinstatement of the area. Notification of Council prior to removal of structure | Not applicable | N/A |
| 6. Optional review provision re environmental effects | No review required | N/A |
| Overall assessment of consent compliance and environmental performance in respect of this consent | | N/A |

Table 8 Summary of performance for Consent 5700-1 To disturb the bed of the Mangorei Stream by trenching to erect, place and maintain a pipeline under the Mangorei Stream in the Waiwhakaiho catchment

| Condition requirement | Means of monitoring during period under review | Compliance achieved? |
|--|--|----------------------|
| 1. Notification of Council prior to construction and maintenance works | No maintenance in monitoring year | N/A |
| 2. Exercise of consent in accordance with information submitted in support of application | No maintenance in monitoring year | N/A |
| 3. Disturbance of riverbed areas covered by water | No maintenance in monitoring year | N/A |
| 4. Adoption of best practicable option | No maintenance in monitoring year | N/A |
| 5. Minimise disturbance of riverbed and bank and reinstatement of areas disturbed | No maintenance in monitoring year | N/A |
| 6. Removal of structure when no longer required and reinstatement of the area. Notification of Council prior to removal of structure | Not applicable | N/A |
| 7. Optional review provision re environmental effects | No review required | N/A |
| Overall assessment of consent compliance and environmental performance in respect of this consent | | N/A |

Table 9 Summary of performance for Consent 6643-1 To erect, place and maintain a weir in the Mangorei Stream in the Waiwhakaiho catchment

| Condition requirement | Means of monitoring during period under review | Compliance achieved? |
|---|--|----------------------|
| 1. Adoption of best practicable option | Liaison with consent holder | Yes |
| 2. Consent to be exercised in line with application documentation | Liaison with consent holder | Yes |
| 3. Review provision | A review was not necessary | N/A |
| 4. Annual inspection by consent holder and report to Council | Report received | Yes |
| 5. Notification of Council prior to maintenance works | No maintenance in monitoring year | N/A |
| 6. Adoption of best practicable option during maintenance works | No maintenance in monitoring year | N/A |
| 7. No maintenance to occur 1 May to 31 October unless waived by Council | No maintenance in monitoring year | N/A |
| 8. Lapse provision | Not applicable – consent exercised | N/A |
| 9. Review provision | No review required | N/A |
| Overall assessment of consent compliance and environmental performance in respect of this consent | | High |

3.4.2. Inglewood water supply

Table 10 Summary of performance for Consent 3934-2 To take up to 400 cubic metres/day [5 litres/second] of water throughout the year for farm supply purposes; and ii) up to 5000 cubic metres/day [70 litres/second] of water as a contingency supply for Inglewood municipal water supply purposes from an intake weir in the Ngatoro Stream a tributary of the Manganui River in the Waitara Catchment

| Condition requirement | Means of monitoring during period under review | Compliance achieved? |
|---|--|----------------------|
| 1. Limit on combined abstraction from Ngatoro Stream | Contingency take not exercised | N/A |
| 2. Recording and provision of abstraction data to Council | Contingency take not exercised | N/A |
| 3. Optional review provision re environmental effects | Expires June 2015, no more review options. | N/A |
| Overall assessment of consent compliance and environmental performance in respect of this consent | | N/A |

Table 11 Summary of performance for Consent 4509-2 To maintain a water supply intake infiltration gallery in and adjacent to the Ngatoro Stream a tributary of the Manganui River in the Waitara catchment and to maintain a pipeline from the gallery to the water treatment station for Inglewood urban water supply purposes

| Condition requirement | Means of monitoring during period under review | Compliance achieved? |
|---|---|----------------------|
| 1. Any works to be undertaken only between 1 November and 30 April | Liaison with consent holder | Yes |
| 2. Notification of Council 48 hrs prior to maintenance works | Liaison with consent holder – notification of works on three occasions in monitoring year | Yes |
| 3. Minimise areas of disturbance | Inspection and liaison with consent holder | Yes |
| 4. Undertake works in accordance with guidelines | Inspection and liaison with consent holder | Yes |
| 5. Structure to be removed and area reinstated when no longer required | Not applicable - structure in use | N/A |
| 6. Structure not to restrict fish passage | Inspection | Yes |
| 7. Lapse condition | Not applicable | N/A |
| 8. 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 12 Summary of performance for Consent 4510-2 To take and use water from the Ngatoro Stream a tributary of the Manganui River in the Waitara catchment, for Inglewood urban water supply purposes

| Condition requirement | Means of monitoring during period under review | Compliance achieved? |
|---|--|----------------------|
| 1. Abstraction not to exceed 4,850 m ³ /day or 56 l/s | Review of abstraction data | Yes |
| 2. Requirement for water meter and data logger | Provision of data | Yes |
| 3. Emergency take and notification | Not exercised | N/A |
| 4. Provision of data to Council | Data received | Yes |
| 5. Efficient and conservative use of water | Liaison with consent holder | Yes |
| 6. Intake screened for fish | Inspection | Yes |
| 7. Lapse condition | Not applicable | N/A |
| 8. 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 13 Summary of performance for Consent 5188-1 To license and maintain an existing weir structure in the Ngatoro Stream a tributary of the Manganui River in the Waitara Catchment

| Condition requirement | Means of monitoring during period under review | Compliance achieved? |
|---|--|----------------------|
| 1. Maintenance of weir to enable fish passage | Inspection and triennial fish survey | Yes |
| 2. Optional review provision re environmental effects | Expires June 2015, no more review options. | N/A |
| Overall assessment of consent compliance and environmental performance in respect of this consent | | High |

Table 14 Summary of performance for Consent 5869-1 To discharge clarifier bleed and filter backwash supernatant overflow from the Inglewood water treatment plant into the Ngatoro Stream a tributary of the Manganui River in the Waitara catchment

| Condition requirement | Means of monitoring during period under review | Compliance achieved? |
|--|--|----------------------|
| 1. Limit on discharge rate | Not monitored | N/A |
| 2. Proper and efficient maintenance and operation of settlement facility | Inspection | Yes |

| Condition requirement | Means of monitoring during period under review | Compliance achieved? |
|---|--|----------------------|
| 3. Discharge not to cause certain effects in the Ngatoro Stream below the established mixing zone | Inspection and sampling | Yes |
| 4. Limits on certain contaminants in discharge | Sampling | Yes |
| 5. Optional review provision re environmental effects | Next option for review 2015 | N/A |
| Overall assessment of consent compliance and environmental performance in respect of this consent | | High |

3.4.3. Oakura water supply

Table 15 Summary of performance for Consent 1277-3 To discharge up to 40 cubic metres/day filter backwash from the Oakura Water Treatment Plant into the Wairau Stream

| Condition requirement | Means of monitoring during period under review | Compliance achieved? |
|---|--|----------------------|
| 1. Adopt best practice | No discharge in monitoring year | N/A |
| 2. Consent exercised in accordance with information supplied | No discharge in monitoring year | N/A |
| 3. Discharge quality | No discharge in monitoring year | N/A |
| 4. Effects of discharge | No discharge in monitoring year | N/A |
| 5. A review provision | No review option this period | N/A |
| Overall assessment of consent compliance and environmental performance in respect of this consent | | N/A |

Table 16 Summary of performance for Consent 1278-3 To take and use water from the Wairau Stream for Oakura water supply purposes

| Condition requirement | Means of monitoring during period under review | Compliance achieved? |
|---|--|----------------------|
| 1. Limit on volume and rate of abstraction | No abstraction in monitoring year | N/A |
| 2. Recording and provision to Council of abstraction data | No abstraction in monitoring year | N/A |
| 3. Mitigation of effects of abstraction by donation to Taranaki Tree Trust | No abstraction in monitoring year | N/A |
| 4. Maintenance of residual flow in the Wairau Stream below the abstraction point | No abstraction in monitoring year | N/A |
| 5. Provision for change or cancellation | Liaison with consent holder - No application for change or cancellation received | N/A |
| 6. Optional review provision re water use requirements and environmental effects | Expires June 2013, no more reviews options | N/A |
| Overall assessment of consent compliance and environmental performance in respect of this consent | | N/A |

Table 17 Summary of performance for Consent 5713-1 To erect, place and maintain a weir in the Wairau Stream for Oakura water supply purposes

| Condition requirement | Means of monitoring during period under review | Compliance achieved? |
|--|--|----------------------|
| 1. Construction of weir and fish pass to be in accordance with plan submitted with the application | Not applicable | N/A |
| 2. Notification of Council prior to construction and maintenance works | No maintenance in monitoring year | N/A |
| 3. Maintenance of structure to ensure compliance with consent conditions | No maintenance in monitoring year | N/A |
| 4. Screening of intake structure to avoid entrapment of fish | Inspection | Yes |
| 5. Works or structures not to obstruct native fish passage | Inspection and triennial fish survey | Yes |
| 6. Adoption of best practicable option to avoid or minimise discharge of silt or contaminants and adverse effects on water quality | No maintenance in monitoring year | N/A |
| 7. Structure to be removed when no longer required and area reinstated. Council to be notified prior to removal | Retained for contingency supply | N/A |
| 8. Fish pass to be installed between 1 November and 30 April | Fish pass installed | N/A |
| 9. Optional review provision re environmental effects | Expires June 2013, no more review options | N/A |
| Overall assessment of consent compliance and environmental performance in respect of this consent | | High |

Table 18 Summary of performance for Consent 6114-1 To take and use groundwater from two bores for Oakura water supply purposes

| Condition requirement | Means of monitoring during period under review | Compliance achieved? |
|--|--|----------------------|
| 1. Consent to be exercised in accordance with information submitted in support of the application and to ensure consent conditions are met | Inspection and liaison with consent holder | Yes |
| 2. Adoption of best practicable option to prevent or minimise adverse effects on the environment | Inspection and liaison with consent holder | Yes |
| 3. Limits on volume and rate of abstraction | Review of abstraction data provided to Council | Yes |
| 4. Abstraction not to have adverse effects on other known groundwater and surfacewater takes | Liaison with consent holder | Yes |
| 5. Recording of abstraction rates | Provision of data | Yes |
| 6. Optional review provision re environmental effects | No review required | N/A |
| Overall assessment of consent compliance and environmental performance in respect of this consent | | High |

3.4.4. Okato water supply

Table 19 Summary of performance for Consent 0026-3 To take up to 1000 cubic metres/day [13.8 litres/second] of water from the Mangatete Stream in the Kaihihi Catchment for municipal supply purposes

| Condition requirement | Means of monitoring during period under review | Compliance achieved? |
|---|--|----------------------|
| 1. Adopt best practicable option | Inspection and liaison with consent holder | Yes |
| 2. Exercise consent in accordance with the application documentation | Inspection and liaison with consent holder | Yes |
| 3. Abstraction rates and daily limits | Review of abstraction data received by Council | Yes |
| 4. Notification of exceedances | Rate not exceeded | Yes |
| 5. Installation of staff gauge | Staff gauge installed by Council | Yes |
| 6. Implementation of water conservation for flows less than 241 l/s | Review of consent holder's records | Yes |
| 7. Restriction of abstraction at certain flows | Review of stage data- trigger values not met | N/A |
| 8. Maintaining and supplying of abstraction records | Provision of data | Yes |
| 9. Screen off intake structure | Inspection | Yes |
| 10. Lapse condition | Not applicable – consent exercised | N/A |
| 11. Review condition | No more review options | N/A |
| Overall assessment of consent compliance and environmental performance in respect of this consent | | High |

Table 20 Summary of performance for Consent 4805-1 To place and maintain an infiltration gallery structure in the Mangatete Stream in the Kaihihi Catchment for water supply purposes

| Condition requirement | Means of monitoring during period under review | Compliance achieved? |
|---|--|----------------------|
| 1. Structure to be maintained in accordance with details in support of application | No maintenance in monitoring year | N/A |
| 2. Notification of the Council prior to major maintenance works | Notification of works on one occasion | Yes |
| 3. Every practicable measure to be taken to prevent discharge of silt, organics or cement into watercourse during maintenance works | Inspection and liaison with consent holder | Yes |
| 4. Optional review provision re environmental effects | Expires June 2013, no more review options | N/A |
| Overall assessment of consent compliance and environmental performance in respect of this consent | | High |

3.4.5. Urenui dam

Table 21 Summary of performance for Consent 5989-1 To modify and maintain an existing earth retention structure (dam) on the Kakapo Stream

| Condition requirement | Means of monitoring during period under review | Compliance achieved? |
|---|--|----------------------|
| 1. Notification of Council prior to maintenance works | No maintenance in monitoring year | N/A |
| 2. Structure not to obstruct fish passage | Inspection and triennial fish surveys | Yes |
| 3. Adoption of best practicable option to avoid or minimise discharge of silt or other contaminants and any adverse effects on water quality | No maintenance in monitoring year | N/A |
| 4. Area and volume of river bed disturbance during fish pass construction and structure maintenance minimised and disturbed areas reinstated where possible | No maintenance in monitoring year | N/A |
| 5. Maintenance of structure to ensure compliance with consent conditions | No maintenance in monitoring year | N/A |
| 6. Removal of structure when no longer required and reinstatement of area. Notification of Council prior to removal | Not applicable | N/A |
| 7. Optional review provision re environmental effects | Next option for review 2021 | N/A |
| Overall assessment of consent compliance and environmental performance in respect of this consent | | High |

3.4.6. Waitara industrial supply

This is a contingency supply and was not utilised in the monitoring period under review.

Table 22 Summary of performance for Consent 0126-4 To take water from the Waiongana Stream for Waitara industrial water supply purposes

| Condition requirement | Means of monitoring during period under review | Compliance achieved? |
|--|--|----------------------|
| 1. Adopt best practice | No abstraction in monitoring year | N/A |
| 2. Abstraction volume limits | No abstraction in monitoring year | N/A |
| 3. Water conservation at low flow | No abstraction in monitoring year | N/A |
| 4. Cessation of abstraction if river flow <402 L/s | No abstraction in monitoring year | N/A |
| 5. Record keeping | No abstraction in monitoring year | N/A |

| Condition requirement | Means of monitoring during period under review | Compliance achieved? |
|---|--|----------------------|
| 6. Council right to suspend or reduce abstraction | No abstraction in monitoring year | N/A |
| 7. Lapse provision | Not applicable - consent previously exercised | N/A |
| 8. Review provision | Expires June 2012, no more review options | N/A |
| Overall assessment of consent compliance and environmental performance in respect of this consent | | N/A |

Table 23 Summary of performance for Consent 4816-2 To use and maintain an existing weir, fish pass and associated intake structures on the Waiongana Stream for Waitara industrial water supply purposes

| Condition requirement | Means of monitoring during period under review | Compliance achieved? |
|---|--|----------------------|
| 1. Notification of Council prior to maintenance works | No maintenance in monitoring year | N/A |
| 2. Adoption of best practicable option to avoid or minimise adverse effects | No maintenance in monitoring year | N/A |
| 3. Minimising of area and volume of river disturbance during maintenance and reinstatement of disturbed areas | No maintenance in monitoring year | N/A |
| 4. Maintenance work not to be conducted between 1 May and 31 October unless waived in writing | No maintenance in monitoring year | N/A |
| 5. Maintenance of structure[s] to ensure compliance with consent conditions | No maintenance in monitoring year | N/A |
| 6. Structure not to restrict fish passage | Inspection and triennial fish surveys | Yes |
| 7. Structure to be removed when no longer required and area to be reinstated | Retained for contingency supply | N/A |
| 8. Optional review provision re environmental effects | No review required | N/A |
| Overall assessment of consent compliance and environmental performance in respect of this consent | | High |

Table 24 Summary of performance for Consent 4817-2 To discharge water and sediment from intake pipe cleaning and draining of settling ponds into the Waiongana Stream

| Condition requirement | Means of monitoring during period under review | Compliance achieved? |
|--|--|----------------------|
| 1. Records of cleaning and draining operations and provision of records to Council | No discharge in monitoring year | N/A |
| 2. Notification prior to discharge | No discharge in monitoring year | N/A |
| 3. Discharge only to occur when flow is greater than 3 times median other than for emergency works or with prior approval from Council | No discharge in monitoring year | N/A |

| Condition requirement | Means of monitoring during period under review | Compliance achieved? |
|---|--|----------------------|
| 4. Discharge not to cause certain effects in the Waiongana Stream below the established mixing zone | No discharge in monitoring year | N/A |
| 5. Limit on increase in turbidity below mixing zone as result of discharge | No discharge in monitoring year | N/A |
| 6. Optional review provision re environmental effects | No review required | N/A |
| Overall assessment of consent compliance and environmental performance in respect of this consent | | N/A |

During the year under review, NPDC demonstrated a high level of environmental performance and compliance with the resource consents. There are however on-going non-compliances with NES regulations in regards to water meter standards.

3.5. Recommendation from the 2011-20 12 Annual Report

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

1. THAT the monitoring programme for consents associated with New Plymouth District Council's water supply schemes in the 2012-2013 monitoring year remain unchanged from that for 2011-2012.
2. That the optional review of consent 0672 not be exercised on the grounds that current consent conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent.

These recommendations were implemented in full.

3.6. Alterations to monitoring programmes for 2013-2014

In designing and implementing the monitoring programmes for water abstractions/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 abstractions/discharges and effects, and subsequently reporting to the regional community, the scope of assessments required at the time of renewal of consents, and the need to maintain a sound understanding of industrial processes within Taranaki abstracting water and discharging to the environment.

It is proposed that for 2013-2014, the programme remains unchanged from that for 2012-2013. A recommendation to this effect is included in this report.

3.7. Exercise of optional review of consents

Resource consents 0673, 6114, 4816, 5699, and 5700 provide for an optional review of the consent in June 2014. Review conditions in these consents allows the Council to review the consent, if there are grounds to consider that current consent conditions

are not 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.

Based on the results of monitoring in the year under review, and in previous years as set out in earlier annual compliance monitoring reports, it is considered that there are no grounds that require a review to be pursued.

A recommendation to this effect is presented in Section 4 of this report.

4. Recommendations

1. THAT the monitoring programme for consents associated with New Plymouth District Council's water supply schemes in the 2013-2014 monitoring year remain unchanged from that for 2012-2013.
2. THAT the optional review of consents 0673, 6114, 4816, 5699, and 5700 in June 2014 not be exercised on the grounds that current consent conditions are adequate to deal with any adverse effects on the environment arising from the exercise of the consents.

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 |
| BTEX | MAH's benzene, toluene, ethylbenzene and xylene |
| 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 | 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 |
| l/s | litres per second |

| | |
|------------------|--|
| MAHs | monocyclic aromatic hydrocarbons, molecules consist of a single six-sided hydrocarbon ring |
| 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) |
| NES | National Environmental Standard |
| 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) |
| PAHs | polycyclic aromatic hydrocarbons, molecules consist of more than two six-sided hydrocarbon rings |
| 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; |
| Temp | temperature, measured in °C (degrees Celsius) |
| TPH | total petroleum hydrocarbons |
| Turb | turbidity, expressed in NTU |
| 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 |
| Zn* | zinc |

*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, 1999, New Plymouth District Council Water Supply Plants and Structures Monitoring Programme Annual Report 1998-99, Technical Report 99-54.

Taranaki Regional Council, 2001, Regional Freshwater Plan for Taranaki as adopted by the Taranaki Regional Council, September 2001.

Appendix I

Resource consents held by New Plymouth District Council

New Plymouth Water Supply



Discharge 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
www.trc.govt.nz

Please quote our file number
on all correspondence

Name of
Consent Holder: New Plymouth District Council
Private Bag 2025
NEW PLYMOUTH 4342

Consent Granted
Date: 30 May 2008

Conditions of Consent

Consent Granted: To discharge wastewater from a water treatment plant into
an unnamed tributary of the Mangorei Stream in the
Waiwhakaiho catchment at or about (NZTM)
1696185E-5669305N

Expiry Date: 1 June 2026

Review Date(s): June 2014, June 2020

Site Location: Junction Road, New Plymouth

Legal Description: Lot 1 DP 10097 Blk X Paritutu SD

Catchment: Waiwhakaiho

Tributary: Mangorei

*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. Notwithstanding any other condition of this consent, 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 5038. In the case of any contradiction between the documentation submitted in support of application 5038 and the conditions of this consent, the conditions of this consent shall prevail.
- 3. The following concentrations shall not be exceeded in the discharge:

| Component | Concentration |
|------------------|----------------------|
| pH (range) | 6.0 – 9.0 |
| suspended solids | 100 gm ⁻³ |
| free chlorine | 0.2 gm ⁻³ |

This condition shall apply prior to the entry of the wastewater into the receiving waters of the unnamed tributary, at a designated sampling point approved by the Chief Executive, Taranaki Regional Council.

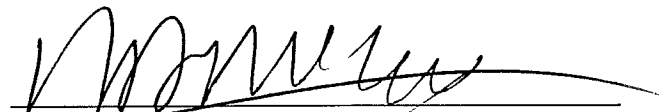
- 4. After allowing for reasonable mixing, within a mixing zone extending 15 metres downstream of the discharge point, the discharge shall not, either by itself or in combination with other discharges, give rise to any or all of the following effects in the receiving water:
 - a) the production of any 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.

Consent 0672-3

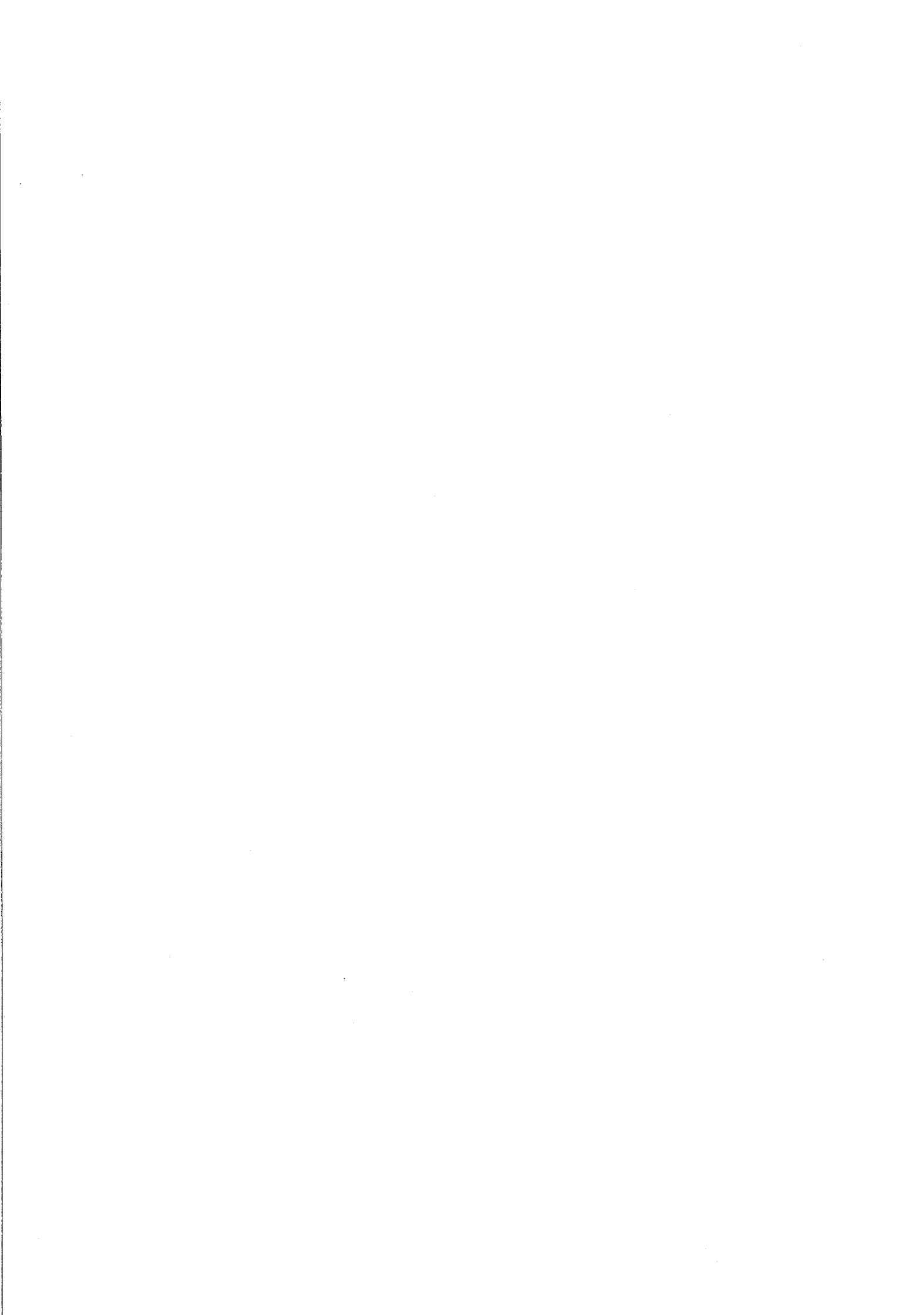
5. This consent shall lapse on the expiry of five years after the date of issue of this consent, unless the consent is given effect to before the end of that period or the Taranaki Regional Council fixes a longer period pursuant to section 125(1)(b) of the Resource Management Act 1991.
6. In accordance 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 2014 and/or June 2020, 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 30 May 2008

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

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

Name of
Consent Holder: New Plymouth District Council
Private Bag 2025
NEW PLYMOUTH 4342

Consent Granted 30 May 2008
Date:

Conditions of Consent

Consent Granted: To discharge stormwater from a water treatment plant into
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1696185E-5669305N

Expiry Date: 1 June 2026

Review Date(s): June 2014, June 2020

Site Location: Junction Road, New Plymouth

Legal Description: Lot 1 DP 10097 Blk X Paritutu SD

Catchment: Waiwhakaiho

Tributary: Mangorei

Consent 0673-3

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. Notwithstanding any other condition of this consent, 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 substantially in accordance with the documentation submitted in support of application 5001. In the case of any contradiction between the documentation submitted in support of application 5001 and the conditions of this consent, the conditions of this consent shall prevail.
3. The stormwater discharged shall be from a catchment area not exceeding 2 hectares.
4. The consent holder shall maintain a stormwater management plan. This plan shall document how the site is to be managed in order to minimise the contaminants that become entrained in the stormwater to the satisfaction of the Chief Executive, Taranaki Regional Council.
5. The consent holder shall maintain a contingency plan. The plan shall detail measures and procedures to be undertaken to prevent spillage or accidental discharge of contaminants not licensed by this consent, and measures to avoid, remedy or mitigate the environmental effects of such a discharge, to the satisfaction of the Chief Executive, Taranaki Regional Council.
6. Any above ground hazardous substances storage areas shall be bunded with drainage to sumps, or other appropriate recovery systems, and not to the stormwater catchment.

Consent 0673-3

7. The following concentrations shall not be exceeded in the discharge:

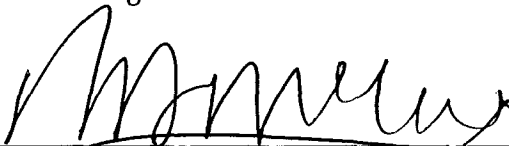
| Component | Concentration |
|------------------|----------------------|
| pH (range) | 6.0 - 9.0 |
| suspended solids | 100 gm ⁻³ |
| free chlorine | 0.2 gm ⁻³ |

This condition shall apply prior to the entry of the stormwater into the receiving waters of the unnamed tributary, at a designated sampling point approved by the Chief Executive, Taranaki Regional Council.

8. After allowing for reasonable mixing, within a mixing zone extending 15 metres downstream of the discharge point, the discharge shall not, either by itself or in combination with other discharges, give rise to any or all of the following effects in the receiving water:
- 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.
9. 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.
10. 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 2014 and/or June 2020, 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 30 May 2008

For and on behalf of
Taranaki Regional Council


Director-Resource Management



Consent 2055-3



**Water 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
FAX 0-6-765 5097

Name of
Consent Holder: New Plymouth District Council
Private Bag 2025
NEW PLYMOUTH

Consent Granted
Date: 25 June 2002

Conditions of Consent

Consent Granted: To take up to 60,480 cubic metres per day at a maximum
rate of 740 litres/ second of water from Lake Mangamahoe
in the Waiwhakaiho Catchment for municipal water supply
purposes at or about GR: P19:072-308, P19:071-306 and
P19:078-298

Expiry Date: 1 June 2021

Review Date(s): June 2006, June 2011, June 2016

Site Location: Lake Mangamahoe, Junction Road, New Plymouth

Legal Description: Pt Sec 13 DP 5433 Hua and Waiwhakaiho Hundred Blk X
Paritutu SD

Catchment: Waiwhakaiho

Tributary: Lake Mangamahoe

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

Consent 2055-3

General conditions

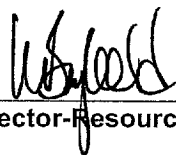
- a) On receipt of a requirement from the Chief Executive, Taranaki Regional Council (hereinafter the Chief Executive), the consent holder shall, within the time specified in the requirement, supply the information required relating to the exercise of this consent.
- b) Unless it is otherwise specified 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 the application 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. All intake structures shall be screened to avoid the entrainment of fish.
4. 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.
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 the month of June 2006 and/or June 2011 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 25 June 2002

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
FAX 0-6-765 5097

Name of
Consent Holder: New Plymouth District Council
Private Bag 2025
NEW PLYMOUTH

Consent Granted 9 November 2000
Date:

Conditions of Consent

Consent Granted: To erect, place and maintain a pipebridge over the
Mangorei Stream in the Waiwhakaiho catchment at or
about GR: P19:055-316

Expiry Date: 1 June 2020

Review Date(s): June 2002, June 2008, June 2014

Site Location: Mangorei Road, New Plymouth

Legal Description: Lot 1 DP 9635 Pt Sec 773 Grey Dist Blk IX Paritutu SD

Catchment: Waiwhakaiho

Tributary: Mangorei

Consent 5699-1

General conditions

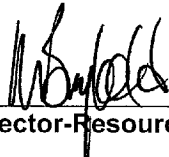
- a) That on receipt of a requirement from the Chief Executive, Taranaki Regional Council (hereinafter the Chief Executive), the consent holder shall, within the time specified in the requirement, supply the information required relating to the exercise of this consent.
- b) That unless it is otherwise 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 consent holder shall notify the Taranaki Regional Council at least 48 hours prior to the commencement and upon completion of the initial construction 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. The structure[s] authorised by this consent shall be constructed generally in accordance with the documentation submitted in support of the application and shall be maintained to ensure the conditions of this consent are met.
3. The consent holder shall adopt the best practicable option 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 and bank disturbance shall, so far as is practicable, be minimised and any areas which are disturbed shall, so far as is practicable, be reinstated, including riparian vegetation.
5. The structure[s] authorised by this consent shall be removed and the area reinstated, if and when the structure[s] are no longer required. The consent holder shall notify the Taranaki Regional Council at least 48 hours prior to structure[s] removal and reinstatement.
6. 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 2002 and/or June 2008 and/or June 2014, for the purpose of ensuring that the conditions adequately deal with the environmental effects arising from the exercise of this 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 9 November 2000

For and on behalf of
Taranaki Regional Council



Director-Resource Management



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

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

Name of
Consent Holder: New Plymouth District Council
Private Bag 2025
NEW PLYMOUTH

Consent Granted 30 January 2001
Date:

Conditions of Consent

Consent Granted: To disturb the bed of the Mangorei Stream by trenching to
erect, place and maintain a pipeline under the Mangorei
Stream in the Waiwhakaiho catchment at or about GR:
P19:059-331

Expiry Date: 1 June 2020

Review Date(s): June 2002, June 2008, June 2014

Site Location: Junction Road, New Plymouth

Legal Description: Pt Lot 1 DP 6447 Blk X Paritutu SD

Catchment: Waiwhakaiho

Tributary: Mangorei

Consent 5700-1

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 consent holder shall notify the Taranaki Regional Council at least 48 hours prior to the commencement and upon completion of the initial construction 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. The structure[s] authorised by this consent shall be constructed generally in accordance with the documentation submitted in support of the application and shall be maintained to ensure the conditions of this consent are met.
3. The disturbance of parts of the riverbed covered by water and/or any works which may result in downstream discolouration of water shall only be undertaken between the period 1 November and 30 April, except where this requirement is waived in writing by the Chief Executive, Taranaki Regional Council.
4. The consent holder shall adopt the best practicable option 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.
5. The consent holder shall ensure that the area and volume of riverbed and bank disturbance shall, so far as is practicable, be minimised and any areas which are disturbed shall, so far as is practicable, be reinstated, including riparian vegetation.
6. The structure[s] authorised by this consent shall be removed and the area reinstated, if and when the structure[s] are no longer required. The consent holder shall notify the Taranaki Regional Council at least 48 hours prior to structure[s] removal and reinstatement.
7. 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 2002 and/or June 2008 and/or June 2014, for the purpose of ensuring that the conditions adequately deal with the environmental effects arising from the exercise of this 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 30 January 2001

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
FAX: 06-765 5097
www.trc.govt.nz

Please quote our file number
on all correspondence

Name of
Consent Holder: New Plymouth District Council
Private Bag 2025
NEW PLYMOUTH

Consent Granted
Date: 1 August 2005

Conditions of Consent

Consent Granted: To erect, place and maintain a weir in the Mangorei Stream
in the Waiwhakaiho catchment at or about GR: P19:044-
268

Expiry Date: 1 June 2020

Review Date(s): June 2008, June 2014

Site Location: Scout Road, Korito, New Plymouth

Legal Description: Sec 96 Hua & Waiwakaiho Hun Blk II Egmont SD

Catchment: Waiwhakaiho

Tributary: Mangorei

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

Consent 6643-1

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

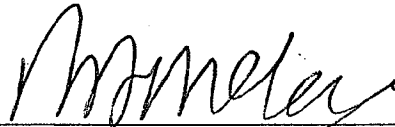
1. The consent holder shall at all times adopt the best practicable option, as defined in section 2 of the Resource Management Act 1991, to prevent or minimise any adverse effects on the environment from the exercise of this consent.
2. The exercise of this consent shall be undertaken generally in accordance with the documentation submitted in support of application 3838. In the case of any contradiction between the documentation submitted in support of application 3838 and the conditions of this consent, the conditions of this consent shall prevail.
3. This consent may be reviewed at any time should monitoring show that brown trout densities upstream of the structure are increasing or if there are significant adverse effects on conservation values upstream of the structure or if the structure is found to be no longer necessary for the conservation of native fish biodiversity.
4. The consent holder shall undertake annual inspections of the structure authorised by this resource consent and provide a report to the satisfaction of the Chief Executive, Taranaki Regional Council.
5. The consent holder shall notify the Chief Executive, Taranaki Regional Council, at least 48 hours prior to any maintenance works of the structure licensed by this consent which would involve disturbance of, or deposition to, the streambed or discharges to water.
6. The consent holder, during any maintenance works, 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 streambed and to avoid or minimise the disturbance of the streambed and any adverse effects on water quality.
7. No maintenance work shall be conducted during the period 1 May to 31 October unless waived in writing by the Chief Executive, Taranaki Regional Council.

Consent 6643-1

8. 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.
9. 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 2008 and/or June 2014, 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 1 August 2005

For and on behalf of
Taranaki Regional Council



Director-Resource Management

Inglewood Water Supply

TRK973934



WATER 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: **NEW PLYMOUTH DISTRICT COUNCIL
PRIVATE BAG 2025 NEW PLYMOUTH**

Renewal
Granted Date: **19 September 1997**

CONDITIONS OF CONSENT

Consent Granted: **TO TAKE:**

- i) UP TO 400 CUBIC METRES/DAY [5 LITRES/SECOND] OF WATER THROUGHOUT THE YEAR FOR FARM SUPPLY PURPOSES; AND**
- ii) UP TO 5000 CUBIC METRES/DAY [70 LITRES/SECOND] OF WATER AS A CONTINGENCY SUPPLY FOR INGLEWOOD MUNICIPAL WATER SUPPLY PURPOSES FROM AN INTAKE WEIR IN THE NGATORO STREAM A TRIBUTARY OF THE MANGANUI RIVER IN THE WAITARA CATCHMENT AT OR ABOUT GR: P20:088-197**

Expiry Date: **1 June 2015**

Review Date[s]: **June 2003 and June 2009**

Site Location: **DUDLEY ROAD INGLEWOOD**

Legal Description: **LOT 1 DP8522 BLK XI EGMONT SD**

Catchment: **WAITARA 395.000**

Tributary: **MANGANUI 395.040
NGATORO 395.045**

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

TRK973934

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 manage the take so that its combined abstraction from the Ngatoro Stream under this resource consent and consent TRK944510, the abstraction via an infiltration gallery, does not exceed 75 litres/second at any time.
- 2. THAT the consent holder shall satisfactorily install and operate a measuring device capable of recording daily rates of abstraction and shall make such records available to the General Manager, Taranaki Regional Council, upon request.
- 3. THAT the Taranaki Regional Council may review any or all of the conditions of this consent by giving notice of review during June 2003 and/or June 2009, for the purpose of ensuring that the conditions are adequate to deal with any adverse effects of the abstraction on the environment, which were not foreseen at the time of granting the consent, and which it was not appropriate to deal with at that time.

Signed at Stratford on 19 September 1997

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
FAX: 06-765 5097
www.trc.govt.nz

Please quote our file number
on all correspondence

Name of
Consent Holder: New Plymouth District Council
Private Bag 2025
NEW PLYMOUTH 4342

Consent Granted
Date: 12 June 2009

Conditions of Consent

Consent Granted: To maintain a water supply intake infiltration gallery in and adjacent to the Ngatoro Stream a tributary of the Manganui River in the Waitara catchment and to maintain a pipeline from the gallery to the water treatment station for Inglewood urban water supply purposes at or about (NZTM) 1701081E-5660275N

Expiry Date: 1 June 2027

Review Date(s): June 2015, June 2021

Site Location: Dudley Road, Inglewood

Legal Description: Pt Sec 17 Blk VIII Egmont SD

Catchment: Waitara

Tributary: Manganui
Ngatoro

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

Consent 4509-2

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. Any disturbance of parts of the riverbed covered by water and/or any works which may result in downstream discolouration of water shall be undertaken only between 1 November and 30 April, except where this requirement is waived in writing by the Chief Executive, Taranaki Regional Council.
2. The consent holder shall notify the Chief Executive, Taranaki Regional Council, in writing at least 48 hours prior to the commencement and upon completion of maintenance works which would involve disturbance of or deposition to the riverbed or discharges to water. Notification shall include the consent number and a brief description of the activity consented and be emailed to worknotification@trc.govt.nz.
3. 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 is practicable, be reinstated.
4. The consent holder shall take all reasonable steps to:
 - a. minimise the amount of sediment discharged to the stream;
 - b. minimise the amount of sediment that becomes suspended in the stream; and
 - c. mitigate the effects of any sediment in the stream.

Undertaking work in accordance with *Guidelines for Earthworks in the Taranaki region*, by the Taranaki Regional Council, will achieve compliance with this condition.

5. Except with the written agreement of the Chief Executive, Taranaki Regional Council, the structure[s] authorised by this consent shall be removed and the area reinstated, if and when the structure is no longer required. A further resource consent may be required to authorise the removal of the structure, and the consent holder is advised to seek advice from the Council on this matter.
6. The exercise of this consent shall not restrict the passage of fish.

Consent 4509-2

7. This consent shall lapse on 30 June 2014, 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.
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 2015 and/or June 2021, 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.

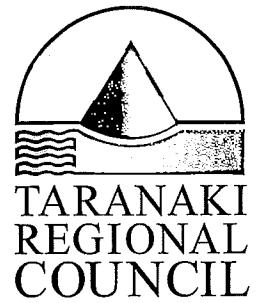
Signed at Stratford on 12 June 2009

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
www.trc.govt.nz

Please quote our file number
on all correspondence

Name of
Consent Holder: New Plymouth District Council
Private Bag 2025
NEW PLYMOUTH 4342

Consent Granted
Date: 12 June 2009

Conditions of Consent

Consent Granted: To take and use water from the Ngatoro Stream a tributary
of the Manganui River in the Waitara catchment, for
Inglewood urban water supply purposes at or about
(NZTM) 1701081E-5660275N

Expiry Date: 1 June 2021

Review Date(s): June 2015

Site Location: Dudley Road, Inglewood

Legal Description: Pt Sec 17 Blk VIII Egmont SD

Catchment: Waitara

Tributary: Manganui
Ngatoro

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

Consent 4510-2

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. Subject to condition 3, the volume of water taken shall not exceed 4,850 cubic metres per day, at a rate not exceeding 56 litres per second.
2. The consent holder shall maintain a water meter and a datalogger. The water meter and a datalogger shall be tamper-proof and shall measure and record the rate and volume of water taken to an accuracy of $\pm 5\%$.
3. The consent holder shall be allowed to take up to 70 litres per second when it is necessary in emergency cases, provided previous notification is made to the Chief Executive of the Taranaki Regional Council. Notification shall be made by e-mailing worknotification@trc.govt.nz 24 hours of the emergency abstraction commencing. Notification shall include the consent number and a brief description of the activity consented.
4. The consent holder shall make available electronic records of water taken to the Council at a frequency and in a format to be advised by the Chief Executive Taranaki Regional Council.
5. Notwithstanding the terms and conditions of this consent the consent holder shall take all reasonable steps to avoid, remedy or mitigate any adverse effect on the environment arising from the exercise of this consent, including, but not limited to, the efficient and conservative use of water
6. The consent holder shall ensure that the intake structure is appropriately screened to avoid the entrainment of fish.
7. This consent shall lapse on 30 June 2014, 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 4510-2

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 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 12 June 2009

For and on behalf of
Taranaki Regional Council



A handwritten signature in black ink, appearing to read 'A. Williams', is written over a horizontal line. The signature is fluid and cursive.

~~Director-Resource Management~~



TRK975188



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

LAND USE CONSENT

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

Name of Consent Holder: **NEW PLYMOUTH DISTRICT COUNCIL
PRIVATE BAG 2025 NEW PLYMOUTH**

Consent Granted Date: **19 September 1997**

CONDITIONS OF CONSENT

Consent Granted: **TO LICENSE AND MAINTAIN AN EXISTING WEIR STRUCTURE
IN THE NGATORO STREAM A TRIBUTARY OF THE MANGANUI
RIVER IN THE WAITARA CATCHMENT AT OR ABOUT GR:
P20:088-197**

Expiry Date: **1 June 2015**

Review Date[s]: **June 2003 and June 2009**

Site Location: **NGATORO STREAM UPPER DUDLEY ROAD, INGLEWOOD**

Legal Description: **LOT 1 DP8522 BLK XI EGMONT SD**

Catchment: **WAITARA 395.000**

Tributary: **MANGANUI 395.040
NGATORO 395.045**

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

TRK975188

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 the weir to enable the passage of native fish, juvenile trout and adult trout.
- 2. THAT the Taranaki Regional Council may review any or all of the conditions of this consent by giving notice of review during June 2003 and/or June 2009, for the purpose of ensuring that the conditions are adequate to deal with any adverse effects of the structure on the environment, which were not foreseen at the time of granting the consent and which it was not appropriate to deal with at that time.

Signed at Stratford on 19 September 1997

For and on behalf of
TARANAKI REGIONAL COUNCIL



DIRECTOR - RESOURCE MANAGEMENT

Consent 5869-1



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

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

Name of
Consent Holder: New Plymouth District Council
Private Bag 2025
NEW PLYMOUTH



Change To
Conditions Date: 23 October 2001 [Granted: 25 September 2001]

Conditions of Consent

Consent Granted: To discharge clarifier bleed and filter backwash supernatant overflow from the Inglewood water treatment plant into the Ngatoro Stream a tributary of the Manganui River in the Waitara catchment at or about GR: Q19:121-227

Expiry Date: 1 June 2015

Review Date(s): June 2003, June 2009

Site Location: Inglewood water treatment plant, Dudley Road, Inglewood

Legal Description: Lot 1 DP 17502 Blk VIII Egmont SD

Catchment: Waitara

Tributary: Manganui
Ngatoro

Consent 5869-1

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 rate shall not exceed 48 litres per second.
2. The consent holder shall properly and efficiently maintain and operate the settlement facility.
3. After allowing for a mixing zone of 25 metres downstream of the discharge, the discharge shall not give rise to any of the following effects in the Ngatoro stream:
 - 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. The discharge quality shall not exceed the following limits at all times:

| | |
|-------------------------|----------------------|
| suspended solids | 20 gm ⁻³ |
| free available chlorine | 0.1 gm ⁻³ |
| pH | 6.5 - 8.5 |
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 2003 and/or June 2009, for the purpose of ensuring that the conditions adequately deal with the environmental effects arising from the exercise of this 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 23 October 2001

For and on behalf of
Taranaki Regional Council


Chief Executive

Oakura Water Supply



Discharge 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
www.trc.govt.nz

Please quote our file number
on all correspondence

**Name of
Consent Holder:** New Plymouth District Council
Private Bag 2025
NEW PLYMOUTH 4600

**Consent Granted
Date:** 11 December 2006

Conditions of Consent

Consent Granted: To discharge filter backwash from the Oakura Water Treatment Plant onto and into land in the vicinity of the Wairau Stream at or about GR: P19:930-301

Expiry Date: 1 June 2025

Review Date(s): June 2013, June 2019

Site Location: Main South Road, Oakura

Legal Description: Sec 13 Pt Sec 14 30 Oakura Dist Blk II Wairau SD

Catchment: Wairau

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 4477. In the case of any contradiction between the documentation submitted in support of application 4477 and the conditions of this consent, the conditions of this consent shall prevail.
- 3. The discharge quality shall not exceed the following limits at all times:

| Component | Concentration |
|-------------------------|-----------------------|
| Suspended solids | 100 g/m ³ |
| Free available chlorine | 0.2 g/ m ³ |
| pH | 6-9 |

- 4. The discharge shall not give rise to any of the following effects in the Wairau 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.

Consent 1277-3

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 the month of June 2013 and/or June 2019, 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 11 December 2006

For and on behalf of
Taranaki Regional Council



Director Resource Management



Consent 1278-3



Water 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
NEWZEALAND
PHONE 0-6-765 7127
FAX 0-6-765 5097

Name of
Consent Holder: New Plymouth District Council
Private Bag 2025
NEW PLYMOUTH

Consent Granted 13 June 2001
Date:

Conditions of Consent

Consent Granted: To take and use water from the Wairau Stream for Oakura
water supply purposes at or about GR: P19:933-297

Expiry Date: 1 June 2013

Review Date(s): June 2004, June 2007, June 2008, June 2009

Site Location: Upper Wairau Road, Oakura

Legal Description: Pt Subn 2 of Sec 170 Oakura Dist Blk III Cape SD

Catchment: Timaru

Tributary: Wairau

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

Consent 1278-3

General conditions

- [REDACTED]
- 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

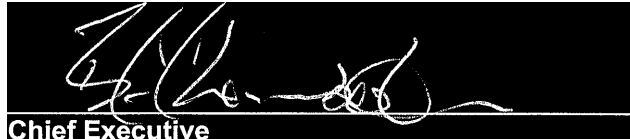
1. The volume of water abstracted shall not exceed 2,300 cubic metres per day and the rate shall not exceed 27 litres/second.
2. The consent holder shall monitor and maintain records of the abstraction including date, rate and volume abstracted, and shall make these records available to the Chief Executive, Taranaki Regional Council, upon request.
3. That by agreement of the consent holder, the consent holder shall mitigate the effects of the abstraction by donating annually to the Taranaki Tree Trust up to \$1,200 [goods and services tax exclusive] for the purpose of providing riparian management in the Wairau Stream catchment below the Egmont National boundary. The amount shall be adjusted annually according to the consumer price index or similar index, to account for the effects of inflation. The total financial contribution under this condition and under consent 5777 condition 4 shall not exceed the aforementioned amount.
4. The abstraction shall be managed to ensure that a residual flow of not less than 9 litres/second is maintained at all times in the Wairau Stream below the abstraction weir licensed by consent 5713.
5. The consent holder may apply to the Taranaki Regional Council for a change or cancellation of the conditions of their consent, in accordance with section 127(l)(a) of the Resource Management Act 1991, to take account of operational requirements or the results of the monitoring.
6. The Taranaki Regional Council may review under section 128 of the Resource Management Act 1991:
 - (a) condition 1 to assess water use requirements in June 2007, June 2008 and/or June 2009; and

Consent 1278-3

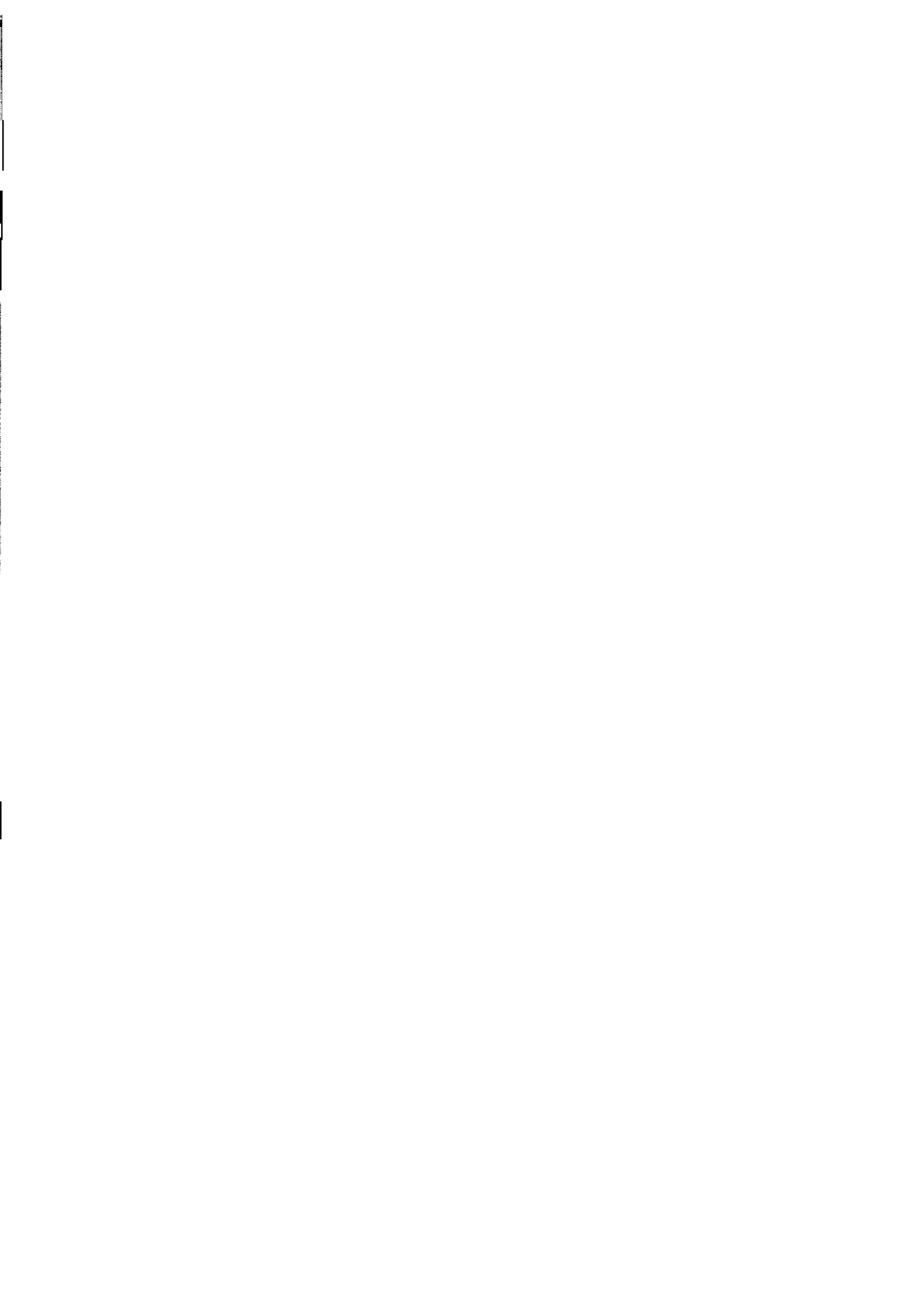
- (b) any or all of the conditions of this consent by giving notice of review during the month of June 2004 and/or June 2007, for the purpose of ensuring that the conditions are adequate to deal with any significant adverse effects on the environment arising from the exercise of this consent, which either 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 13 June 2001

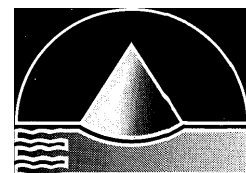
For and on behalf of
Taranaki Regional Council



Chief Executive



Consent 5713-I



**TARANAKI
REGIONAL
COUNCIL**

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

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

Name of
Consent Holder: New Plymouth District Council
Private Bag 2025
NEW PLYMOUTH

Consent Granted
Date: 13 June 2001

Conditions of Consent

Consent Granted: To erect, place and maintain a weir in the Wairau Stream
for Oakura water supply purposes at or about GR:
PI 9:933-297

Expiry Date: 1 June 2013

Review Date(s): June 2004, June 2007, June 2008, June 2009

Site Location: Upper Wairau Road, Oakura

Legal Description: Pt Subn 2 of Sec 170 Oakura Dist Blk III Cape SD

Catchment: Timaru

Tributary: Wairau

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

Consent 5713-I

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 consent holder shall construct the weir, including the fish pass, in general accordance with Plan No W-DFC-1001 submitted with application 1174.
2. The consent holder shall notify the Taranaki Regional Council, at least 48 hours prior to the construction of the fish pass and any maintenance works which would involve disturbance of, or deposition to the streambed or discharges to water.
3. The structure authorised by this consent shall be maintained to ensure the conditions of this consent are met.
4. The consent holder shall ensure that the intake is appropriately screened to avoid the entrapment of native fish.
5. That any works or structures which are the subject of this consent shall not obstruct native fish passage.
6. The consent holder, during fish pass construction and weir maintenance, shall adopt the best practicable option to avoid or minimise the discharge of silt or other contaminants into water or onto the streambed and to avoid or minimise any adverse effects on water quality.
7. The structure authorised by this consent shall be removed and the area reinstated, if and when the structure is no longer required. The consent holder shall notify the Taranaki Regional Council at least 48 hours prior to the removal of the structure and reinstatement of the area.
8. That the fishpass shall be installed only between 1 November and 30 April.

Consent 5713-I

9. The Taranaki Regional Council may review, under section 128 of the Resource Management Act 1991, any or all of the conditions of this consent by giving notice of review during the month of June 2004, June 2007, June 2008 and/or June 2009, 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 13 June 2001

For and on behalf of
Taranaki Regional Council

A black rectangular box containing a white handwritten signature in cursive script.

Chief Executive





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

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

Name of
Consent Holder: New Plymouth District Council
Private Bag 2025
NEW PLYMOUTH

Consent Granted
Date: 19 March 2003

Conditions of Consent

Consent Granted: To take and use groundwater from two bores for Oakura
water supply purposes at or about GR: P19:932-300 and
GR: P19:934-301

Expiry Date: 1 June 2020

Review Date(s): June 2008, June 2014

Site Location: Wairau Road, Oakura

Legal Description: Lot 1 DP 312138 & Lot 1 DP 19978 Blk II Wairau SD

Catchment: Oakura

Tributary: Wakamure

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

www.trc.govt.nz

Consent 6114-1

General conditions

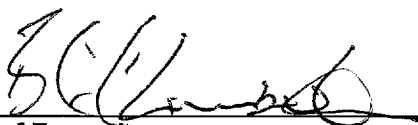
- a) On receipt of a requirement from the Chief Executive, Taranaki Regional Council (hereinafter the Chief Executive), the consent holder shall, within the time specified in the requirement, supply the information required relating to the exercise of this consent.
- b) Unless it is otherwise specified 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 undertaken in general accordance with the information submitted in support of the application and to ensure the conditions of this consent are met at all times.
2. The consent holder shall at all times adopt the best practicable option, as defined by section 2 of the Resource Management Act 1991, to prevent or minimise any actual or likely adverse effect on the environment associated with the abstraction of groundwater, including but not limited to the efficient and conservative use of water.
3. The volume of water abstracted shall not exceed 3715 cubic metres/day at an individual bore rate of 35 litres/second, or a combined rate of 43 litres/second between the two bores.
4. The abstraction shall be managed such that there are no adverse effects on other known groundwater and surface water takes from the exercise of this consent.
5. The consent holder shall operate a measuring device capable of recording daily rates of abstraction from the bore[s] and monitor water levels in nearby observation bores, and shall make these records available to the Chief Executive upon request.
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 2008 and/or June 2014, 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 19 March 2003

For and on behalf of
Taranaki Regional Council



Chief Executive

Okato Water Supply



CHIEF EXECUTIVE
PRIVATE BAG 713
47 CLOTEN ROAD
STRATFORD
NEW ZEALAND
PHONE: 06-765 7127
FAX: 06-765 5097
www.trc.govt.nz

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: New Plymouth District Council
Private Bag 2025
NEW PLYMOUTH 4342



Decision Date
[Change]: 27 September 2011

Commencement
Date [Change]: 27 September 2011 [Granted: 14 June 2007]

Conditions of Consent

Consent Granted: To take water from the Mangatete Stream in the Kaihihi
catchment for public water supply purposes at or about
(NZTM) 1678253E-5658216N

Expiry Date: 1 June 2019

Review Date(s): June 2013

Site Location: Okato Intake, Saunders Road, Okato

Legal Description: Lot 5 DP 431790 [Site of take]

Catchment: Kaihihi

Tributary: Mangatete

*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.

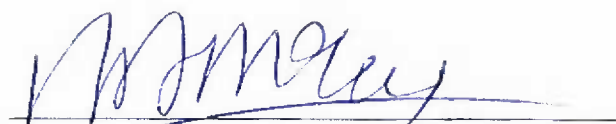
Special conditions

1. The consent holder shall 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 effects on the environment from the exercise of this consent, including, but not limited to, the efficient and conservative use of water.
2. The exercise of this consent shall be undertaken generally in accordance with the documentation submitted in support of applications 4464 and 6829. In the case of any contradiction between the documentation submitted in support of applications 4464 and 6829, and the conditions of this consent, the conditions of this consent shall prevail.
3. The volume of water abstracted shall not exceed 1000 cubic metres/day, at a rate not exceeding 13.8 litres/second, except when a fault or incident occurs at the plant that threatens the security of the water supply for Okato, in this case the water abstracted shall not exceed 1200 cubic metres/day, for the duration of the event.
4. The consent holder is to notify the Chief Executive, Taranaki Regional Council, when a fault or incident occurs, that requires taking more than 1000 m³/day, and of the nature of the fault or incident.
5. A staff gauge shall be installed immediately downstream of the water take and a low flow rating curve established before the exercise of this consent. The staff gauge will be installed by the Taranaki Regional Council and all costs will be recovered through the compliance monitoring programme in place for the activity.
6. When the flow in the Mangatete Stream, measured beneath the Saunders Road bridge, is less than 180 litres/second for a period of seven or more consecutive days, water conservation practices are to be put in place by the consent holder (eg. garden water only to be used every odd day).

7. When the flow in the Mangatete Stream, measured beneath the Saunders Road bridge, is less than 120 litres/second for a period of seven or more consecutive days, the taking of water shall be restricted to the minimum amount necessary to maintain the health of people and animals (i.e. garden water and other non-essential uses are prohibited).
8. The consent holder shall maintain a record of abstraction including date, and daily volume abstracted (to an accuracy of + 5%), and shall make these records available to the Chief Executive, Taranaki Regional Council, upon request.
9. The consent holder shall ensure that the emergency intake structure is appropriately screened to avoid the entrapment of freshwater fish.
10. 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.
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 2013, 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 27 September 2011

For and on behalf of
Taranaki Regional Council



Director-Resource Management

TRK954805

COPY



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 CLOTON ROAD
STRATFORD
NEW ZEALAND
PHONE 0-6-765 7127
FAX 0-6-765 5097

Name of
Consent Holder: NEW PLYMOUTH DISTRICT COUNCIL
PRIVATE BAG 2025 NEW PLYMOUTH 4620

Consent
Granted Date: 20 October 1995

CONDITIONS OF CONSENT

Consent Granted: TO PLACE AND MAINTAIN AN INFILTRATION GALLERY
STRUCTURE IN THE MANGATETE STREAM IN THE KAIHIHI
CATCHMENT FOR WATER SUPPLY PURPOSES AT OR ABOUT
GR: P19:882-200

Expiry Date: 1 June 2013

Review Date[s]: June 2001

Site Location: OKATO INTAKE, MANGATETE STREAM, SAUNDERS ROAD,
OKATO

Legal Description: LOT 1 DP5525 PT SEC 86 BLK VI CAPE SD

Catchment: KAIHIHI 381.000

Tributary: MANGATETE 381.004

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

GENERAL CONDITIONS

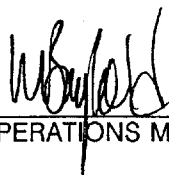
- (a) That on receipt of a requirement from the General Manager, Taranaki Regional Council (hereinafter the General Manager), the consent holder shall, within the time specified in the requirement, supply the information required relating to the exercise of this consent.
- (b) That unless it is otherwise 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;
 - (ii) charges for the carrying out of the Council's functions under section 35 in relation to this consent; and
 - (iii) charges authorised by regulations.

SPECIAL CONDITIONS

- 1) THAT the consent holder shall maintain the structure in accordance with the plans and details provided in support of the application.
- 2) THAT the consent holder must notify the Taranaki Regional Council at least 24 hours prior to the commencement of any major maintenance works.
- 3) THAT during any maintenance works, the consent holder must observe every practicable measure to prevent the discharge or placement of silt and/or organics and/or cement products into the watercourse, to the satisfaction of the General Manager, Taranaki Regional Council.
- 4) THAT the Taranaki Regional Council may review any or all of the conditions of this consent by giving notice of review during June 2001 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.

Signed at Stratford on 20 October 1995

For and on behalf of
TARANAKI REGIONAL COUNCIL



OPERATIONS MANAGER

Waitara Industrial Water Supply



**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
www.trc.govt.nz

Please quote our file number
on all correspondence

Name of
Consent Holder: New Plymouth District Council
Private Bag 2025
NEW PLYMOUTH 4600

Consent Granted
Date: 1 November 2006

Conditions of Consent

Consent Granted: To take water from the Waiongana Stream for Waitara
Industrial water supply purposes at or about
GR: Q19:143-346

Expiry Date: 1 June 2012

Review Date(s): June 2008, June 2010

Site Location: Waiongana Steam, Mountain Road, Lepperton

Legal Description: Pt Sec 188 Blk VII Secs 190 & 191 Blk XI Paritutu SD

Catchment: Waiongana

*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.

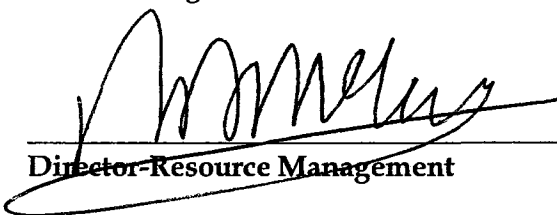
Special conditions

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 associated with the abstraction of water from the Waiongana Stream, including, but not limited to, the efficient and conservative use of water.
2. The volume of water abstracted shall not exceed 6,000 cubic metres/day, at a rate no greater than 69.4 litres/second.
3. The consent holder shall implement water conservation measures to reduce the water demand at times when the Waiongana Stream is less than 471 litres/second as measured at State Highway 3A [Q19:144-339].
4. The abstraction authorised by this consent shall cease when the flow in the Waiongana Stream immediately below the intake weir is less than 402 litres/second.
5. The consent holder shall maintain records of abstraction including date, abstraction rates and volume abstracted, and shall make these records available to the Chief Executive, Taranaki Regional Council, upon request.
6. The Taranaki Regional Council reserves the right to suspend or reduce the abstraction during extreme low flow events, in order to protect the biological communities in the Waiongana Stream, in accordance with section 329 of the Resource Management Act 1991.
7. This consent shall lapse on the expiry of five (5) years after the date of commencement 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.

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 2008 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 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 1 November 2006

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

Name of
Consent Holder: New Plymouth District Council
Private Bag 2025
NEW PLYMOUTH 4342

Decision Date: 21 June 2013

Commencement Date: 21 June 2013

Conditions of Consent

Consent Granted: To take and use water from the Waiongana Stream to
supply water for industry in Waitara

Expiry Date: 1 June 2031

Review Date(s): June 2018, June 2024, June 2030

Site Location: Mountain Road, Lepperton

Legal Description: Adjacent to Pt Sec 190 (Site of take)

Grid Reference (NZTM) 1704217E-5672857N

Catchment: Waiongana

*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 to section 36 of the Resource Management Act 1991.

Special conditions

1. The rate of taking shall not exceed 58 litres per second.
2. The consent holder shall notify the Chief Executive, Taranaki Regional Council of the intention to exercise this consent at least 60 days before the consent is first exercised. Notification shall include the consent number and a brief description of the activity consented and be emailed to worknotification@trc.govt.nz.
3. Before exercising this consent the consent holder shall install, and thereafter maintain a water meter and a datalogger at the site of taking. 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 $\pm 5\%$. 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/ on an annual basis.

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.

Consent 0126-5

6. The water meter and datalogger shall be accessible to Taranaki Regional Council officer's at all reasonable times for inspection and/or data retrieval.
7. The records of water taken shall:
 - (a) be in a format that, in the opinion of the Chief Executive, Taranaki Regional Council, is suitable for auditing; and
 - (b) specifically record the water taken as 'zero' when no water is taken.
8. When the flow in the Waiongana Stream is less than 471 litres per second as measured at State Highway 3A, the taking of water shall be restricted to the minimum amount necessary to maintain the health and welfare of people and animals (i.e. garden water and other non-essential uses are prohibited).
9. The taking of water authorised by this consent shall be managed to ensure that the flow in the Waiongana Stream as measured at State Highway 3A is not less than 402 litres per second. No taking shall occur when the flow is less than 402 litres per second.
10. At all times the consent holder shall adopt the best practicable option to prevent or minimise any actual or likely adverse effect on the environment associated with the abstraction of water from the Waiongana Stream, including, but not limited to, the efficient and conservative use of water.
11. The consent holder shall ensure that the intake is screened to avoid fish (in all stages of their life-cycle) entering the intake or being trapped against the screen.
12. During any 12-month period ending on 30 June in which this consent is exercised, the consent holder shall make a payment of \$2000 (plus GST) to the Taranaki Regional Council as a financial contribution. The financial contribution shall be used to remedy or mitigate adverse environmental effects of the taking in the Waiongana Stream catchment. The financial contribution shall be adjusted in accordance with the Consumer Price Index (or similar) so that the real value of the payment remains the same.
13. The consent holder shall provide reports to the Chief Executive, Taranaki Regional Council to demonstrate that the amount authorised for taking, or some lesser amount, is reasonably needed. These reports shall be provided no later than 30 April 2018, 30 April 2024, and 30 April 2030.
14. This consent shall lapse on in 1 June 2031, 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.

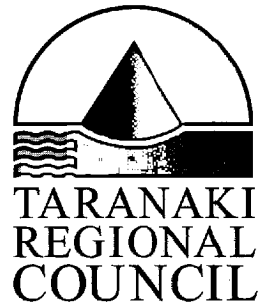
Consent 0126-5

15. 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 2018 and/or June 2024 and/or June 2030, for the purposes of:
- (a) reducing the amount of water authorised to be taken following a review of requirements provided in accordance with condition 13;
 - (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; and/or
 - (c) to require any data collected in accordance with the conditions of this consent to be transmitted directly to the Council's computer system, in a format suitable for providing a 'real time' record over the internet.

Signed at Stratford on 21 June 2013

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
FAX 06-765 5097

Please quote our file number
on all correspondence

Name of
Consent Holder: New Plymouth District Council
Private Bag 2025
NEW PLYMOUTH

Consent Granted
Date: 16 June 2003

Conditions of Consent

Consent Granted: To use and maintain an existing weir, fish pass and associated intake structures on the Waiongana Stream for Waitara Industrial water supply purposes at or about GR: Q19:143-344

Expiry Date: 1 June 2020

Review Date(s): June 2008, June 2014

Site Location: Mountain Road, Lepperton

Legal Description: Pt Secs 190 & 191 Blk XI Paritutu SD

Catchment: Waiongana

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

www.trc.govt.nz

Consent 4816-2

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 consent holder shall notify the Chief Executive, Taranaki Regional Council, at least 48 hours prior to any maintenance works of the structure[s] or fish pass licensed by this consent which would involve disturbance of, or deposition to, the streambed or discharges to water.
2. The consent holder, during any maintenance works, shall adopt the best practicable option to avoid or minimise the discharge of silt or other contaminants into water or onto the streambed and to avoid or minimise the disturbance of the streambed and any adverse effects on water quality.
3. The consent holder, during any maintenance, shall ensure that the area and volume of river bed disturbance shall, so far as practicable, be minimised and any areas which are disturbed shall, so far as practicable, be reinstated.
4. No maintenance work shall be conducted during the period 1 May to 31 October unless waived in writing by the Chief Executive, Taranaki Regional Council
5. The structure[s] authorised by this consent shall be maintained to ensure the conditions of this consent are met.
6. The structure[s] authorised by this consent shall be constructed and maintained so as not to restrict the passage of native fish and trout, to the satisfaction of the Chief Executive, Taranaki Regional Council.
7. The structure[s] authorised by this consent shall be removed and the area reinstated, if and when the structure is no longer required. The consent holder shall notify the Taranaki Regional Council at least 48 hours prior to the removal of the structures and reinstatement of the area.

Consent 4816-2

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 2008 and/or June 2014, 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 16 June 2003

For and on behalf of
Taranaki Regional Council



Chief Executive





Discharge 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: New Plymouth District Council
Private Bag 2025
NEW PLYMOUTH

Consent Granted
Date: 15 July 2003

Conditions of Consent

Consent Granted: To discharge up to 250 litres/second of water and sediment
from intake pipe cleaning and draining of settling ponds
into the Waiongana Stream at or about GR: Q19:142-346

Expiry Date: 1 June 2020

Review Date(s): June 2008, June 2014

Site Location: Mountain Road [State Highway 3A], Lepperton

Legal Description: Pt Secs 190 & 191 Blk XI Paritutu SD

Catchment: Waiongana

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

Consent 4817-2

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 consent holder shall keep a record of all cleaning and draining operations, including date, time, and duration of discharge, with such records to be available to the Chief Executive, Taranaki Regional Council, upon request.
2. The consent holder shall notify the Taranaki Regional Council at least 24 hours prior to discharging water and sediment from intake pipe cleaning and/or draining of settling ponds to the Waiongana Stream where practicable.
3. The consent holder shall discharge water and sediment where possible during high flow events when the flow is greater than 3 times the median flow i.e. more than 4.41 cubic metres per second as measured at the Taranaki Regional Council's hydrological monitoring station at State Highway 3A. Discharges under other flow conditions, other than draining of settling ponds for emergency maintenance work, will only be permitted with the prior written approval of the Chief Executive, Taranaki Regional Council.
4. The discharge shall not give rise, beyond a 25-metre mixing zone, to any or all of the following effects in the Waiongana Stream:
 - a) the production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials;
 - b) any conspicuous change in 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.
5. The discharge shall not give rise, beyond a 25-metre mixing zone, to an increase in turbidity of greater than 25% in terms of NTU [nephelometric turbidity units] in the Waiongana Stream.

Consent 4817-2

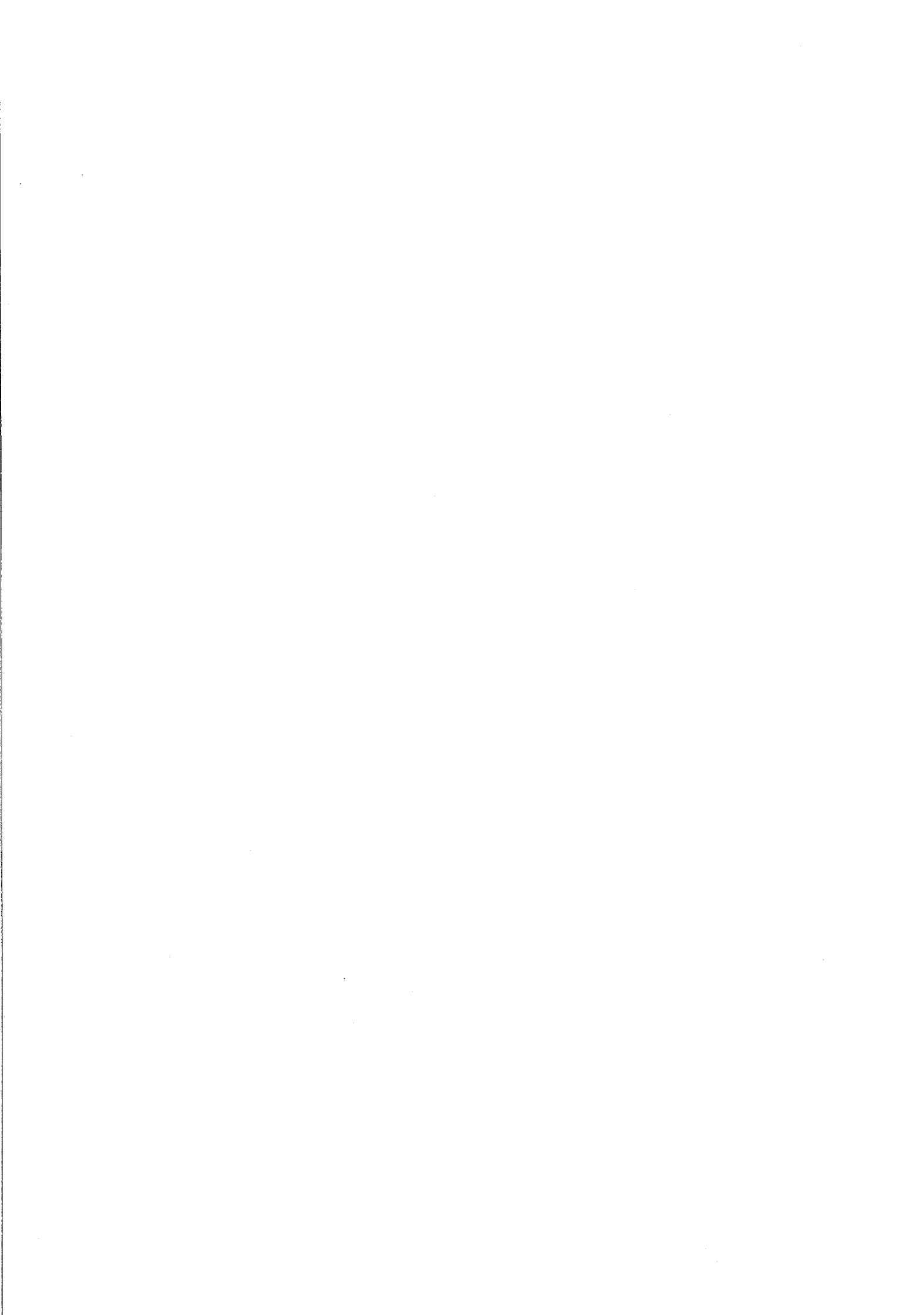
6. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review during the month of June 2008 and/or June 2014, 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 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 15 July 2003

For and on behalf of
Taranaki Regional Council



Director-Resource Management



Urenui dam





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: New Plymouth District Council
Private Bag 2025
NEW PLYMOUTH

Consent Granted
Date: 9 April 2002

Conditions of Consent

Consent Granted: To modify and maintain an existing earth retention
structure (dam) on the Kakapo Stream at or about GR:
Q19:303-429

Expiry Date: 1 June 2021

Review Date(s): June 2009, June 2015

Site Location: Kaipikari Road, Urenui

Legal Description: Lots 1 & 2 DP 12063 Urenui Dist

Catchment: Onaero

Tributary: Kakapo

Consent 5989-1

General conditions

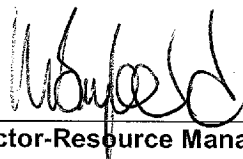
- a) On receipt of a requirement from the Chief Executive, Taranaki Regional Council (hereinafter the Chief Executive), the consent holder shall, within the time specified in the requirement, supply the information required relating to the exercise of this consent.
- b) Unless it is otherwise specified 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 consent holder shall notify the Chief Executive, Taranaki Regional Council, at least 48 hours prior to any maintenance works of the structure[s] or fish pass licensed by this consent which would involve disturbance of, or deposition to, the streambed or discharges to water.
2. Any works or structure[s] which are the subject of this consent shall not obstruct fish passage after 1 December 2003.
3. The consent holder, during fish pass construction and any structure maintenance, shall adopt the best practicable option to avoid or minimise the discharge of silt or other contaminants into water or onto the streambed and to avoid or minimise the disturbance of the streambed and any adverse effects on water quality.
4. The consent holder, during fish pass construction and any structure maintenance shall ensure that the area and volume of river bed disturbance shall, so far as is practicable, be minimised and any areas which are disturbed shall, so far as is practicable, be reinstated.
5. The structure[s] authorised by this consent shall be maintained to ensure the conditions of this consent are met.
6. The structure[s] authorised by this consent shall be removed and the area reinstated, if and when the structure is no longer required. The consent holder shall notify the Taranaki Regional Council at least 48 hours prior to the removal of the structures and reinstatement of the area.
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 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 9 April 2002

For and on behalf of
Taranaki Regional Council



Director-Resource Management

Appendix II

Fish survey reports

Memorandum

To Scott Cowperthwaite, Scientific Officer
From B Jansma, Scientific Officer
Document 1234995
Report No. BJ200
Date 13 August 2013

Fish survey in the Mangatete Stream, undertaken in relation to an NPDC weir, June 2013

New Plymouth District Council (NPDC) hold resource consents in relation to several water supply schemes. The monitoring programmes for these schemes include fish monitoring of a selection of the weirs each year. The programme for the 2012-2013 monitoring period included monitoring of the Mangatete Stream weir.

The weir in the Mangatete Stream was originally installed to supply water to the Okato Dairy Factory (since closed down). This weir is therefore considered an existing structure under the Regional Freshwater Plan for Taranaki. In order to meet the permitted activity rules of this plan, the weir must (amongst other things) not restrict the passage of fish.

A spotlighting survey was undertaken in the Mangatete Stream on 30 June 2013, with one site upstream and one downstream of the weir surveyed. This survey was undertaken to assess the fish population in the downstream vicinity of this weir, and to gain an understanding of which species can successfully negotiate this weir.

Methods

In this survey two sites were sampled, one site upstream of the weir and one site downstream of the weir, using the night spotlighting method. This method involves the use of hand held spotlights powered by 12 amp hour batteries, with observed fish captured using handnets where possible. All fish observed and/or captured were counted and identified where possible. In general a spotlighting survey will survey a larger area of stream than electric fishing. In this case, 96 meters of stream length was surveyed at site 1 (upstream of the weir), and 47 meters of stream length was surveyed at site 2 (downstream of the weir).

Details of the sites surveyed are given in Table 1 and the location of sites surveyed in relation to the weir and fish pass are shown in Figure 1.

A 0.5m high weir is located on private land off Saunders Road, Okato. This weir is associated with the infiltration gallery for the Okato water supply scheme, but originally supplied water to the Okato Dairy Factory. A fish pass has been installed on this weir, and it was to assess the efficacy of this pass that the current survey was undertaken.

The Taranaki Regional Council has previously conducted two fish surveys in the Mangatete Stream, both upstream and downstream of the weir, while the Department of Conservation has undertaken some work in the headwaters. The results from these surveys are available from the New Zealand Freshwater Fish Database, administered by NIWA. The surveys employed one of two methods – night spotting and electric fishing. Both methods have their advantages and disadvantages for determining fish populations. When all results are compiled from both survey methods it can provide comprehensive fish community data.

Table 1 Location of sites surveyed for fish in relation to the NPDC weir on the Mangatete Stream

| Stream | Site No. | Site code | Description | Altitude (m) | Distance Inland from sea (km) | Area Surveyed (m ²) |
|------------------|----------|-----------|-----------------------------------|--------------|-------------------------------|---------------------------------|
| Mangatete Stream | 1 | MTT000170 | Approx. 3km upstream of NPDC weir | 220 | 14.0 | 672 |
| | 2 | MTT000203 | Downstream of NPDC weir | 180 | 10.9 | 423 |

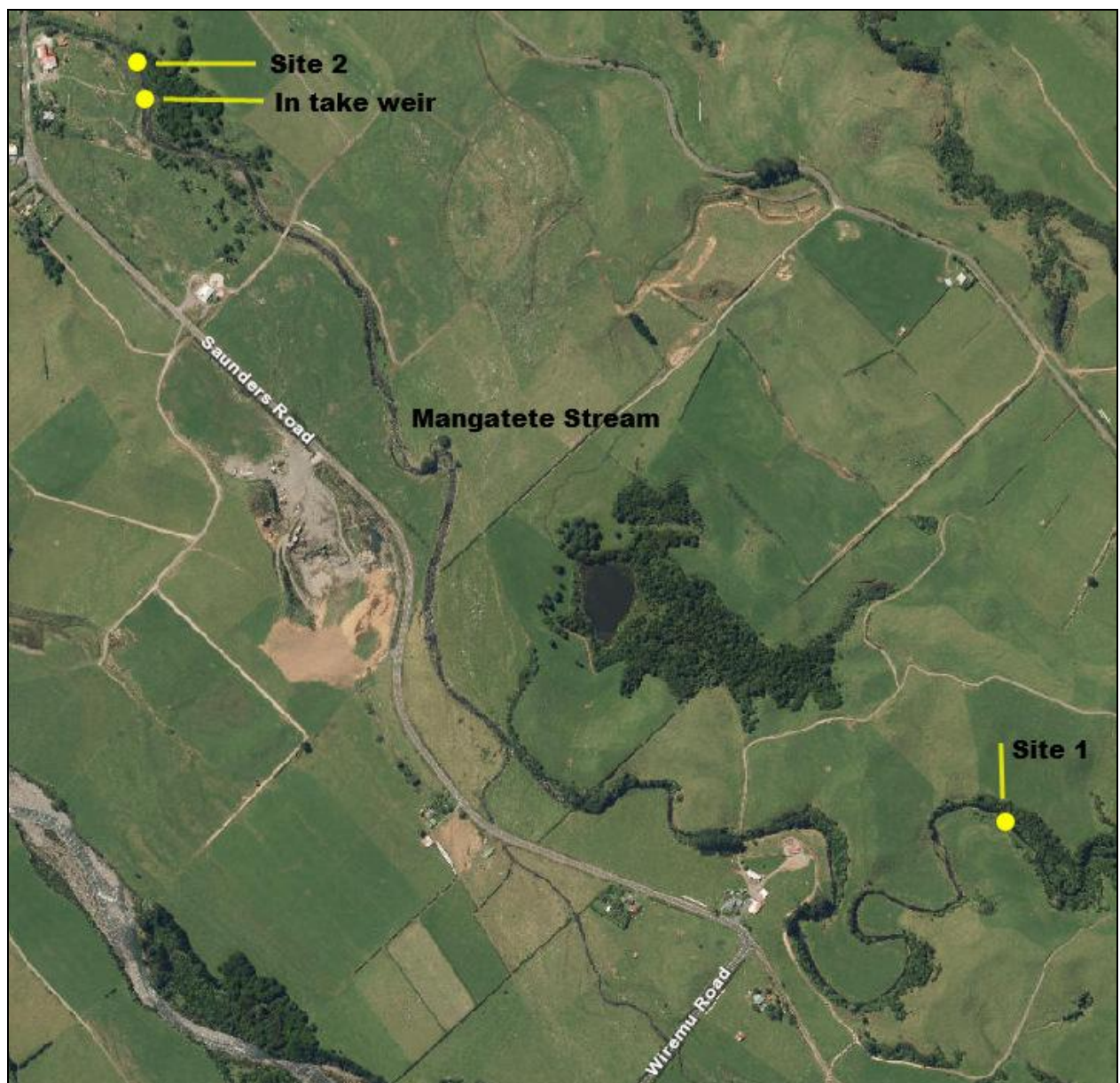


Figure 1 The Mangatete Stream, showing sampling sites.

Results

The environmental conditions noted at the time of the survey included that the stream was in moderate flow, and clear. However, flow conditions at site 2 were very swift, making spotlighting fish very difficult at this site. As a result it is likely that the results of this survey are an underrepresentation of the actual fish community present at site 2. Site 1 on the other hand had better flow conditions, with two large pools and one riffle surveyed. It is likely that the majority of fish present in this reach were observed.

The results of the survey conducted in the Mangatete Stream on 30 June 2013 are presented in Table 2. Data held in the TRC and NIWA databases is included in Table 2 for comparison.

Table 2 Fish species recorded in the Mangatete Stream upstream and downstream of the NPDC Weir

| Species | Downstream of weir | | Upstream of weir | |
|--|--------------------|------------------|------------------|------------------|
| | MTT000203 | Database records | MTT000198 | Database records |
| Longfin eel <i>Anguilla dieffenbachii</i> | 1 | ✓ | 4 | ✓ |
| Shortfin eel <i>Anguilla australis</i> | | ✓ | | ✓ |
| Redfin Bully <i>Gobiomorphus huttoni</i> | | ✓ | 4 | ✓ |
| Brown trout <i>Salmo trutta</i> | | | | ✓ |
| Banded kokopu <i>Galaxias fasciatus</i> | | | | ✓ |
| Shortjaw kokopu <i>Galaxias postvectis</i> | | | | ✓ |
| Giant kokopu <i>Galaxias argenteus</i> | | | 5 | ✓ |
| UID galaxiid | | | 1 | ✓ |
| UID eel | 5 | ✓ | 1 | ✓ |
| No. of species | 1 | 3 | 3 | 6 |

Discussion

A low species richness was recorded during the current survey, with only three species recorded in total. The absence of torrentfish in the Mangatete Stream is unusual, and may indicate the presence of a fish barrier further downstream.

The species richness and abundance observed were both higher upstream than downstream. While this is a direct reflection of the habitat sampled, it is also an indication that the weir is not a barrier to the passage of those species recorded. Those species recorded upstream of the weir in the current survey were longfin eel (*Anguilla dieffenbachii*), redfin bully (*Gobiomorphus huttoni*) and giant kokopu (*Galaxias argenteus*). Work undertaken by the Department of Conservation in the headwaters of the Mangatete Stream also indicates that the weir is not a barrier to the passage of banded and shortjaw kokopu. The presence of a healthy population of giant kokopu as confirmed in the current survey is also significant, and indicates that the headwaters of the Mangatete Stream support a very significant native fish community. Visual observation indicates that the pass is too shallow to provide passage of trout, but it is considered that adult trout will be able to jump over the weir itself, especially in the higher flows that usually initiate trout migration. Therefore, trout do not need to use the pass.

With regard to whether the weir meets the fish passage condition of permitted activity rule 52 of the Regional Freshwater Plan for Taranaki, it appears that there is no restriction of fish passage. Therefore it is considered that the weir meets this condition. However, it may be worthwhile for NPDC to hold consent for this weir, as this will provide a greater degree of flexibility for management e.g. planning maintenance works.

Summary

On 30 June 2013, a spotlighting survey was undertaken at two sites in the in the Mangatete Stream, so as to assess the NPDC weir in terms of fish passage. This weir is not to restrict fish passage, in order to meet the permitted activity rule for existing structures (rule 52 in the Regional Freshwater Plan for Taranaki).

A low species richness was recorded during this survey, with only three species recorded in total. The absence of torrentfish in the Mangatete Stream is unusual, and may indicate the presence of a barrier to fish passage further downstream.

Species richness and abundance was higher upstream than downstream indicating that the weir is not a barrier to these species. Work undertaken by the Department of Conservation in the headwaters of the Mangatete Stream also indicates that the weir is not a barrier to the passage of banded and shortjaw kokopu. The presence of a healthy population of giant kokopu as confirmed in the current survey indicates that the headwaters of the Mangatete Stream support a very significant native fish community. Visual observation indicates that the pass is too shallow to provide passage of trout, but it is considered that adult trout will be able to jump over the weir itself, especially in the higher flows that usually initiate trout migration.

With regard to whether the weir meets the fish passage condition of permitted activity rule 52 of the Regional Freshwater Plan for Taranaki, it appears that there is no restriction of fish passage. Therefore it is considered that the weir meets this condition. However, it may be worthwhile for NPDC to hold consent for this weir, as this will provide a greater degree of flexibility for management e.g. planning maintenance works etc.

References

- Jansma, B., 2010: Fish surveys in the Mangorei and Mangatete Streams, in relation to NPDC weirs, 2008 – 2009. Report Number BJ110.
- McDowall, R.M., 2000: The Reed Field Guide to New Zealand Freshwater Fishes. Reed books, Reed Publishing (New Zealand) Ltd. 224pp.
- Rhys FG, Barrier D.J. and Caskey D., 2002: Survey methodology for Shortjawed Kokopu (*Galaxias postvectis*) – standardised spotlighting techniques. Department of Conservation, Wellington, New Zealand.

Memorandum

To Scott Cowperthwaite, Scientific Officer
From Bart Jansma, Scientific Officer
Document No. 1234409
Report No. BJ197
Date 9 August 2013

Fish survey conducted in the Wairau Stream in relation to the NPDC water supply weirs for the Oakura water supply, June 2013

Introduction

The New Plymouth District Council (NPDC) holds various resource consents in relation to several municipal water supply schemes. The monitoring programme for these schemes include fish monitoring, to assess whether the weirs used by these schemes are providing fish passage to the upper reaches of their respective catchments, as required by their resource consent(s). As a part of the 2012-13 monitoring programme, the Wairau Stream was monitored. NPDC do not actively abstract water from the Wairau stream but it is retained as a contingency, to supply the Oakura township when necessary. The consent relating to the weir is as follows:

5713 To erect, place and maintain a weir in the Wairau Stream for Oakura water supply purposes at or about GR: P19:933-297

The Wairau Stream is the shortest corridor in Taranaki for the migration of native freshwater fish between the sea and Egmont National Park. The stream supports an important community of native freshwater fish, including a significant population of shortjaw kokopu, which is an important conservation species. Most of the fish species recorded previously in this stream are migratory and therefore must be allowed free access upstream and downstream of the weir. Consequently, special condition 5 of resource consent 5713 requires "that any works or structures which are the subject of this consent shall not obstruct native fish passage". This report discusses the results of an electric fishing survey conducted on 7 June 2013, to assess compliance with this consent condition.

Wairau Stream Weir

The NPDC weir in the Wairau Stream is located at an altitude of approximately 120 m above sea level and is two metres high. It is a stepped weir, and some native fish were able to negotiate it prior to a fish pass being in place. A fish pass was installed at the weir in June 2001 (Figure 1). It is constructed of rocks cemented in place, to form a rock ramp. This ramp provides a flow of water that is spread over a less steep gradient, which should be sufficient to provide passage to all species that are present at this altitude in the catchment.

Previous studies have been undertaken to assess the effect of this weir, both prior to and post installation of the fish pass. A summary of the results from these studies are presented in previous annual reports, and summarised in table 1.



Figure 1 Wairau Stream weir and fish pass

Methods

Two sites were sampled in this survey conducted on 7 June 2013, one site upstream of the weir, and one site downstream of the weir. The sites were surveyed by means of the electric fishing method, using a Kainga EFM300 backpack machine. At least 30 metres of stream was surveyed, with this reach divided into numerous subreaches. Starting at the bottom of the survey reach, each subreach was fished in a downstream direction, with the stunned fish either collected by the fisher, or collected in a pole net set at the lower end of the sub reach. On this occasion numerous runs were undertaken side by side in some subreaches, to ensure the stream width was surveyed. In most cases only a single pass was undertaken of each area. Once a subreach was fished, the fishing team moved upstream to the next subreach. Those fish captured were identified and counted, where possible. Inevitably some fish eluded capture, although some were identified before reaching cover. Once fish had been identified, they were released.

An additional site was surveyed on this day, to establish what species were present immediately downstream of State Highway 45. This was to assess any impacts the SH45 culvert had on fish passage, as there was a significant waterfall at the outlet of this culvert.

Results

The results of this survey are presented in Table 1. Fish species recorded in previous surveys at these sites are also included in Table 1, for comparison.

Table 1 Fish species recorded in the Wairau Stream upstream and downstream of the water supply weir together with results of past surveys; UID = unidentified

| Survey date | Site | Area fished (m ²) | Banded kokopu | Longfin eel | UID eel | Koaro | Shortjaw kokopu | UID galaxiid | Redfin bully |
|------------------|-------------|-------------------------------|---------------|-------------|---------|-------|-----------------|--------------|--------------|
| Previous Surveys | | | | | | | | | |
| 28-Apr-99 | D/s of weir | 300 | 4 | - | 7 | 2 | 5 | - | |
| 28-Apr-99 | U/s of weir | 200 | 1 | 2 | - | 2 | - | 5 | |
| 02-Feb-00 | D/s of weir | 300 | - | 10 | - | 2 | 11 | 3 | |
| 02-Feb-00 | U/s of weir | 300 | - | 8 | - | 1 | 11 | 2 | |
| 27-Mar-02 | D/s of weir | 200 | 5 | - | 4 | 2 | 3 | - | |
| 27-Mar-02 | U/s of weir | 200 | 2 | - | 2 | 3 | - | 5 | |
| 12-Mar-03 | D/s of weir | 200 | 5 | 1 | 7 | - | 5 | 2 | |
| 12-Mar-03 | U/s of weir | 200 | 3 | - | 5 | - | - | 9 | |
| 7-Jun-06 | D/s of weir | 150 | 2 | - | - | - | - | 2 | |
| 7-Jun-06 | U/s of weir | 300 | 3 | 1 | 7 | 1 | - | 3 | |
| 4-Mar-10 | D/s of weir | 150 | 2 | - | 10 | - | 6 | 5 | |
| 4-Mar-10 | U/s of weir | 300 | 2 | - | 2 | - | - | 3 | |
| Current Survey | | | | | | | | | |
| 7-Jun-2013 | D/s of SH45 | 70 | | 2 | | 2 | | | 3 |
| 7-Jun-2013 | D/s of weir | 100 | | 1 | 2 | 1 | | 1 | |
| 7-Jun-2013 | U/s of weir | 156 | 2 | 1 | | 2 | | | |

The diversity of fish (number of fish species) at the downstream site was slightly less than recorded in most previous surveys, with two species (koaro (*Galaxias brevipinnis*), and longfin eel (*Anguilla dieffenbachii*)) being confirmed as present (Figure 2). Two unidentified eels and one unidentified galaxiid were also observed, but not collected. In comparison, the upstream site had an improved diversity, with three species being confirmed as present (banded kokopu (*Galaxias fasciatus*), koaro (*Galaxias brevipinnis*), and longfin eel (*Anguilla dieffenbachii*)). This is similar to that recorded in the 2006.

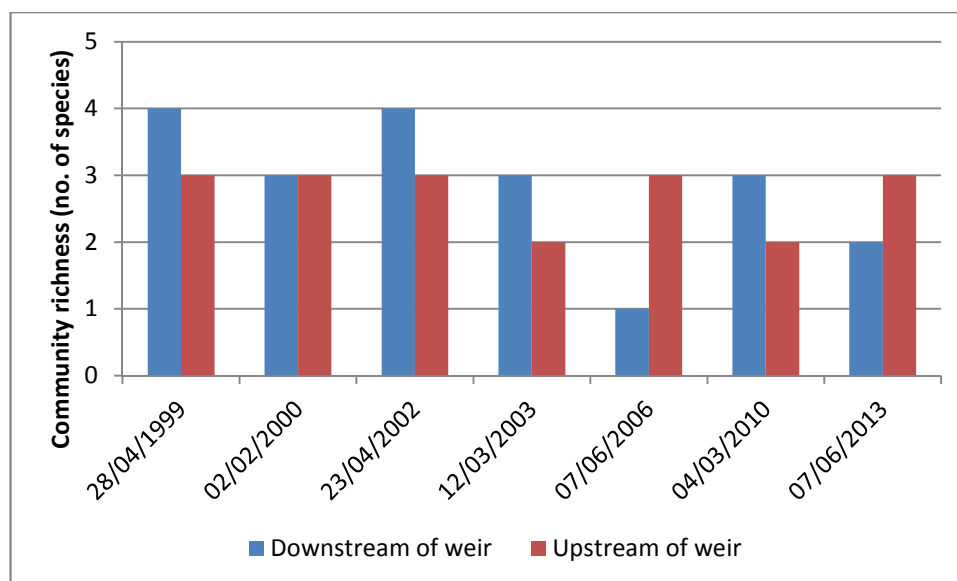


Figure 2 Community richness (number of fish species) recorded in surveys conducted in the Wairau Stream since 1999 (only includes UID eels or UID galaxiids when no eels or galaxiids were not identified to species).

The presence of koaro at both sites is encouraging, as a total of just one koaro had been recorded in the previous three surveys at these sites. However, this is tempered somewhat by the absence of shortjaw kokopu during the current survey. This species was recorded as relatively abundant at the downstream site during the previous survey. Both of these results are most likely related to the change in sampling technique, as koaro are most often recorded using the electric fishing technique, while shortjaw kokopu are rarely recorded using this technique due to their nocturnal nature, taking cover deep in undercut banks during the day.

It is important to note that there were some significant differences in habitat between the upstream and downstream sites. Downstream, the Wairau flowed through pasture, with little to no riparian shading. The weir is located just inside the bush line, and consequently the upstream site was completely shaded by riparian vegetation. There was still some undercut bank, but there was an increase in the incidence of boulders.

The survey undertaken below State Highway 45 recorded two of the three species recorded upstream (koaro and longfin eel) with redfin bully (*Gobiomorphus huttoni*) also being recorded. It is apparent that redfin bully are unable to negotiate the SH45 culvert, and this suggests that the abundances of other species upstream of this culvert may also be reduced. Remediation of this barrier will be pursued with the relevant authority.

Conclusions

A fish survey was conducted on 7 June 2013 upstream and downstream of the Wairau Stream weir. Fish diversity was lower downstream of the weir, compared with that recorded upstream of the weir, although by only one species. This is a similar result to that recorded in the 2006 survey. The greater amount of undercut bank in the reach downstream of the weir provided good cover, and as such nocturnal species may be under represented in the results. This is the likely explanation for the absence of shortjaw kokopu, which were relatively abundant at this site in the last survey, which used the spotlighting method.

Upstream of the weir three species were confirmed as present. There were no new species recorded above the weir, and although no shortjaw kokopu were recorded, they may have been present, but did not come out from cover. The presence of banded kokopu and koaro above the weir is an indication that the weir is operating in compliance with special condition 5 of resource consent 5713.

While there were some differences between the fish populations upstream of the weir with those downstream of the weir, these differences are more likely to have been influenced by the habitat available to the fish. It is not thought to be related to the presence of the weir. On this day an additional survey was undertaken downstream of State Highway 45, and this indicated that the SH45 road culvert is a barrier to the passage of at least one species, and may also be a partial barrier to those species recorded upstream. Once this is resolved, it is likely that species richness and potentially abundance will increase upstream.

Summary and Recommendations

The monitoring of the Wairau Stream indicates that fish passage on the NPDC weir is likely to provide fish passage for all fish present in the monitored reach. Provided that regular inspections of the fish pass confirms that it is operating as required and being maintained, it is recommended that the fish monitoring be conducted once every three years as per the scheduled monitoring programme currently implemented.

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