

# Rotorua Te Arawa Lakes Strategy Group

## **NOTICE IS GIVEN**

that the next meeting of the **Rotorua Te Arawa Lakes Strategy Group** will be held in **The Council Chamber, Rotorua Lakes Council, Civic Administration Building, 1061 Haupapa Street, Rotorua** on:

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**Friday, 27 September 2019 commencing at 9.30 am.**

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Fiona McTavish  
**Chief Executive**  
Bay of Plenty Regional Council Toi Moana

Bay of Plenty Regional Council,  
Rotorua Lakes Council and  
Te Arawa Lakes Trust.

*Working as one to protect our lakes with funding  
assistance from the Ministry for the Environment.*



**ROTORUA  
TE ARAWA  
LAKES  
PROGRAMME**



# Rotorua Te Arawa Lakes Strategy Group Terms of Reference<sup>1</sup>

## Interpretation

In these Terms of Reference:

“Organisations” means the Te Arawa Lakes Trust, the Rotorua Lakes Council, and the Bay of Plenty Regional Council; sometimes referred to as “Partner Organisations”.

“Rotorua /Te Arawa Lakes” means Lakes Rotorua, Rotoiti, Rotoehu, Rotomā, Ōkataina, Tikitapu, Ōkāreka, Tarawera, Rotomahana, Rerewhakaaitu, Ōkaro.

“Group” means the Rotorua Te Arawa Lakes Strategy Group, formed as a Joint Committee under Clause 30 of Schedule 7 of the Local Government Act 2002; sometimes referred to as the “Strategy Group”.

## Purpose

The purpose of the Group is to contribute to the promotion of the sustainable management of the Rotorua Te Arawa Lakes and their catchments, for the use and enjoyment of present and future generations, while recognising and providing for the traditional relationship of Te Arawa with their ancestral lakes.

## Membership

The membership of the Group comprises of six members:

- Two members of the Te Arawa Lakes Trust Entity appointed by that entity - who are governance members; and
- Two members of the Bay of Plenty Regional Council appointed by that Council - one of whom is the Chairperson of that Council; and
- Two members of the Rotorua Lakes Council appointed by that Council - one of whom is the Mayor of that Council.

Plus one non-voting Poū Tākiwaiora (Independent Chairperson) appointed by the members for a three year term in alignment with the Local Government triennium and is to be reviewed and confirmed at the first meeting of the Group following the local government elections.

The Poū Tākiwaiora is not deemed to be a member of the Rotorua Te Arawa Lakes Strategy Group for the purposes of a quorum.

The Poū Tākiwaiora shall assume the role and responsibilities as defined in the Rotorua Te Arawa Lakes Strategy Group Poū Tākiwaiora Guidelines.

The Deputy Chairperson shall be appointed from the membership at the first meeting of the Group following the local government elections.

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<sup>1</sup> Amended Terms of Reference adopted by Rotorua Te Arawa Lakes Strategy Group Meeting 5 April 2019

## Quorum

The quorum for a meeting of the Group will be one appointed member from each of the partner organisations

The special quorum for a meeting of the Group will be four members of the Group.

In the event that the ordinary quorum is not satisfied at three consecutive meetings of the Group in circumstances, where in the case of each such meeting:

- It was notified in accordance with the Standing Orders;
- Order papers were sent to each member of the Group in accordance with the Standing Orders; and
- The meeting had not been cancelled for any reason, then the members in attendance may declare the third meeting inquorate according to the Standing Orders and the special quorum will then be substituted.

At any subsequent meeting, the ordinary quorum will be restored

No matters that were not on the order paper for the meeting at which the special quorum was established can be considered by a special quorum meeting.

## Term of the Committee

The Rotorua Te Arawa Lakes Strategy Group is a permanent joint committee established under the Te Arawa Lakes Settlement Act 2006 (Te Arawa Lakes Deed of Settlement - Cultural Redress: Lakes Management and Relationships, clauses 9.1 to 9.3 -December 2004) and is not disestablished as a consequence of a local government election.

The Group's Terms of Reference are derived from the Rotorua Lakes Strategy Agreement included in Part 1 of the Relationship Schedule to the Deed of Settlement, December 2004.

## Specific Responsibilities and Delegated Functions

The Group has the following functions:

- Provide leadership to the Organisations and the community in relation to implementation of the Vision and Strategy for the Lakes of the Rotorua District originally adopted in 2000 and refreshed version adopted by the Strategy Group in 2013.
- Identify significant existing and emerging issues affecting the Rotorua Te Arawa Lakes and respond appropriately.
- Approve, monitor, evaluate, and review agreements, policies and strategies and all other proposals to achieve integrated outcomes for the Rotorua Te Arawa Lakes.
- Identify, monitor, and evaluate necessary actions by the partner organisations and other relevant organisations.
- Receive reports on activities being undertaken by the partner organisations and other relevant organisations.
- Participate in the preparation of statutory plans in relation to significant issues. Such plans include but are not limited to lwi and hapū management plans, district and regional plans, reserve management plans and annual plans.
- Participate in applications for activities in relation to significant issues not addressed by existing policies of the partner organisations. Such activities include but are not limited to resource consents, designations, heritage orders, water conservation orders, restricting access to the lakes (during special events or in particular circumstances), and transferring and/or delegating of statutory authority.

## **Power to Recommend**

To the partner organisations on any matters within the Strategy Group's delegated functions as it deems appropriate.

The Rotorua Te Arawa Lakes Strategy Group report directly to their own Organisations.



## Public Forum

1. A period of up to 15 minutes may be set aside near the beginning of the meeting to enable members of the public to make statements about any matter on the agenda of that meeting which is open to the public, but excluding any matter on which comment could prejudice any specified statutory process the council is required to follow.
2. The time allowed for each speaker will normally be up to 5 minutes but will be up to the discretion of the chair. A maximum of 3 public participants will be allowed per meeting.
3. No statements by public participants to the Council shall be allowed unless a written, electronic or oral application has been received by the Chief Executive (Governance Team) by 12.00 noon of the working day prior to the meeting and the Chair's approval has subsequently been obtained. The application shall include the following:
  - name of participant;
  - organisation represented (if any);
  - meeting at which they wish to participate; and matter on the agenda to be addressed.
4. Members of the meeting may put questions to any public participants, relevant to the matter being raised through the chair. Any questions must be asked and answered within the time period given to a public participant. The chair shall determine the number of questions.





# Membership

<b>Chairperson:</b>	Sir T Curtis (Chairman, Te Arawa Lakes Trust)
<b>Deputy Chairperson:</b>	Mayor S Chadwick (Rotorua Lakes Council)
<b>Appointees:</b>	<b><u>Rotorua Lakes Council:</u></b> Councillor K Hunt, Deputy Mayor D Donaldson (Alternate) <b><u>Te Arawa Lakes Trust</u></b> R Meha, R Bennett, N Nicholson (Alternate) <b><u>Bay of Plenty Regional Council</u></b> Chairman D Leeder, Councillor K Winters, Councillor T Marr (Alternate)
<b>Attendees:</b>	M Workman (Director of Water, Ministry for the Environment )
<b>Committee Advisor:</b>	M Pansegrouw

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Recommendations in reports are not to be construed as policy until adopted.

## Agenda

- 1 Opening Karakia
- 2 Apologies
- 3 Public Forum
- 4 Acceptance of Late Items
- 5 General Business
- 6 Confidential Business to be Transferred into the Open
- 7 Declarations of Conflicts of Interests
- 8 Previous Minutes
- 8.1 Rotorua Te Arawa Lakes Strategy Group Minutes - 14 June 2019

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## 9 Presentations

### 9.1 Essential Freshwater Reform Proposals

Presenter: James Low - Bay of Plenty Regional Council Team Leader Policy (Freshwater)

### 9.2 Trophic Level Index (TLI) Status of the Lakes

Presenter: Andy Bruere - Bay of Plenty Regional Council Lakes Operations Manager

## 10 Reports

### 10.1 Rotorua Te Arawa Lakes Programme Status Report update and 2018/19 Annual Report 27

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### 10.2 Rotorua Lakes Council - Update to Rotorua Te Arawa Lakes Strategy Group 85

### 10.3 Te Arawa Lakes Trust - Update to Rotorua Te Arawa Lakes Strategy Group 87

### 10.4 Ministry for the Environment Update

Representative to provide update at the meeting

### 10.5 2019 Local Government Elections Update 91

## 11 Public Excluded Section 93

### Resolution to exclude the public

THAT the public be excluded from the following parts of the proceedings of this meeting.

The general subject of each matter to be considered while the public is excluded, the reason for passing this resolution in relation to each matter, and the specific grounds under section 48(1) of the Local Government Official Information and Meetings Act 1987 for the passing of this resolution are as follows:

General Subject of Matter to be Considered	Reason for passing this resolution in relation to this matter	Grounds under Section 48(1) LGOIMA 1987 for passing this resolution
11.1 Public Excluded Rotorua Te Arawa Lakes Strategy Group Minutes - 14 June 2019	Please refer to the relevant clause in the meeting minutes	Not Applicable (refer Item 12 below)

### 11.1 Public Excluded Rotorua Te Arawa Lakes Strategy Group Minutes - 14 June 2019 95

## 12 Confidential Business to be Transferred into the Open

**Public Excluded Rotorua Te Arawa Lakes Strategy Group Minutes - 14 June 2019**

**Resolution to transfer the minutes into the open**

**That the Rotorua Te Arawa Lakes Strategy Group**

**Notes the only business transacted in public excluded was to confirm the minutes. In accordance with the Local Government Official Information and Meetings Act 1987, no reason for withholding this information from the public exists.**

**13 Readmit the Public**

**14 Consideration of General Business**

**15 Closing Karakia**



# Previous Minutes



# Minutes of the Rotorua Te Arawa Lakes Strategy Group Meeting held in The Council Chamber, Rotorua Lakes Council, Civic Administration Building, 1061 Haupapa Street, Rotorua on Friday, 14 June 2019 commencing at 9.30 a.m.

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**Present:**

## **Independent**

**Chairman:** Sir T Curtis

**Deputy Chairman:** Mayor S Chadwick (Rotorua Lakes Council)

## **Appointees:**

Rotorua Lakes Council

Councillor K Hunt

Bay of Plenty Regional Council

Chairman D Leeder, Councillor K Winters

Te Arawa Lakes Trust

R Bennett

## **In Attendance:**

Rotorua Lakes Council: Geoff Williams - Chief Executive

Bay of Plenty Regional Council - Toi Moana: Fiona McTavish - Chief Executive; Chris Ingle - General Manager, Integrated Catchments; Anna Grayling - Principal Advisor Rotorua Catchments; Nassah Steed - Team Leader Policy (Environmental); Jill Owen - Planner; Andy Bruere - Lakes Operations Manager; Ruth Keber - Marketing and Communications Advisor; Arash Alaeinia - Rotorua Catchments Advisor (Landowners); Merinda Pansegrouw - Committee Advisor

Te Arawa Lakes Trust: Nicki Douglas - Manager Environment

## **Apologies:**

M Workman (Director of Water, Ministry for the Environment)

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## 1 **Karakia**

Provided by Sir Toby Curtis.

## 2 **Apologies**

### **Resolved**

**That the Rotorua Te Arawa Lakes Strategy Group:**

- 1 **Accepts the apology from Martin Workman tendered at the meeting.**

**Chadwick/Hunt  
CARRIED**

### 3 **Public Forum**

Nil

### 4 **Acceptance of Late Items**

Nil

### 5 **General Business**

With the agreement of members, the following item was added for consideration under general business:

- Update – Rotorua Lakes Incentive Scheme.

### 6 **Confidential Business to be transferred into the Open**

Nil

### 7 **Declaration of Conflicts of Interest**

Nil

### 8 **Previous Minutes**

#### 8.1 **Rotorua Te Arawa Lakes Strategy Group Minutes - 05 April 2019**

##### **Resolved**

That the Rotorua Te Arawa Lakes Strategy Group:

- 1 **Confirms the Rotorua Te Arawa Lakes Strategy Group Minutes - 05 April 2019 as a true and correct record of the proceedings.**

**Chadwick/Winters  
CARRIED**

### 9 **Presentations**

#### 9.1 **Lake Tarawera Update/Water Management Area – Planned Plan Change 15 Update**

Members noted that the Government was expected to release the *Essential Freshwater* proposed policy changes package for public feedback in late July/August 2019. Since this would impact on proposed Plan Change 15, members agreed that the item be deferred to the next meeting of Te Arawa Lakes Strategy Group scheduled for 27 September 2019.



## 10 Reports

### 10.1 Changing On-site Effluent Treatment Rules for Rotorua Te Arawa Lakes

*Refer PowerPoint Presentations (Objective ID A3245867)*

Bay of Plenty Regional Council Team Leader Policy (Environmental) Nassah Steed and Planner Jill Owen provided an overview of Draft Plan Change 14 (On-site Effluent Treatment - OSET) including implications for the catchments of the Rotorua Te Arawa Lakes:

#### Key Points

- Background/overview of Plan Change 14 and the process to date
- Key principles
  - To protect lake water quality
  - To address public health risks
  - To consider individual lake characteristics
  - To follow a practical and pragmatic approach
- Key changes in Draft PC14
  - The requirement to upgrade an existing system to an AWTS+NR within 200 metres of a lake shore has been removed
  - Existing soak holes were to be prohibited and must be replaced with an appropriate land application system
  - Rules for communities where reticulation was planned, have been written as 'holding patterns' prior to reticulation
  - New rules for un-reticulated papakāinga developments, composting toilets and greywater discharges have been included
- Next steps
  - Continue considering comments received on Draft Plan Change 14
  - Further consultation with key stakeholders and affected communities to resolve issues, or provide an update of changes to be made to the OSET requirements
  - Working with the district and city councils to ensure the policies and rules were clear and appropriate. BOPRC would also work closely with Rotorua Lakes Council staff on a work programme for the affected communities
- PC 14 (OSET) and its Section 32 evaluation report would likely be publicly notified in late-2019.

#### Members' Comments

- Suggested that after conclusion of the Local Government Elections in October 2019, at the first meeting of the new triennium, for the benefit of new members joining the Rotorua Te Arawa Lakes Strategy Group, an overview of all plan changes be provided.

## Resolved

**That the Rotorua Te Arawa Lakes Strategy Group:**

- 1 Receives the report, Changing On-site Effluent Treatment Rules for Rotorua Te Arawa Lakes.**

**Hunt/Winters  
CARRIED**

## 10.2 Rotorua Te Arawa Lakes Programme Status Report Update and 2019/2020 Annual Work Plan

Bay of Plenty Regional Council Lakes Operations Manager Andy Bruere presented the report updating the Committee on progress made with the Rotorua Te Arawa Lakes Programme.

### Members' Comments:

- Noted that the next annual Target Trophic Level Index (TLI) results review report would be available by end of June 2019.

### Item for TALT Follow-up:

- To facilitate further discussion on the impact of carbon farming and to provide a better understanding of the incentives on both a micro and macro level, a presentation by an expert in the field to be convened for the benefit of members as well as the wider community.

### Item for Staff Follow-up

- To provide members with more information on the planned Science Evening with NIWA tentatively scheduled at the Rotorua Holiday Inn on Wednesday, 14 August 2019.

### Minute Note

At the request of members, included herewith a link to satellite images providing live environmental data as obtained from monitoring buoys in the Rotorua Te Arawa Lakes:

<http://monitoring.boprc.govt.nz/MonitoredSites/cgi-bin/hydwebserver.cgi/catchments/details?catchment=26>

## Resolved

That the Rotorua Te Arawa Lakes Strategy Group:

- 1 Receives the report, Rotorua Te Arawa Lakes Programme Status Report Update and 2019/2020 Annual Work Plan;
- 2 Approves the 2019/2020 Annual Work Plan for the Programme, for submission to the Minister for the Environment.

Hunt/Chadwick  
CARRIED

## 10.3 Rotorua Lakes Council Update Report to Rotorua Te Arawa Lakes Strategy Group - 14 June 2019

Rotorua Lakes Council Chief Executive Geoff Williams presented the report which provided an update on Rotorua Lakes Council (RLC) activities that related to lake water quality.

### Key Points

- Rotomā/Rotoiti Sewerage Scheme
  - Construction of the wastewater treatment plant was nearing completion and commissioning was expected to start in June 2019

- Pipeline from Rotomā to the treatment plant had been completed. Installation of individual onsite installation would continue and it was expected that about 80% of properties would be connected at the start of plant commissioning
- Construction of the Rotoiti reticulation was ahead of the original schedule
- Rotorua Wastewater Treatment Plant
  - Further consultation with significant objectors continued
  - The Officers' Report and recommendations from both consenting authorities, BOPRC and RLC, was expected in mid-June 2019
- Tarawera Sewerage Scheme
  - The development of the Cultural Impact Assessment of all proposed sewerage servicing options continued
  - The Cultural Impact Assessment development was facilitated by the Te Arawa Lakes Trust with significant input from the relevant Iwi and Mana Whenua
- Rotorua Urban Area Comprehensive Stormwater Resource Consent: Resource Consent application had been put on hold by BOPRC.

Members' Comments:

- Noted that a report on Lake Rotoma/Rotoiti Wastewater Reticulation would be considered by the BOPRC at the Council meeting scheduled for 27 June 2019.

## Resolved

**That the Rotorua Te Arawa Lakes Strategy Group:**

- 1 Receives the report, Rotorua Lakes Council Update Report to Rotorua Te Arawa Lakes Strategy Group - 14 June 2019**

**Bennett/Chadwick  
CARRIED**

## 10.4 Te Arawa Lakes Trust – Verbal Update

Te Arawa Lakes Trust (TALT) Environment Manager Nicki Douglas provided a verbal update and responded to questions.

Key Points

- Key focus of the final quarter for 2018/19 year had been to continue adding value to Te Arawa Lakes Programme on behalf of Te Arawa beneficiaries: This involved activity on Embedding Te Tūāpapa across the Programme, completing the Cultural Health Index project and seeking funding for ongoing project delivery across the Lakes, outside the existing Deed
- Funding
  - Letter had been sent to Minister Parker confirming that there was agreement in principle from the Rotorua Te Arawa Lakes Strategy Group (RTALSG) for an allocation of funding to the Te Arawa Lakes Trust (TALT)
  - BOPRC and RLC have also written to Minister Parker in support for \$350,000 per annum of the existing Deed Fund to be allocated to TALT over the next 3 year period
  - A further letter had been sent from the Programme Partners to Minister Little (Minister for Treaty Negotiations) seeking a commitment to meet with the Partners to progress discussions that could lead to ensuring the durability of the Te Arawa Settlement Act beyond this three year funding commitment
  - The Ministry for the Environment was now working with the TALT to finalise a separate Deed that would support the ongoing contribution of Te Arawa to the

- Programme and to enable the Trust to fulfil its particular role to restore the mauri of the Lakes
- It was considered by TALT that this commitment by all parties reflected the genuine partnership that was envisaged at the enactment of the Te Arawa Lakes Settlement Act 2006
  - Embedding Te Tūāpapa into the Lakes Strategy programme to be achieved by delivering a series of wānanga with Regional Council staff on Te Tūāpapa to ensure that there was an understanding with the partner organisations on how to apply Te Tūāpapa within the programme and work across the Lakes
  - Sewerage and reticulation: TALT had undertaken the second phase of the Cultural Impact Assessment (CIA) for the Tarawera Sewerage Scheme. The draft CIA would be completed by June
  - Lakes structures and consents: TALT had completed three Cultural Mapping reports for the existing Lakes Structures. Currently undertaking Cultural Mapping for Lakes Tarawera, Okareka, Rerewhakaitu and Rotoiti
  - Okataina baseline survey – Taonga species: TALT and Ngati Tarawhai had been undertaking a research and monitoring project on taonga species in Lake Okataina. This was funded by Wai Ora. The project had had its final series of wānanga and monitoring and the final report had been submitted to Wai Ora
  - Catfish Volunteer Programme
    - Since the volunteer program was officially launched on 1 October 2018, volunteer numbers have grown steadily and now had over 300 volunteers comprised of lake side residents, Iwi, other community groups and students from 15 schools around Rotorua
    - The volunteer effort was making a significant contribution to the total catfish removed from the lakes with 4,500 catfish caught since trapping began in November 2018.

## Resolved

**That the Rotorua Te Arawa Lakes Strategy Group:**

- 1 Receives the verbal report from Te Arawa Lakes Trust.**

**Hunt/Winters  
CARRIED**

## 10.5 Ministry for the Environment - Update Report

Item deferred to the next meeting scheduled for 27 September 2019.

## 10.6 Public Excluded Section

### Resolved

#### Resolution to exclude the public

**THAT the public be excluded from the following parts of the proceedings of this meeting.**

**The general subject of each matter to be considered while the public is excluded, the reason for passing this resolution in relation to each matter, and the specific**

grounds under section 48(1) of the Local Government Official Information and Meetings Act 1987 for the passing of this resolution are as follows:

General Subject of Matter to be Considered	Reason for passing this resolution in relation to this matter	Grounds under Section 48(1) LGOIMA 1987 for passing this resolution
Public Excluded Rotorua Te Arawa Lakes Strategy Group Minutes – 5 April 2019	Please refer to the relevant clause in the meeting minutes	Good reason for withholding exists under Section 48(1)(a)

Chadwick/Leeder  
CARRIED

## 10.7 Confidential Business to be Transferred into the Open

Nil

## 11 General Business

### • Update – Rotorua Lakes Incentive Scheme

Cr Winters, in referring to the Lake Rotorua Incentives Committee meeting held on 12 June 2019, provided a verbal update on the recent activities of the committee.

#### Item for Staff Follow-up

- To include the following as a standing item on the agenda of Rotorua Te Arawa Lakes Strategy Group meetings: Update from the Rotorua Lakes Incentive Committee.

**The meeting closed at 11:20 am.**

Confirmed DATE

\_\_\_\_\_  
Independent Chairperson  
Sir Toby Curtis



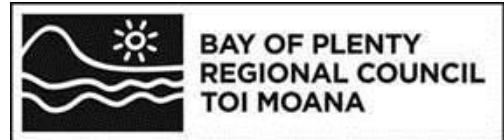
# **Presentations**





# Reports





**Report To:** Rotorua Te Arawa Lakes Strategy Group

**Meeting Date:** 27 September 2019

**Report From:** Chris Ingle, General Manager, Integrated Catchments

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## **Rotorua Te Arawa Lakes Programme Status Report update and 2018/19 Annual Report**

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### **Executive Summary**

The purpose of this report is to provide an update on Rotorua Te Arawa Lakes Programme progress since the last meeting of the Strategy Group in June.

It also seeks approval of the 2018/19 Annual Report, which is to be provided to the Minister for the Environment in accordance with the Deed of Funding for the Programme.

The 2018/19 annual report outlines the progress and measures performance against the 2018/19 annual work plan. Both Deed and non-Deed funded lakes are included to provide a full picture of the programme.

The annual TLI results have been calculated for 2018/19 and indications are that climatic conditions are having a strong influence on water quality through higher lake levels and longer periods of lake stratification.

### **Recommendations**

**That the Rotorua Te Arawa Lakes Strategy Group:**

- 1 Receives the report, Rotorua Te Arawa Lakes Programme Status Report update and 2018/19 Annual Report;**
- 2 Approves the 2018/19 Annual Report for the Programme, for submission to the Minister for the Environment.**

### **1 Programme Status Report**

Appendix one includes a Dashboard Status Report for the Programme. As shown in the dashboard, the Programme is tracking at green two months into the new financial year.

#### **1.1 Lake Rotorua**

## **Proposed Plan Change 10**

To date, 31 resource consents have been issued under Proposed Plan Change 10 (PPC10) with five properties demonstrating low intensity practices. This represents 35 percent of properties in the over 40 hectare category.

The Environment Court has considered the PPC10 appeals in two stages and released a stage one decision on 9 August 2019. The timeframe for stage two has not yet been set.

## **Low Nitrogen Land Use Fund**

Contract negotiations are underway and progressing well with the Hemp contract signed and implementation underway and several others close to signing. Other applicants are gathering specific quotes and completing more detailed project breakdowns to input into the milestone schedules which form the basis of the LNLUF contracts.

### **1.2 Lake Ōkāreka**

Phase one Waitangi Stream erosion repair works have been completed. Works were undertaken to protect stream banks from the higher flows caused by exceptionally high lake levels in Lake Ōkāreka. The second phase of protection works are programmed to commence in February 2020 and will complete the long term protection of the stream, enabling it to safely pass higher flows to Lake Tarawera.

### **1.3 Lake Rotoiti**

The brown bullhead catfish programme has been ongoing over the winter period with TALT coordinated volunteers netting through the cooler months and catching significant numbers of catfish. Regional Council is currently undertaking surveillance in other lakes using environmental DNA methods, designed to detect any invasive pest fish species. The acoustic tracking trial in Lake Rotoiti is scheduled to be completed in December/January which will inform Council on how to accurately target catfish by netting.

## **2 2018/19 Annual Report**

The Rotorua Te Arawa Lakes Programme Annual Report 2018/19 is provided in Appendix 2 and measures performance against the 2018/19 Annual Work Plan.

### **Lake Rotorua**

- The Incentives Scheme has secured 21.5 tonnes of nitrogen to date.
- A total of 214.6 ha of gorse has been removed from the catchment. The remaining gorse areas within the catchment are small, patchy lots.
- The Rotorua wastewater treatment plant resource consent application has been submitted and will be heard through the Environment Court.
- The Programme Steering Group approved the close-out of the Tikitere Zeolite Plant project, preferring to search for alternative projects that achieve nitrogen removal.

- 31 resource consents have now been granted under Proposed Plan Change 10 and 87 of the 94 properties over 40 ha are engaged with Advice and Support.
- Round 2 of the Low Nitrogen Land Use Fund attracted 19 Expressions of Interest with 16 applicants invited to submit a full application. Eight projects were approved by the Rotorua Te Arawa Strategy Group in April 2019 totalling \$1.26m.

### **Lake Rotoehu**

- The weed harvester was not required to operate during the 2018/19 financial year due to minimal weed growth.
- Late in 2018 the phosphorus locking plant on Lake Rotoehu was found to be inefficient and subsequently switched off until changes could be made. A workshop was held with scientists and recommendations have been put forward. Staff have commenced consultation with iwi and the community on extending the alum dosing into a more effective area of the lake.

### **Lake Rotoiti**

- Construction of the sewerage scheme is largely complete with commissioning of the wastewater plant underway.
- A condition inspection was undertaken on the Ohau wall to confirm corrosion rates. The inspection has identified the first signs of holes in the wall since inspections started. The presence of these holes is not considered to compromise water quality. The Structural Management Plan suggests installation of reinforcing beams to strengthen the wall and Regional Council has approved this approach with work commencing in the 2019/20 year.

### **Lake Ōkāreka**

- 53 ha of land use change from gorse and pasture to mānuka was secured in the 2018/19 year. Planting will be undertaken in 2020.
- Stage one erosion protection works on the Waitangi Stream are now complete. These repairs have been necessary to protect streambanks from the higher flows in response to exceptionally high lake levels in Lake Ōkāreka.

### **Trophic Level Index Results**

Lake Rotorua achieved its TLI using the three-yearly rolling average. However, none of the lakes met their annual average Trophic Level Index (TLI) for 2018/19 as set in the Regional Natural Resources Plan (RNRP).

The trophic status of the lakes is highly influenced by climate, with record increases in lake level occurring in the previous year. This coupled with higher summer temperatures and longer periods of stratification on several lakes is likely to contribute to a rise in annual average TLI for many lakes. Figure 1 below shows a summary of the annual TLI for each lake since 2011, along with the TLI target levels in yellow.

Blue-green algae (cyanobacteria) blooms resulted in health warnings being issued by Toi Te Ora for Lakes Rotoehu and Ōkaro. Lake Rotoiti at Okawa Bay experienced blooms in late autumn resulting in a health warning. Lakes Tarawera and Rotorua remained in green surveillance level over the 2018/2019 season.

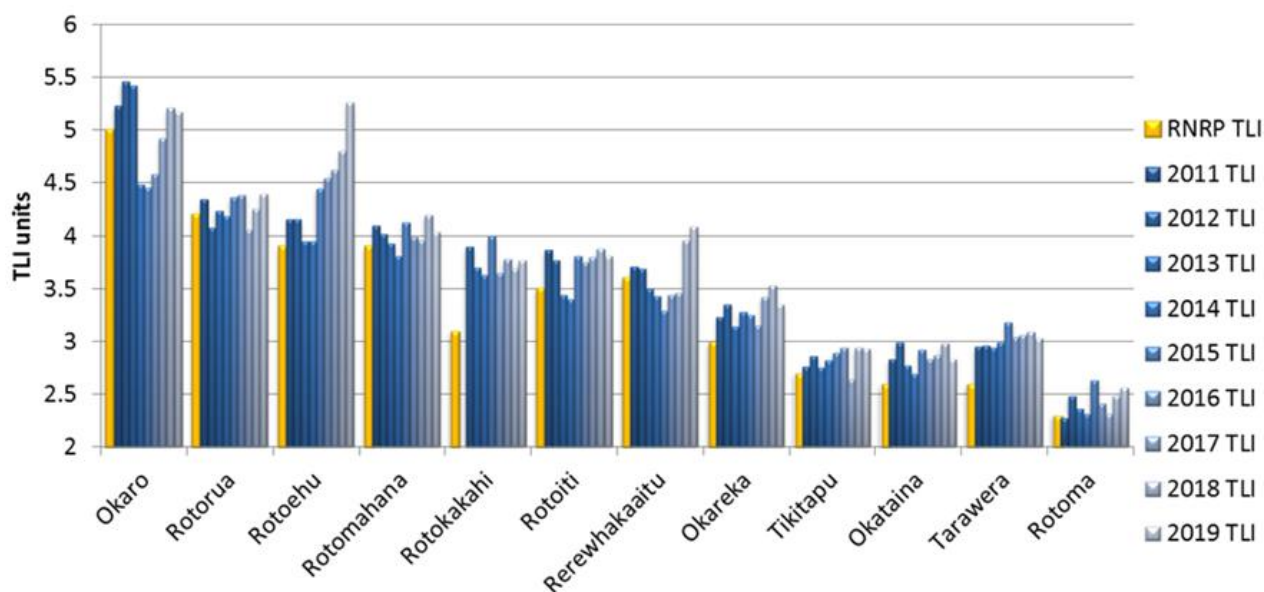


Figure 1: Regional Natural Resources Plan (RNRP) TLI Objectives and annual TLI results, 2011 to 2019.

### 3 Budget Implications

#### 3.1 Current Year Budget

This work is being undertaken within the current budgets for the Integrated Catchments activities in Year 2 of the Long Term Plan 2018-2028.

#### 3.2 Future Budget Implications

There are no future budget implications.

### 4 Community Outcomes

This work directly contributes to A Healthy Environment and Freshwater for Life Community Outcomes in the Council's Long Term Plan 2018-2028.

Laverne Mason  
**Rotorua Catchments Manager**

**for General Manager, Integrated Catchments**

**18 September 2019**

# **APPENDIX 1**

## **2019-09-27 Dashboard**





# Rotorua Te Arawa Lakes Programme

<b>Programme Manager</b>	Laverne Mason	<b>Sponsor</b>	Chris Ingle	<b>Status Report Date</b>	27 September 2019
<b>Overall Status</b>	Overall Status: GREEN				

Category	RAG Status	Update
Financials	GREEN	
Schedule	GREEN	
Resources	GREEN	
Scope	GREEN	
Overall Progress	GREEN	

## Programme Risks

<b>Overall Risk Register: 7 open risks</b>	Risks 12 and above: 1 open risk
	Risks 8-11: 5 open risks
	Risks 1-7: 1 open risk

## Projects Snapshot

**Lake Rotorua**

Overall status: GREEN

TLI Target = 4.2  
Current = 4.4  
Stable

- Continued engagement with unconnected properties at Brunswick/Rotokawa. Progressing connections to properties that have provided their approval and received building consent.
- Further investigation into wetland restoration and enhancement as part of the engineering solutions project.
- Continuing the re-consenting process for phosphorus locking.
- Incentives Programme - Negotiations continue for 7.5t nitrogen. A further 210kg N deal is with the landowner's lawyer.
- As part of the LNLUF, the hemp demonstration implementation is underway. Several other contracts are close to being signed.
- The Gorse Conversion budget has been fully spent. Most of the remaining gorse in the catchment is small patchy areas and will be funded using alternative Council budgets.
- 31 resource consents (RC) have been issued to date.
- Continuing to work with landowners of >40 ha to finalise NMP's and RC applications.

**Lake Rotoiti**

Overall status: GREEN

TLI Target = 3.5  
Current = 3.8  
Stable

- First commissioning of the wastewater treatment plant has been completed.
- Tenders for repair works on the Ohau Wall exceeded expected value. Contract negotiations are underway.
- Commencing community discussions on lake level changes.

**Lake Tarawera**

Overall status: ORANGE

TLI Target = 2.6  
Current = 3.0  
Declining

- Preferred sewerage options are currently being confirmed through a CIA. The CIA will be referred to the Community Reference Group.
- Tarawera lake modelling has been delayed due to uncertainty in the water quality results. Working towards a solution.
- Acacia control programme has commenced.
- Continue to develop EP's for landowners in the Greater Tarawera Catchments.

**Lake Rotoehu**

Overall status: ORANGE

TLI Target = 3.9  
Current = 5.3  
Declining

- Continuing to work through potential adjustments of alum dosing. Weekly P monitoring is being undertaken.
- Engagement with Rotoehu community on sewerage reticulation is on hold while a decision on pre-treatment system for Rotoiti is made.

**Lake Okareka**

Overall status: GREEN

TLI Target = 3.0  
Current = 3.4  
Improving

- Contract for a further 75ha of land use change is with the landowner's lawyer. Once signed, this will complete the Lake Okareka land use change project.
- Waitangi Stream protection works have been completed.
- A video was produced on why gorse is a problem in the Rotorua Catchment, specifically Lake Okareka.

**LAKE ROTORUA NITROGEN TARGET (320 T)**

TARGET (T)	320
ACHIEVED (T)	30

\*Note: The stability of Lake Rotorua's TLI is due to artificial means.



## **APPENDIX 2**

# **2018- 2019 Annual Report Rotorua Te Arawa Lakes Programme**





# Annual Report

2018/2019

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**Bay of Plenty Regional Council, Rotorua  
Lakes Council and Te Arawa Lakes Trust.**

*Working as one to protect our lakes  
with funding assistance from the  
Ministry for the Environment.*

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# Part 1:

## Purpose

The purpose of this document is to report against the 2018/19 Annual Work Plan of the Rotorua Te Arawa Lakes Programme. This report is in accordance with Clause 5.3 and 5.4 of the Deed of Funding.

This report provides an update on deed funded projects, including their financial status. It also provides an update on non-deed funded projects that fall under the Programme.

The overarching goal of the Deed of Funding is to reach community aspirations for water quality in four deed funded lakes: Rotorua, Rotoiti, Ōkāreka and Rotoehu.



# Part 2:

## Overview

Work progresses on all lakes but with a continued heavy resource weighting towards Lake Rotorua. An update on each lake is provided below, in accordance with the 2018/19 Annual Work Plan.

### Lake Rotorua

<b>RLC and BOPRC Annual Plan Budget 2018/19 (\$000)</b>	<b>Actual year to date expenditure (\$000)</b>	<b>Approved Crown Funding (\$000)</b>	<b>Crown Funding received to date (\$000)</b>	<b>Crown Funding applied to date (\$000)</b>
10,730	2,171	5,365	2,278	1,085

Proposed Plan Change 10 (PPC10) is currently moving through the Schedule 1 Resource Management Act, Environment Court process. The Court Hearing versus the Natural Capital Group finished in March and we are awaiting the Court's decision.

Reworking of the previously finalised Nutrient Management Plans continues to be undertaken, to provide identification of Critical Source Areas for phosphorus and identifying mitigation measures, both included as new provisions of the Plan Change following the decision of Commissioners at the Council hearings in 2017. Advice and Support staff continue to work closely with Landowners to provide information on their obligations under PPC10. Twenty seven consents have been granted for properties over 40 ha with further applications being processed. In total, 144 Landowners have engaged with the Advice and Support service. Overseer Legacy has been replaced with Overseer FM. The new software enables Landowners to publish files directly to Council.

To date, a total of 214.6 ha of gorse has been removed from the catchment. Staff continue to work with Landowners on gorse conversion but the remaining areas in the catchment are small, patchy lots.

The Low Nitrogen Land Use Fund attracted 19 Expressions of Interest with 16 applicants invited to submit a full application. Ten applications were received and eight projects were put forward and approved by the Rotorua Te Arawa Lakes Programme Steering Group totalling \$1.26M. Contract negotiations are ongoing including a hemp trial contract totalling up to \$179,000.

The Incentives Scheme has secured 21.5 t of nitrogen. The Lake Rotorua Incentives Committee undertook their Strategic Review as required by the Terms of Reference. The findings were presented to Council in August 2019.

In September, the Programme Steering Group approved the close out of the Tikitere Zeolite Plant Project. Due to increasing build and ongoing operational costs, the project was no longer viable. Workshops have been held to investigate engineering solutions within the catchment to achieve nitrogen reductions. The focus has now shifted to an investment in projects which will result in assets to the community, in addition to in-lake nitrogen removal, these may include: enhancement and protection of existing wetlands, development of new wetlands and removal of nitrogen fixing species.

Rotorua Lakes Council lodged their resource consent application for the Rotorua Wastewater Treatment Plant Alternative Disposal Site. The application was directly referred to the Environment Court and publically notified. The application is unlikely to be heard until 2020. Staff from both councils continue to work together to progress individual property sewerage reticulation in the Rotokawa/Brunswick area.

Biosecurity surveillance undertaken discovered Brown Bullhead Catfish by Mokoia Island in Lake Rotorua. This is the first time catfish have been found in this lake. Surveillance and netting over the 2018/19 period saw a total of 170 catfish caught in Lake Rotorua.

As part of the Communication Summer Campaign, Regional Council staff, contractors and members of the public, featured in a short video that highlights the work being undertaken to improve water quality in the Rotorua Te Arawa Lakes.

## Lake Rotoehu

<b>RLC and BOPRC Annual Plan Budget 2018/19 (\$000)</b>	<b>Actual year to date expenditure (\$000)</b>	<b>Approved Crown Funding (\$000)</b>	<b>Crown Funding received to date (\$000)</b>	<b>Crown Funding applied to date (\$000)</b>
385	146	193	96	73

Lake algal blooms started early in the season with a public health warning issued for Lake Rotoehu. As a result of the algal blooms short term intervention, weed harvesting was unable to be undertaken. Another short term intervention, phosphorus locking, has been put on hold due to inefficiencies. A water quality workshop was held with scientists and as a result, changes are being made to the phosphorus locking plant, to make it more effective at locking phosphorus coming to the lake. Consent renewal for the plant is currently being sought, including additional locations within Lake Rotoehu to improve alum dosing efficiency.

## Lake Okareka

<b>RLC and BOPRC Annual Plan Budget 2018/19 (\$000)</b>	<b>Actual year to date expenditure (\$000)</b>	<b>Approved Crown Funding (\$000)</b>	<b>Crown Funding received to date (\$000)</b>	<b>Crown Funding applied to date (\$000)</b>
320	114	160	80	57

Staff have brokered a Land Use Change Agreement for 53 ha of gorse and pasture to be planted in mānuka. An audit of the catchment Land Use to assess compliance with the Rule 11 Benchmark was undertaken in 2017/18. As a result of the audit, the one property owner found to be well in excess of their benchmark has agreed to work with an agricultural consultant to come into compliance.

Stage one of the erosion protection works at Waitangi Stream have been undertaken to minimise the considerable risk of accelerated erosion, as a result of the higher stream flows since June 2017. Stage two is being undertaken during 2019/20.

## Lake Rotoiti

<b>RLC and BOPRC Annual Plan Budget 2018/19 (\$000)</b>	<b>Actual year to date expenditure (\$000)</b>	<b>Approved Crown Funding (\$000)</b>	<b>Crown Funding received to date (\$000)</b>	<b>Crown Funding applied to date (\$000)</b>
11,445	11,021	5,723	2,736	5,511

Sewerage reticulation between Curtis Road and Hinehopu is largely complete with the plant and reticulation expected to be operational by late August.

A condition inspection was carried out on the Ohau Wall to confirm corrosion rates. The inspection identified the first signs of holes in the wall since inspections started. The installation of stiffening components will be undertaken in 2019/20.

Catfish incursion management continued during 2018/19 with 28,060 catfish netted, which is an 18% decrease on the 2017/18 season. A coordinator for the community response to the catfish incursion was recruited by Te Arawa Lakes Trust. The position has been funded by Bay of Plenty Regional Council (BOPRC) for a period of three years.

## Summary of Trophic Level Index Results

For the second year none of twelve Rotorua - Te Arawa Lakes met their Regional Natural Resources Plan (RNRP) Trophic Level Index (TLI) objective when compared to the annual average TLI for 2018/2019. Comparison of the three yearly annual average with the RNRP TLI objective showed only Lake Rotorua to match its objective TLI.

Trophic status has been impacted by climate, with record increases in lake level occurring in the previous year, which may help explain a rise in annual average TLI for many lakes.

Blue-green algae (cyanobacteria) blooms resulted in health warnings being issued by Toi Te Ora for Lakes Rotoehu and Ōkaro. Lake Rotoiti at Okawa Bay experienced blooms in late autumn resulting in a health warning. Tarawera and Rotorua remained in green surveillance level over the 2018/2019 season.

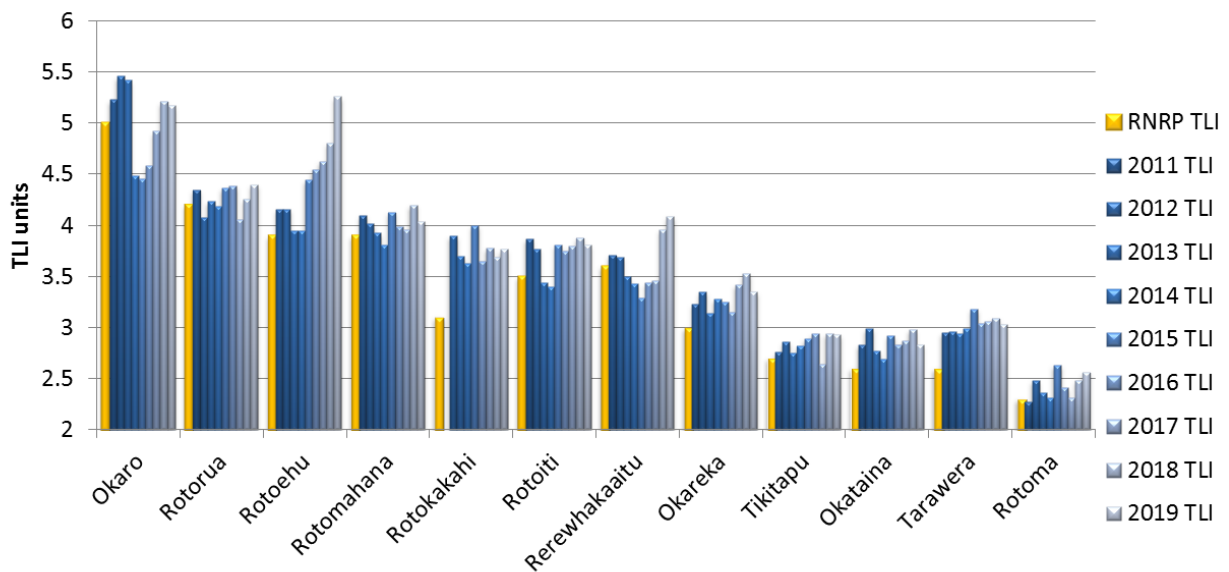


Figure 1 Regional Natural Resources Plan (RNRP) TLI Objectives and average annual TLI results, 2011 to 2019.

# Part 3:

## Key achievements

An overview of key achievements for 2018/19 are shown in the table below. Deed funded projects are highlighted in **bold**.

For more detailed information about the projects (including financials), please refer to the later sections of this report.

### Lake operations

Lake operations as shown in 2018/19 Annual Work Plan	Lake operations achievements 2018/19
<b>Continue Lake Rotoehu Weed Harvesting</b>	<b>Due to insufficient weed growth as a result of algae blooms, the weed harvester was not operational during 2018/19.</b>
<b>Investigate further engineering solutions to achieve remaining 50 t Nitrogen (N)</b>	<b>A working group has been established to investigate engineering solutions within the catchment to achieve the remaining 50 t N. The preference moving forward is to see investment in projects which will be assets to the community, in addition to in-lake nitrogen removal, these may include: fencing off seeps, enhancement and protection of existing wetlands, development of new wetland and removal of nitrogen fixing species. Further sewerage reticulation may also be a possibility. There are challenges in achieving this target; staff will continue to look for possible solutions.</b>

Lake operations as shown in 2018/19 Annual Work Plan	Lake operations achievements 2018/19
Continue phosphorous locking to maintain water quality (Lakes Rotoehu and Rotorua)	<p>The phosphorus locking plant on the Puarenga Stream is out of commission due to the bulk tank not meeting national containment standards. A replacement tank is expected to be commissioned before the end of 2019.</p> <p>The phosphorus locking plant at Lake Rotoehu was turned off in August 2018 due to high lake level and poor efficacy of dosing. A water quality workshop was held with scientists in October, which made recommendations to manage issues with the operation of the plant. Changes are being made in an attempt to operate the plant more effectively. Bay of Plenty Regional Council is planning on applying for resource consent to alum dose in multiple locations, to improve efficacy of phosphorus removal in Lake Rotoehu.</p>
Continue to pursue resource consents, prepare site and review engineering and cost feasibility of Tikitere Zeolite Plant, in time for scheduled 2018-2019 construction	Creep in the project capital costs through the trial and design process impacted negatively on the project viability. The early capital cost was estimated at \$4.6M which has escalated to more than \$9.6M with operating costs of \$750,000 a year. A project close out report was approved by PSG September 2018. Construction of this plant is no longer considered a viable option to achieve nitrogen removal from Lake Rotorua.
Undertake re consenting of phosphorous locking on Lakes Rotorua and Rotoehu	The resource consent application for Lake Rotorua has been applied for and dosing continues while the Regional Council makes a consent decision. A cultural impact assessment is being undertaken. Consultants are preparing the resource consent application for Lake Rotoehu dosing. The dosing methodology is being reviewed to improve dosing efficiency for phosphorus uptake.
Manage the corrosion of the Ohau Wall as per the Structural Management Plan	A condition inspection was undertaken on the Ohau Wall to confirm corrosion rates. The inspection has identified the first signs of holes in the wall since inspections started. The protection method developed in the Structural Management Plan is the preferred option and installation of the stiffening components to strengthen the wall will be undertaken in 2019/20.
Install monitoring buoys at Lakes Rotoiti and Ōkāreka	This project is currently on hold until the management of the Lake Buoys Programme has been clarified. This programme has transitioned from a research project since about 2006 to a programme monitoring tool and so annual costs of monitoring need to be accounted for within our annual budgets.

Lake operations as shown in 2018/19 Annual Work Plan	Lake operations achievements 2018/19
Continue Lake Ōkāreka streamworks to protect assets from erosion	Stage one, erosion protection work on the Waitangi Stream erosion is now complete. These repairs have been necessary to protect streambanks from the higher flows in response to exceptionally high lake levels in Lake Ōkāreka. Stage two, erosion protection works will take place during 2019/20 financial year.
Responsive weed management as required for amenity purposes across all lakes	Weed can be a problem over the summer months in recreational areas. Budget is available to deal with this as required over late summer.
Finalise and present Tarawera Catchment nutrient modelling	Nutrient modelling to review nitrogen and phosphorus loads within the Tarawera Catchment has been complicated by difficulties in historical nutrient analytical technique changes. This issue has been resolved sufficiently to allow completion of the modelling in the near future.
The University of Waikato Chair of Science and the Water Quality Technical Advisory Group will continue to provide expert advice and scientific rigour for the Programme	<p>Technical Advisory Group (TAG) advice continues. Technical Advisory Group is close to releasing a paper on the impact of climate change to the Lakes Programme.</p> <p>Four meetings held during the reporting period, including two targeted workshops.</p> <p>A major undertaking for 2018/19 was the completion of the Plan Change 10 Science Review. Twelve module reports have been prepared on each of the reporting topics and a final summary report was completed that brings together the review findings in one volume.</p> <p>The Memorandum of Understanding with the University for the Chair of Lake and Freshwater Science and the associated research programme has been renegotiated and approved for funding in December 2018, by the Regional Council through to 2024.</p>
Land Technical Advisory Group to provide technical support for land use and land management decisions	No land use research workshops were held during the reporting period.

Lake operations as shown in 2018/19 Annual Work Plan	Lake operations achievements 2018/19
Continue work to refine function of the trout barrier at Hamurana Springs, by investigating options to alleviate algae issues above the barrier and prevent trout from passing above the barrier	The trout barrier has experienced some issues with algae growth. We are considering the long term application of the barrier and whether it can be altered or removed.
Continue to monitor forest harvest impact on groundwater and Lake Rotomā - a four year project - Year 4	Monitoring of forest harvest impacts are being undertaken. The results indicate high levels of nitrogen are leaching in the years after harvesting. A detailed report is expected December 2019.
Continue koura monitoring programme on all twelve lakes	The Rotorua Te Arawa Lake Programme has, for a long time, relied on TLI and submerged plant index (SPI) reporting to show trends in the health of our Rotorua Lakes. Programme staff recognised that a more encompassing measure of lake health was necessary and so ongoing kakahi and koura monitoring was established in 2014. The focus of this work is to provide long term kakahi and koura population statistics on two native animal species living within our lakes. The reports are available on the Rotorua Lakes Programme website and have provided interesting data about species distribution and density in our lakes. Each lake is reported on over a five year rotation and this work will, in time, provide a powerful data set of changes in these native species over time. Improvements in water quality for Lake Rotorua are clearly benefitting the survival of these native fauna.
Continue catfish surveillance and potential management	<p>In December 2018, Brown Bullhead Catfish were discovered at Mokoia Island in Lake Rotorua. This was the first time the pest fish had been discovered in the lake.</p> <p>The 2018/19 season saw a total of 28,060 catfish netted, which is an 18% decrease on the 2017/18 season (34,117). The majority of the pest fish are being caught in Lake Rotoiti with low numbers in Lake Rotorua (170).</p> <p>An acoustic tracking trial is being undertaken in Lake Rotoiti, along with spawning distribution surveys. Research into eDNA to further develop this water monitoring was undertaken by the University of Waikato.</p>



## Land management

Land management as shown in 2018/19 Annual Work Plan	Land management achievements 2018/19
Continue to implement the Lake Rotorua Gorse Programme, including signing up new agreements and implementing existing ones	The total area of land that has pending agreement or has a gorse agreement on it is 214.6 ha. This includes an agreement to convert 93.3 ha.
Seek Expressions of Interest for low nitrogen land use trials. Commence trials on three properties. Continue addressing gaps in research for housing and tourism opportunities in the catchment	The Low Nitrogen Land Use Fund attracted 19 Expressions of Interest with 16 applicants invited to submit a full application. Ten applications were received and eight projects were put forward and approved by the Rotorua Te Arawa Lakes Steering Group in April, totalling \$1.26M.
Continue to implement the Lake Rotorua Incentives Scheme, including signing up new agreements and implementing existing ones	To date, 21.5 t of Nitrogen has been secured through the incentives scheme.
Continue to implement the Advice and Support Service for Landowners affected by Plan Change 10	To date, 144 Landowners have engaged with Advice and Support. There are 94 properties over 40 ha, in area, in the Lake Rotorua Catchment which require a resource consent this year and of these, 87 are engaged with Advice and Support. Previously finalised Nutrient Management Plans (NMPs) are currently being reworked to incorporate a greater emphasis on “on-farm” phosphorous mitigations, as a result of the Commissioners’ decisions on Plan Change 10 released in 2017. Further rework may be required depending on the Environment Court decision on the appeal into the allocation methodology.
Progress further land use change in Lake Ōkāreka Land Use Project to reduce nutrient loss	An agreement has been signed for 60 ha of gorse and pasture to be planted in mānuka. Feasibility of a further large land use change agreement in the Lake Ōkāreka Catchment is being considered.

Land management as shown in 2018/19 Annual Work Plan	Land management achievements 2018/19
Continue Tarawera Catchment acacia control on land adjacent to Isthmus Track	Acacia control was undertaken over 137 ha of land throughout the 2018 winter period. The 2019 winter control commenced June 2019.
Support the farming community to develop Farm Management Plans that concentrate on Good Management Practices in the Lakes Rerewhakaaitu, Rotokakahi, Rotomahana and Tarawera catchments and provide support for the implementation of these plans. Quantify the nutrient reductions achieved by the farming community in these catchments	<p>This project was completed during the reporting period and completes actions 2 and 4 of the Tarawera Lakes Restoration Plan.</p> <p>The local farmer group - Project Rerewhakaaitu, Beef and Lamb New Zealand, Fonterra and the Bay of Plenty Regional Council worked together to develop 48 customised Farm Environment Plans for farms in the inner and outer catchments of Lake Tarawera. This represents most farms in these catchments, with only a few farms opting not to participate, which is a fantastic outcome.</p> <p>These plans will help farmers minimise nitrogen and phosphorus losses to waterways. This 18 month project involved farmers in the catchments of Lakes Rotomahana, Okareka, Okaro, Rotokakahi, Rerewhakaaitu and Tarawera, plus some adjoining farms in the Rangitaiki and Waikato River catchments. Each Farm Plan was supported by an Overseer file which modelled the nutrient footprint of the farm enterprise.</p> <p>While the plans and Overseer files remain confidential to each Landowner, a summary report was compiled for each sector by each of the industry groups and presented back to the community in December 2018. These summary reports will provide valuable input to the Lake Tarawera Catchment modelling currently being undertaken.</p> <p>The Land Management Team continues to work with Landowners to implement the mitigations identified in the individual Farm Environment Plans.</p>

## Policy, planning, communications and information technology

Policy, planning, communications and information technology as shown in 2018/2019 Annual Work Plan	Policy, planning, communications and information technology achievements 2018/19
Continue Schedule 1 RMA (1991) process for Lake Rotorua Nutrient Management rules being made operative	Plan Change 10 is currently moving through the Schedule 1 Resource Management Act (RMA), Environment Court process. The Court Hearing versus the Natural Capital Group finished in March and we are awaiting the Court's decision.
Identify timeframes for rules to be developed for the 'Non-Rule 11' lakes	The Rotorua Water Management Area (RWMA) plan change (PC15) will implement the National Policy Statement for Freshwater Management (NPSFM). This will cover the remaining lakes not included within Plan Change 10 or Rule 11 of the Operative RNRP. Notification of PC15 is expected in 2022.
Continue to embed Te Tuapapa o ngā wai o Te Arawa within the Programme	<p>A key focus for Te Arawa Lakes Trust has been continuing to engage hapū and iwi with the Rotorua Te Arawa Lakes Programmes in a number of projects, and ensuring Te Arawa values are maintained.</p> <p>A wananga was held with Regional Council staff on Te Tuapapa, to ensure staff understand how to apply Te Tuapapa within the Programme and work across the lakes.</p>
Continue implementation of the revised Communications Plan for the Programme	<p>A key recommendation from the 2018 Independent Quality Assurance Review was to align the Communications Plan with the foundational Vision and Strategy Document and milestones of key projects to ensure consistency in communications. The Plan has since been updated to reflect the recommendations.</p> <p>The programme also hosted a stall at the Rotorua Home Show from 13 to 15 July 2018, where staff were able to engage with members of the public. The distribution email list was increased from roughly 400 to 700 in this time. New collateral and brochures were produced for this.</p> <p>A Summer advertising campaign was run during 2018/2019 which included:</p> <ul style="list-style-type: none"> <li>• Four sponsored stories were run through New Zealand Media and Entertainment (NZME), which talk about the programme as a whole and</li> </ul>

Policy, planning, communications and information technology as shown in 2018/2019 Annual Work Plan	Policy, planning, communications and information technology achievements 2018/19
	<p>what is being done to achieve targets, how Landowners can help and engage and how the general public can help.</p> <ul style="list-style-type: none"> <li>• Radio messaging has been targeted at rural land owners through Radio Sport and News Talk ZB farming segments for parts of the programme, including land use changes and gorse conversion.</li> <li>• Targeted messaging has been placed on bus backs for general public, with images captured from real staff and people in the community who are working towards cleaner lakes.</li> <li>• A video which simply outlines what the programme does was produced and played at cinemas across the summer months.</li> <li>• An animation was produced to explain how excess nutrients in Lake Rotorua are a problem. This has been used on social media and in local cinema advertising.</li> <li>• The Lakes Programme website has been rebuilt and was launched in December. The website focuses on each of the Te Arawa akes and why we are working towards improving their water quality.</li> </ul> <p>Facebook and Instagram numbers have grown significantly over the last year with 2,327 Facebook and 486 Instagram followers.</p>
Progress Phase Two of the Nutrient Discharge Management System	Phase two was completed at the end of December. This will deliver an automated process for transfers, agreements and NMP committed actions. Development of Phase three is underway.
Complete cultural mapping for all lakes	Regional Council have a contract with Te Arawa Lakes Trust to deliver cultural mapping. Reports for Lakes Rotorua, Rotoehu, Rotomā, Tarawera and Okareka have been completed.

Policy, planning, communications and information technology as shown in 2018/2019 Annual Work Plan	Policy, planning, communications and information technology achievements 2018/19
Assist Te Arawa Lakes Trust to establish an Iwi Engagement Forum for lakes matters	In January 2019, Te Arawa Lakes Trust provided a proposal to establish this forum. This is currently being considered with the aim of establishing the forum in the first quarter of 2019/20.

## Sewerage

Sewerage as shown in 2018/2019 Annual Work Plan	Sewerage achievements 2018/19
<p><b>Commence a project to connect the remaining unconnected properties in the Lake Rotorua Catchment to sewerage reticulation</b></p>	<p><b>Staff from both councils are working together to get unconnected properties connected to sewerage reticulation.</b></p>
<p><b>Complete construction of the Rotomā/Rotoiti wastewater treatment plant, land disposal system and reticulation</b></p>	<p><b>Construction of the wastewater treatment plant is nearing completion. The reticulation system and wastewater plant are expected to be operational by late August.</b></p>
<p>Seeking approval for the Rotorua Wastewater Treatment Plan alternative disposal site</p>	<p>The resource consent application has been lodged and most likely will be heard by the Environment Court in 2020, as part of the Direct Referral Process under the RMA.</p>
<p>Continue community engagement at Rotoehu in relation to sewerage, with the aim of agreeing on preferred options</p>	<p>Engagement with the community regarding sewerage reticulation options is currently on hold pending the completion of the Rotomā/Rotoiti sewerage scheme.</p>
<p>Assist the community to decide whether sewerage reticulation is a feasible response to declining water quality on Lake Tarawera</p>	<p>The Tarawera Sewerage Steering Committee have adopted a preferred option for sewerage reticulation, using grinder pumps and reticulation down Tarawera Road back to the Lake Rotorua Wastewater Treatment Plant.</p> <p>This option is to be confirmed through the development of a Cultural Impact Assessment.</p>

# Part 4

## Rotorua Te Arawa Lakes annual water quality results

### Introduction

The Regional Natural Resources Plan includes policies designed to manage the water quality of the 12 Rotorua Te Arawa lakes. Each of these lakes has an objective TLI based on past water quality (RL O1 (Objective 11) of the RNRP). The TLI is a numerical index that represents the water quality aspirations of the regional community.

Monitoring programmes have been developed to identify changes in lake water quality and ecology. These include physico-chemical water quality monitoring to generate the TLI, algal monitoring with a focus on cyanobacteria, and macrophyte monitoring using the LakeSPI index.

The objective of this report is to update the annual TLIs for each of the lakes and compare values against the objectives set in the RNRP. The TLI is made up of four measures; Total Phosphorus (TP), Total Nitrogen (TN), Chlorophyll-a and Secchi depth (water clarity). For further information on the lakes water quality monitoring programme and methods, refer to Scholes and Hamill (2016): <https://cdn.boprc.govt.nz/media/566926/rotorua-lakes-report-2014-2015.pdf>

The table below summarises the TLI data for the Rotorua Lakes for the period July 2018 to June 2019.

Table 1 Three-yearly average TLI values, annual TLI, trophic status category and LakeSPI condition for the Rotorua Lakes.

Lake <i>Regional Natural Resources Plan Objective</i> <i>TLI units</i>	2014/15 Annual TLI  <i>TLI units</i>	2015/16 Annual TLI  <i>TLI units</i>	2016/17 Annual TLI  <i>TLI units</i>	2017/18 Annual TLI  <i>TLI units</i>	2018/19 Annual TLI	2018/19 3 yearly annual average TLI	Lake Type <i>based on Trophic Status</i>	LakeSPI Condition 2018 <sup>1</sup>
Ōkaro <b>5.0</b>	4.6	4.6	4.9	5.2	5.2	5.1	Super-trophic	Moderate
Rotorua <b>4.2</b>	4.4	4.4	4.1	4.3	4.4	4.2	Eutrophic	Moderate
Rotoehu <b>3.9</b>	4.5	4.6	4.6	4.8	5.3	4.9	Eutrophic/ Super-trophic	Poor
Rotomahana <b>3.9</b>	4.0	4.0	4.0	4.2	4.0	4.1	Mesotrophic/ Eutrophic	High

<sup>1</sup> NIWA (2018). Assessment of the Rotorua Te Arawa lakes using LakeSPI – 2018.

Lake <i>Regional Natural Resources Plan Objective TLI units</i>	2014/15 Annual TLI	2015/16 Annual TLI	2016/17 Annual TLI	2017/18 Annual TLI	2018/19 Annual TLI	2018/19 3 yearly annual average TLI	Lake Type <i>based on Trophic Status</i>	LakeSPI Condition 2018 <sup>2</sup>
Rotoiti <b>3.5</b>	3.7	3.8	3.8	3.9	3.8	3.8	Mesotrophic	Poor
Rerewhakaaitu <b>3.6</b>	<b>3.3</b>	<b>3.4</b>	<b>3.5</b>	4.0	4.1	3.8	Mesotrophic	Moderate
Okareka <b>3.0</b>	3.3	3.2	3.4	3.5	3.4	3.4	Mesotrophic	Moderate
Tikitapu <b>2.7</b>	2.9	2.9	<b>2.6</b>	2.9	2.9	2.8	Oligotrophic	Moderate
Ōkātina <b>2.6</b>	2.8	2.8	2.9	3.0	2.8	2.9	Oligotrophic	Moderate
Tarawera <b>2.6</b>	3.1	3.0	3.1	3.1	3.0	3.1	Oligotrophic	Moderate
Rotoma <b>2.3</b>	2.5	2.4	<b>2.3</b>	2.5	2.6	2.5	Oligotrophic	High
<i>Rotokakahi*</i> <b>3.1</b>	4.0	3.7	3.8	3.7	3.8	3.7	Mesotrophic	Moderate

*\*Italicised figures are based on Te Wairoa Stream monitoring and a three-parameter TLI (no Secchi disk).*

Monitoring of the of the 12 Rotorua lakes shows that:

- Lake Ōkaro remained above its target TLI for the second year, due to increased TP and TN.
- The TLI for Lake Rotorua remains just above its RNRP objective; however, cyanobacteria activity remained at a low level.
- Lake Rotoehu experienced prolonged and severe cyanobacteria blooms exacerbated by sustained stratification. Its annual average TLI moved into super-trophic classification (TLI of 5.3), the first time since the early 1990s.
- Lake Rotoiti TLI remains stable, but still exceeds its target TLI by 0.3 TLI units. Okawa Bay did, however, experience cyanobacteria bloom in late autumn resulting in a health warning. The lake has remained resilient to further degradation since the installation of the Ohau Channel diversion wall, as indicated by stable hypolimnetic oxygen concentrations and dissolved nutrients.
- After the multiple rain events of the previous year resulted in increased phosphorus levels and rising lake levels, Lake Ōkāreka's annual average TLI decreased compared to last year's (three year annual average remained the same). Nitrogen remains stable but there is an increasing phosphorus trend.
- Lake Rerewhakaaitu's annual average TLI has risen over the past two years, driven by sustained stratification events due to climatic conditions.

<sup>2</sup> NIWA (2018). Assessment of the Rotorua Te Arawa Lakes using LakeSPI - 2018.



- Lake Tikitapu remains at a TLI of 2.9, 0.3 TLI units above its objective. Although phosphorus levels decreased, there was a significant decline in water clarity, which may be an artefact of the previous year intensive rainfall events and a rise in lake level.
- Lake Rotomahana displayed a decrease in annual average TLI. Nitrate-nitrite-nitrogen is observed to have increased in the past two years.
- Lakes Ōkātina and Tarawera’s TLI have been stable over the last five years, but has increased relative to TLI results prior to 2014. This is due to an increase in phosphorus levels.
- After a rapid decline until 2010, Lake Rotokakahi has shown improvement with TLI results being stable over the past few years, but exceeding its TLI target.

## Lake Rotorua

The three year average TLI sits at the objective TLI (4.2 TLI units), although the annual average TLI remains above the objective, at 4.4 TLI units. Chlorophyll-a and TN concentrations remain steady, but TP concentrations were the highest in five years. This is in part explained by Dissolved Reactive Phosphorous (DRP) increases in late summer/autumn, coinciding with stratification events and alum dosing to the Puarenga Stream being turned off at the end of 2018, the alum bulk tank was out of survey.

Two strong stratification events occurred, one in January and another on March. The most significant seems to have been over late March, lasting around a week.

Cyanobacteria levels remained relatively low, similar to the previous summer. All of the sites within Lake Rotorua remained in the green surveillance level during the course of this season.

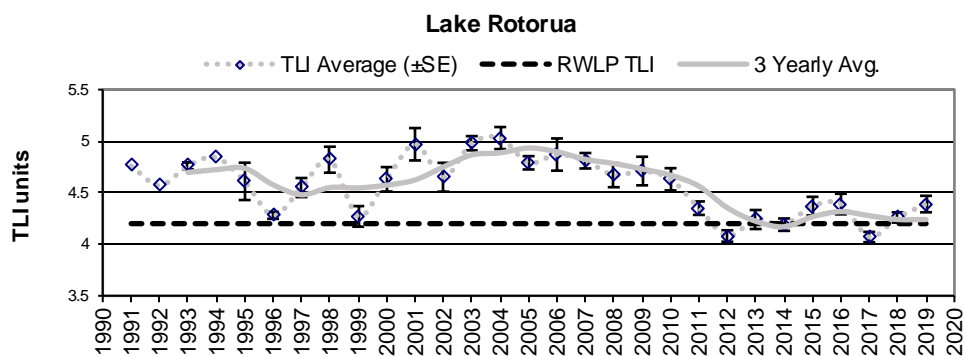


Figure 2 Lake Rotorua annual average and three year average TLI results, compared to the RRP Objective TLI.

## Lake Rotoehu

Lake Rotoehu's year has been marked by persistent cyanobacteria blooms for most of the year. This has seen the TLI annual and three yearly average rise to 5.3 and 4.9 respectively. TN and TP concentrations have spiked over the summer with the onset of stratification. Chlorophyll-a concentrations were some of the highest in recorded history which has led to an ongoing recent decline in water clarity.

There has been an increase in nitrate concentrations over the past few winters. While this may in part be explained as conversion of ammonia released from sediment during stratification, there may be also additional input released from soils due to recent forest harvesting.

Both sites in Lake Rotoehu started and ended the monitoring season in an alert status. On 21 November 2018, Kennedy Bay was in amber alert level and Ōtautū Bay was in the red action mode. Kennedy Bay joined Otautu Bay in the red action level on 5 December 2018 and for the majority of the season they were both in red action level with intermittent decreases to amber and green level biovolumes on occasion. These occasional drops in cyanobacteria biovolume did not remain low for long enough to remove the red alert status, until Kennedy Bay reached an amber alert status in the middle of May 2019. A health warning remains for the lake due to ongoing cyanobacterial blooms.

The very high annual TLI also has occurred in a year when the Waitangi Soda Stream alum dosing has been turned off, due to high lake levels contributing to poor phosphorus removal efficacy.

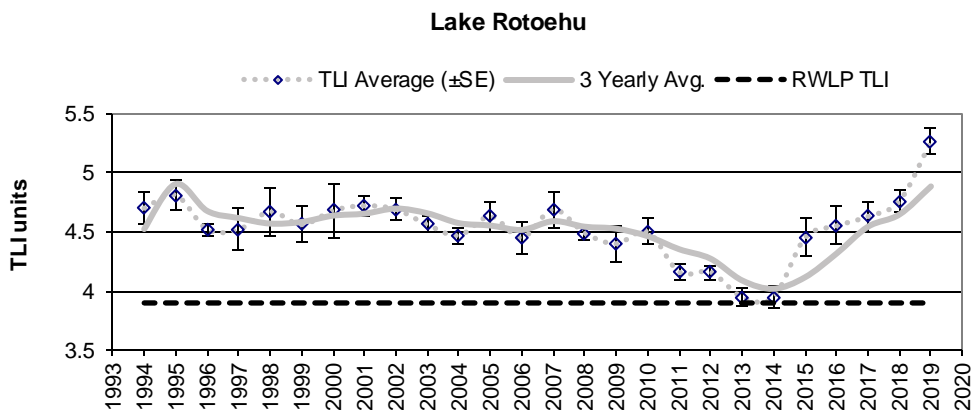


Figure 3 Lake Rotoehu annual average and three year average TLI results, compared to the RNRP Objective TLI.

## Lake Rotoiti

Lake Rotoiti's annual average TLI decreased slightly compared to last year at 3.8, but remains above its objective TLI of 3.5. The three-year average TLI is 3.8. Annual average TP concentration was the lowest in the last five years, while TN remains steady. An elevated spike in chlorophyll-a concentration occurred in autumn probably due to lake turnover.

Dissolved nutrients remain stable, as does hypolimnetic oxygen demand.

Cyanobacteria biovolumes were relatively low, with the exception of Okawa Bay. Here, orange alert levels were reached in mid-January for one week and again in March for the entire month. Red alert levels were reached in May resulting a health warning being imposed.

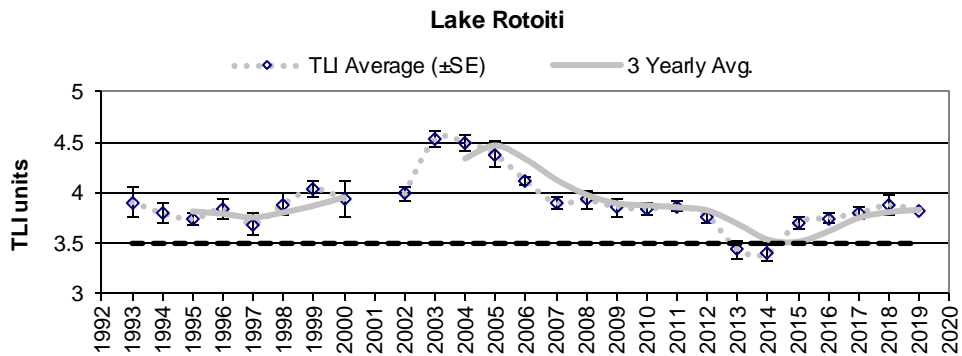


Figure 4 Lake Rotoiti annual average and three year average TLI results, compared to the RNRP Objective TLI.

## Lake Ōkāreka

Lake Ōkāreka's annual average TLI decreased slightly from 3.5 last year to 3.4 for 2018/2019. The three year annual average remains steady at 3.4 TLI units. Total Nitrogen (TN) has remained stable over the past 10 years with a decrease on average compared to last year, and the annual average TP showed a reduction compared to last year but displays a longer term increasing trend.

Hypolimnetic oxygen levels remain similar to the last two years; however, ammoniacal-nitrogen concentrations did increase in the hypolimnion over the stratification period for the last two years. Dissolved reactive phosphorus and nitrate-nitrite-nitrogen remain relatively unchanged. Increased lake level two years ago had some influence on nutrient concentrations and may still have some legacy effect. Increased lake levels can result in longer stratification periods due to increased energy requirement to achieve mixing, which might also explain elevated ammoniacal-nitrogen concentrations.

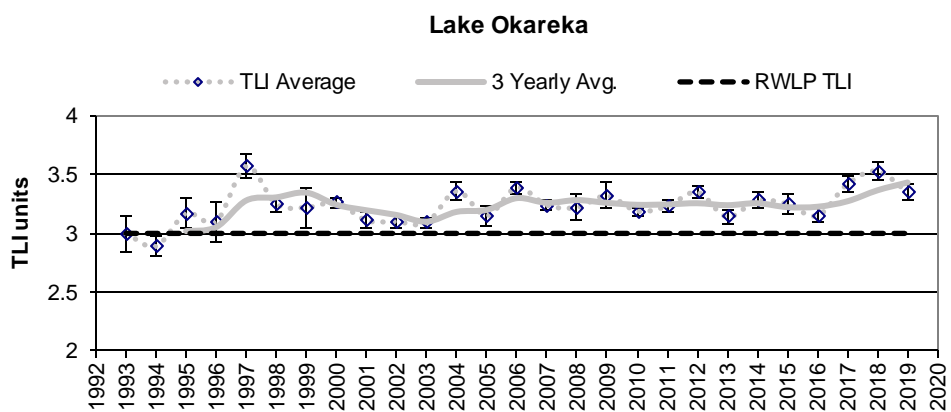


Figure 5 Lake Okareka annual average and three year average TLI results, compared to the RNRP Objective TLI.

## Lake Tarawera

The annual average TLI in Lake Tarawera remains similar to last year at 3.0. The TLI remains almost 0.5 above the RWRP objective of 2.6, with the three year average steady at 3.1.

Chlorophyll-a annual average concentration decreased compared to last year, consistent with other annual average TLI parameters. Both TN and TP were at their lowest concentrations in five years, but Secchi depth was slightly lower than the previous four years.

Nitrate-nitrite-nitrogen remains stable in the hypolimnion but decreased in the epilimnion compared to the previous two years. DRP has decreased compared to the previous five years, consistent with TP.

No reported cyanobacteria blooms occurred over the 2018/2019 season.

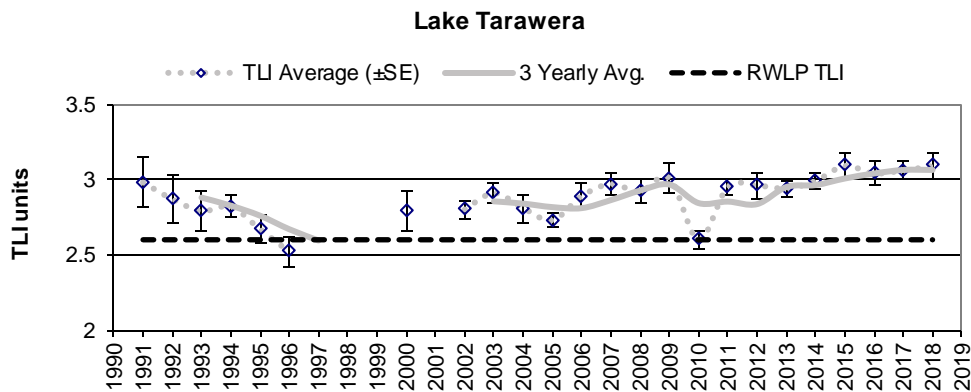


Figure 6 Lake Tarawera annual average and three year average TLI results, compared to the RWRP Objective TLI.

## Lake Ōkaro

Lake Ōkaro remains just above its target TLI of 5.0. The annual average TLI improved slightly on last year in part due to lower chlorophyll-a concentrations in late spring/early summer. Both TN and TP annual average concentrations were elevated compared to the last five years, although productivity (as indicated by chlorophyll-a) did not increase compared to the previous year). Lower algal biomass in late summer 2019 saw an improvement in water clarity, and reduced TN and TP concentrations. Dissolved reactive phosphorus (DRP) in the hypolimnion was elevated compared to the previous five years.

Cyanobacteria were present at red action levels when summer monitoring began in November 2018, continuing into early January. Cyanobacteria biovolumes dropped off after this and remained in green surveillance level for the remainder of the season.

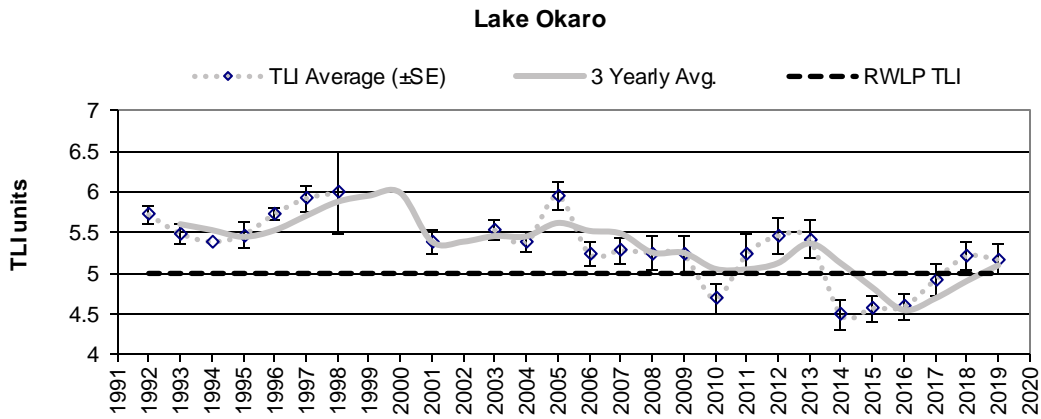


Figure 7 Lake Okaro annual average and three year average TLI results, compared to the RNRP Objective TLI.

## Lake Rotomahana

Lake Rotomahana’s annual average TLI dropped back down after an increase last year, moving from 4.2 to 4.0. The annual average TLI remains above the RNRP objective of 3.9, and the three yearly average remains relatively steady at 4.1.

There was an improvement in water clarity and chlorophyll-a concentrations compared to last year. Total Nitrogen concentrations have increased in the past two years, with TP reasonably stable over the past five years.

Dissolved reactive phosphorus concentrations showed a slight increase as did ammoniacal-nitrogen. There was a more sustained increase in nitrate-nitrite-nitrogen concentrations over the 2018/2019 winter making for the highest annual average observed for this lake since observations begun. This has impacted total nitrogen with the highest total nitrogen in 10 years observed.

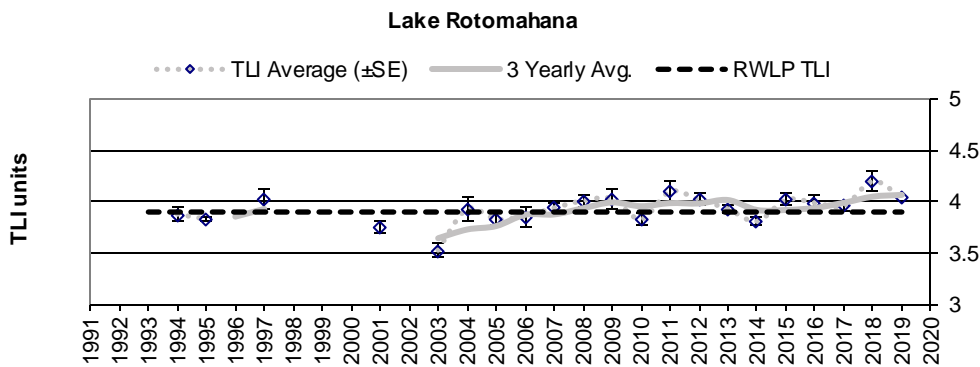


Figure 8 Lake Rotomahana annual average and three year average TLI results, compared to the RNRP Objective TLI.

## Lake Rerewhakaaitu

Lake Rerewhakaaitu's annual average TLI continues to rise above the RNRP objective of 3.6, at 4.1 for 2018/2019. The three year average increased to 3.8 TLI units. Strong stratification events and high lake levels, a result of intensive rainfall events, have led to increased TN and TP concentrations. Chlorophyll-a concentrations have been increasing over the past couple of years, and correspondingly Secchi depth (water clarity) has been decreasing. Secchi depth has shown some improvement in 2019.

Nitrate-nitrite-nitrogen levels remain elevated explaining the increase in TN. Concentrations peaked over the past two winters as did lake levels. Ammoniacal-nitrogen increased over the stratification period as a result of oxygen depletion leading to nutrient sediment release. Ammoniacal-nitrogen is converted to nitrate-nitrite-nitrogen under conditions right for denitrification explaining the increase in nitrate-nitrite-nitrogen. However, there may have been additional inputs from sub-surface leaching from surrounding lands.

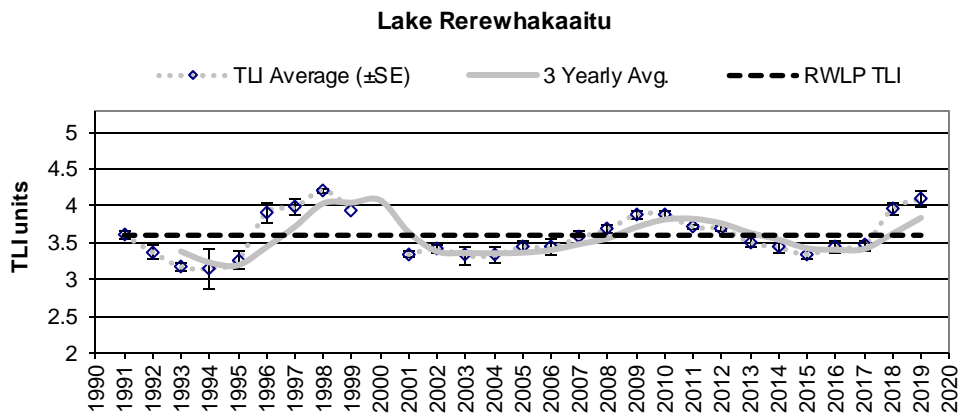


Figure 9 Lake Rerewhakaaitu annual average and three year average TLI results, compared to the RNRP Objective TLI.

## Lake Tikitapu

Lake Tikitapu's annual average TLI remains at 2.9 above the 2.6 TLI objective. The three-year average TLI also remains at 2.8 for 2018/2019 year.

Chlorophyll-a average annual concentrations decreased compared to a high level in the previous year, but did have a sustained winter/spring peak after winter turnover. Total Nitrogen has remained at steady concentrations, and phosphorus decreased to lowest levels in over ten years, similar to those experienced in 2011/2012 (also a time of increased lake level). Water clarity (Secchi depth) did show a significant decrease over winter/spring leading to an annual average drop over 1 m.

Ammoniacal-nitrogen concentrations increased in the hypolimnion over the stratification period, with dissolved reactive phosphorus and nitrate-nitrite-nitrogen remaining at low levels.

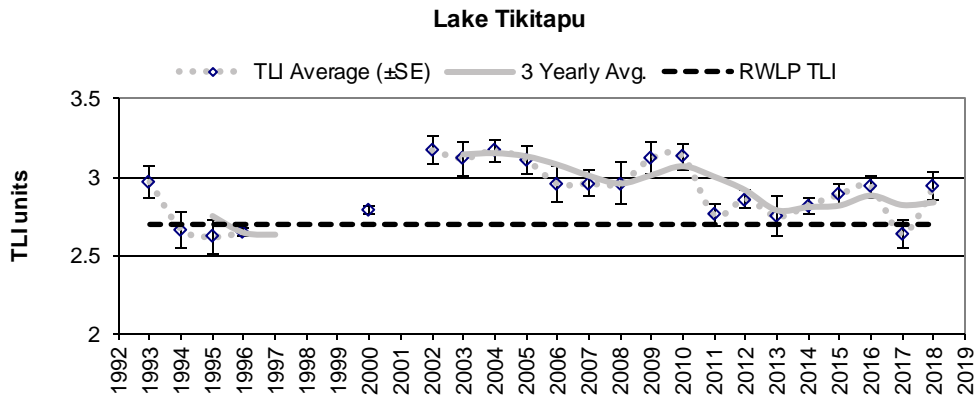


Figure 10 Lake Tikitapu annual average and three year average TLI results, compared to the RNRP Objective TLI.

## Lake Ōkātaina

Lake Ōkātaina’s annual average TLI decreased from the previous two years sitting at 2.8 compared with 3.0 last year. The three-yearly average TLI remained at 2.9.

Average annual chlorophyll-a concentrations dropped compared to the last three years, but continues to display strong seasonal patterns (winter high, summer low). Both TP and TN remain relatively stable. A low water Secchi depth reading was taken in early summer holding the annual average value down.

The oxygen depletion rate decreased compared to the previous five years. Nitrate-nitrite-nitrogen did show an increase in the hypolimnion, which may be an artefact of ammonical-nitrogen build up during stratification.

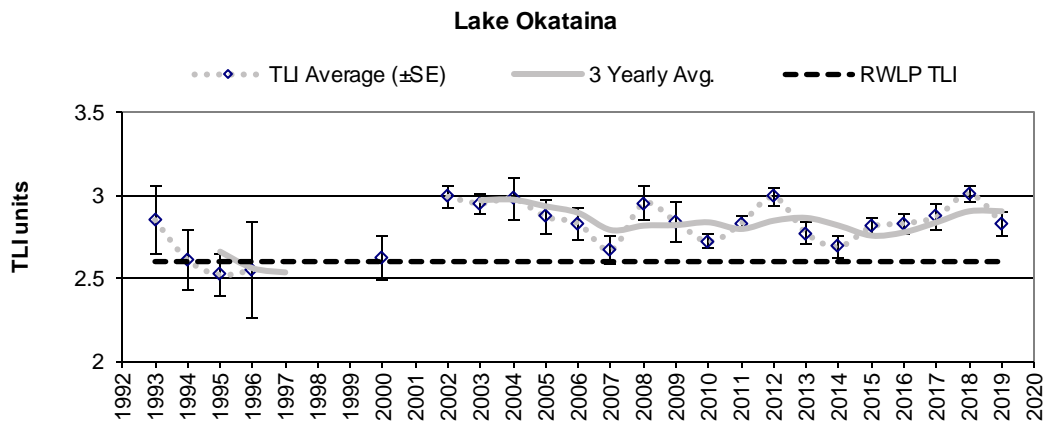


Figure 11 Lake Ōkātaina annual average and three year average TLI results, compared to the RNRP Objective TLI.

## Lake Rotomā

Lake Rotomā's annual average TLI increased compared to last year to be 0.3 TLI units above its RNRP objective of 2.3, sitting at 2.6. The three-year average TLI for 2018/2019 is 2.5.

The increase in TLI was driven by primarily by some low Secchi results (water clarity) and a small increase in annual average TN concentration. Low water clarity readings are not well supported by the Vertical Light Extinction Co-efficient results (a measure of the photosynthetic Available Radiation (sunlight) through the epilimnion). Phosphorus and chlorophyll-a levels remain stable.

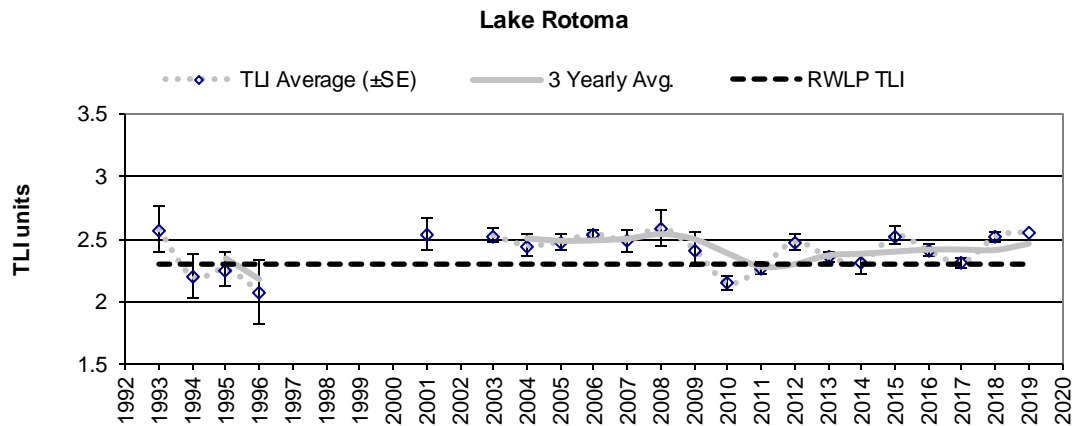


Figure 12 Lake Rotomā annual average and three year average TLI results, compared to the RNRP Objective TLI.

## Lake Rotokakahi

The 2018/2019 TLI measured at Lake Rotokakahi (at the outflow) remains steady at 3.8, slightly increased from last year's result of 3.7. The TLI still remains well above its RNRP objective of 3.1. The three year average TLI for 2018/2019 (as measured by TP, TN and chlorophyll-a) remains at 3.7.

Chlorophyll-a and nitrogen concentrations remain stable, however, phosphorus concentrations increased marginally compared to last year.

No cyanobacteria blooms were observed over the summer months.



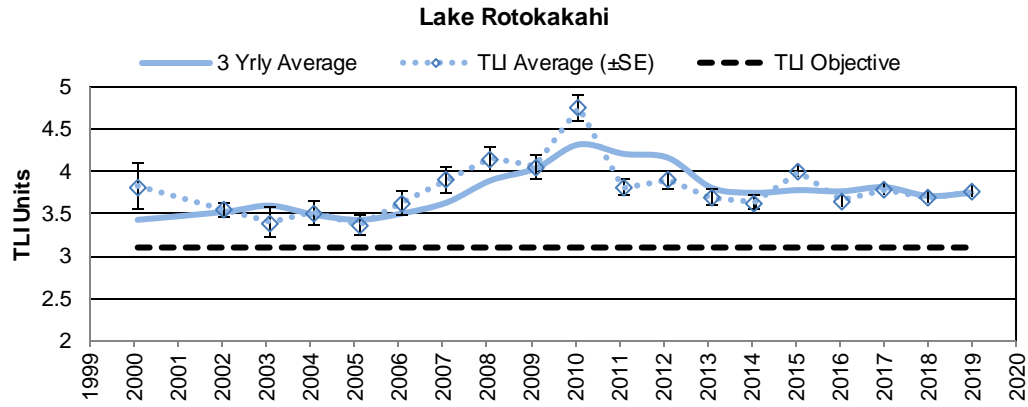


Figure 13 Lake Rotokakahi annual average and three year average TLI results, compared to the RNRP Objective TLI.




## Part 5



# Annual Plan of Interventions – Deed funded lakes


### Lake Rotorua


To meet community expectations for water quality in Lake Rotorua, nitrogen inputs must not exceed 435 t annually. This limit is set in the Bay of Plenty RPS.



## Planned and completed activities – Lake Rotorua



Project	Deed funded	At lake target	12 month target	Annual reduction achieved	Update	Budget \$000	Project status
Lake Rotorua Gorse Conversion Project	Yes	365.5 ha	200 ha	214.6 ha (total)	A total of 214.6 ha of gorse has been removed from the catchment. The remaining gorse areas in the catchment are small, patchy lots. Staff are continuing to work with Landowners of these lots to develop individual strategies to support conversion.	<b>Budget</b> \$221 <b>Spend</b> \$561	
Rotorua Wastewater Treatment Plant - Alternative Disposal Site	No	N/A	N/A	N/A	A resource consent application was lodged with the Regional Council and has been publically notified. The application is unlikely to be heard in the Environment Court until 2020.	<b>Budget</b> \$0	
Connection of currently unreticulated properties	Yes	N/A	N/A	N/A	There are a number of properties in the Lake Rotorua Catchment that are not connected to sewerage reticulation. Staff from both Councils are working together to progress connecting properties.	<b>Budget</b> \$180 <b>Spend</b> \$0	
Completed Lake Rotorua Reticulation	Yes	9.74 t N 0.3 t P	9.74 t N 0.3 t P	9.74 t N 0.8 t P	Previously completed, reductions achieved annually.	<b>Budget</b> \$0	N/A

Project	Deed funded	At lake target	12 month target	Annual reduction achieved	Update	Budget \$000	Project status
Incentives	Yes	100 t N (Reduction of nitrogen entering the lake)	35 t N	1.7 t N	<p>The Incentives Scheme has secured deals of around 21.5 t of Nitrogen.</p> <p>The Lake Rotorua Incentives Committee undertook their Strategic Review as required by the Terms of Reference. The findings are being presented to Council in August.</p>	<p><b>Budget</b> \$7,558</p> <p><b>Spend</b> \$782</p>	
Tikitere Zeolite Plant	Yes	20-25 t N 0.0 t P	N/A	N/A	<p>Creep in the project capital costs through the trial and design process impacted negatively on the project viability. The early capital cost was estimated at \$4.6M which has escalated to more than \$9.6M with operating costs of \$750,000 a year. A project close out report was approved by PSG September 2018.</p> <p>Preference moving forward is to see investment in projects which will be assets to the community, in addition to in-lake nitrogen removal. Recent advice now indicates protection and enhancement of existing wetlands and development of new wetlands are likely to be a more cost effective solution. There may also be opportunities in weed harvesting.</p>	<p><b>Budget</b> \$500</p> <p><b>Spend</b> \$111</p>	

Project	Deed funded	At lake target	12 month target	Annual reduction achieved	Update	Budget \$000	Project status
Further engineering solutions	Yes	15 t N 0.0 t P	N/A	N/A	<p>A working group has been established to investigate engineering solutions within the catchment to achieve the remaining 50 t N. The preference moving forward is to see investment in projects which will be assets to the community including in-lake nitrogen removal, enhancement and protection of existing wetlands, fencing off seeps, development of new wetlands and removal of nitrogen fixing species.</p> <p>A project is underway to remove alders (nitrogen fixing plants) along the Puarenga Stream.</p> <p>Staff are liaising with interested Landowners regarding wetland restoration and enhancement.</p> <p>Other projects are possible but will take more time to establish.</p>	<p><b>Budget</b> \$500</p> <p><b>Spend</b> \$0</p>	

Project	Deed funded	At lake target	12 month target	Annual reduction achieved	Update	Budget \$000	Project status
Advice and Support Service	Yes	N/A	N/A	N/A	<p>To date, 144 Landowners have engaged with Advice and Support. There are 94 properties over 40 ha in area in the Lake Rotorua Catchment which require a resource consent this year and, of these, 87 are engaged with Advice and Support.</p> <p>Previously finalised NMPs are currently being re-worked to incorporate a greater emphasis on on-farm phosphorous mitigations as a result of the Commissioners' decisions on Plan Change 10 in 2017. When completed, Landowners are able to use their NMP to support their application for resource consent.</p> <p>Twenty seven resource consents have been granted to date, with a number of others being processed.</p> <p>Overseer Legacy has been replaced with Overseer FM. The new software is easier for Landowners to use and enables the Landowner to publish files directly to Council.</p>	<p><b>Advice and Support Budget</b> \$500</p> <p><b>Spend</b> \$197</p>	

Project	Deed funded	At lake target	12 month target	Annual reduction achieved	Update	Budget \$000	Project status
<b>Low Nitrogen Land Use Fund</b>	Yes	N/A	N/A	N/A	<p>The Land Use Innovation Series was run during August by the Te Arawa Primary Sector with funding and support from the Programme. A series of workshops and field trips were held to showcase possible alternative low nitrogen land uses for the Lake Rotorua Catchment.</p> <p>The Low Nitrogen Land Use Fund attracted 19 Expressions of Interest with 16 applicants invited to submit a full application. Ten applications were received and eight projects were put forward and approved by the Rotorua Te Arawa Lakes Steering Group in April, totalling \$1.26M.</p> <p>Several contract negotiation meetings have been held, including PSG approval to enter into hemp trial contract negotiators totalling up to \$179,000.</p>	<p><b>Budget</b></p> <p>\$500</p> <p><b>Spend</b></p> <p>\$129</p>	
<b>Phosphorous Locking (Utuhina and Puarenga)</b>	Yes	As required	As required	4.78 t P	<p>The two phosphorus locking plants on the Puarenga and Utuhina streams continue to control in-lake phosphorus levels to the long term target. As a result, the lake had a TLI of 4.3 units for 2017/18 year, which is close to the target and no algal blooms were reported. Staff have been trialling low dose setting over the past 12 months to establish critical response to dose rate and potentially improve cost benefit ratio.</p>	<p><b>Budget</b></p> <p>\$665</p> <p><b>Spend</b></p> <p>\$392</p>	



Project	Deed funded	At lake target	12 month target	Annual reduction achieved	Update	Budget \$000	Project status
Lake Rotorua Regional Water and Land Plan - Proposed Plan Change	No	140 t N (Reduction of nitrogen entering the lake)	N/A	N/A	Plan Change 10 is currently moving through the Environment Court process. Expert Conferencing was completed and the Court hearing versus the Natural Capital Group finished in March 2019. We are awaiting the Court's decision.  No date has been set for the commencement of Stage 2 appeals.	<b>Budget</b> \$0	
Nutrient Agreements (not Incentives Scheme)	No	N/A	3.9 t N 0.07 t P	t N t P	These are historical agreements to reduce nitrogen discharge from land - in effect, nutrient reductions realised annually.	<b>Budget</b> \$0	N/A
Reconsenting of Phosphorus Locking on Lakes Rotorua and Rotoehu	Yes	N/A	N/A	N/A	Resource consent application has been made to renew the Lake Rotorua consents and Council is continuing to finalise consultation in relation to the application. Council has approval to continue Lake Rotorua operation of the alum dosing until such time as a decision on the application is made.  Staff are working with consultants to make consent application for a range of dosing locations in Lake Rotoehu by October 2019. This approach has been workshopped with science advisors and is expected to improve the alum dosing efficiency on that Lake.	<b>Budget</b> \$105 <b>Spend</b> Figures included in P locking	
<b>Total budget 2018/19</b>						\$10,729	
<b>Total expenditure 2018/19</b>						\$2,171	




## Lake Rotoehu

To meet community expectations for water quality in Lake Rotoehu, a reduction of 8.9 t of nitrogen and 0.708 t of phosphorus is required.

### Planned and completed activities - Lake Rotoehu


Project	Deed funded	At lake target	12 month target	Annual reduction achieved	Update	Budget \$000	Project status
Land use and land management change	Yes	6.6 t N 0.46 t P Root Zone	8.45 t N 0.8 t P	8.45 t N 0.8 t P	The land use change target for the Lake was completed a number of years ago now. The benefits of the reduction in nutrient entering the catchment is realised annually.	<b>Budget</b> \$0	N/A
Weed harvesting	Yes	N/A	N/A	N/A	In the past three years weed has not been available for harvest due to high algae growth, so we have been unable to remove any nitrogen or phosphorus with this intervention.	<b>Budget</b> \$50 <b>Spend</b> \$28	
Phosphorus locking	Yes	As required	As required	0 t N 0 t P	A recent workshop with scientists regarding the water quality of Lake Rotoehu has revealed some issues with the operation of the phosphorus locking plant and the natural chemical processes within the lake. Changes are being made to attempt to operate this plant to more effectively lock phosphorus and improve water quality. These changes focus mainly on achieving application of alum in the area where it is most likely to be effective.	<b>Budget</b> \$335 <b>Spend</b> \$118	




Project	Deed funded	At lake target	12 month target	Annual reduction achieved	Update	Budget \$000	Project status
Rotoehu sewerage reticulation	No	N/A	N/A	N/A	Engagement with the community regarding sewerage reticulation options is currently on hold pending the completion of the Rotomā/Rotoiti Sewerage Scheme. Subsidy funding for sewerage reticulation is being explored.	<b>Budget</b> \$0	
<b>Total budget 2018/19</b>						<b>\$385</b>	
<b>Total expenditure 2018/19</b>						<b>\$146</b>	

## Lake Rotoiti

To meet community expectations for water quality, Lake Rotoiti needs a reduction of 130 t of nitrogen and 19 t of phosphorus.

## Planned and completed activities – Lake Rotoiti




Project	Deed funded	At lake target	12 month target	Annual reduction achieved	Update	Budget \$000	Project status
Sewerage Scheme Curtis Road to Hinehopu	Yes	4.9 t N 1.1 t P	0 t N 0 t P	0 t N 0 t P	Construction of the sewerage scheme is largely complete. Pre-commissioning of the wastewater plant is underway. The reticulation system and wastewater plant are expected to be operational by late August.	<b>Budget</b> \$11,445 <b>Spend</b> \$11,021	

Ohau Diversion Wall	No	150 t N 15 t P	150 t N 15 t P	150 t N 15 t P	A condition inspection was undertaken on the Ohau Wall to confirm corrosion rates. The inspection has identified the first signs of holes in the wall since inspections started. The protection method developed in the Structural Management Plan is the preferred option and installation of the stiffening components to strengthen the wall will be undertaken in 2019/20.	<b>Budget</b> \$0	
Completed reticulation	Yes	5.9 t N 0.21 t P	5.9 t N 0.21 t P	5.8 t N 0.48 t P	Completed reticulation - reduction ongoing annually.	<b>Budget</b> \$0	
Install monitoring buoy	No	N/A	N/A	N/A	This project is on hold until such time as BOPRC has a clear understanding of the costs associated with managing the multiple lake buoys. A proposal to manage all buoys is being sought from contractor.	<b>Budget</b> \$36 <b>Spend</b> \$0	
						<b>Total Budget 2018/19</b>	<b>\$11,445,036</b>
						<b>Total Expenditure 2018/19</b>	<b>\$11,021</b>

## Lake Ōkāreka

To meet community expectations for water quality annual nutrient reductions of 2.5 t nitrogen and 0.08 t of phosphorus are required.

### Completed activities - Lake Ōkāreka

Project	Deed funded	At lake target	12 month target	Annual reduction achieved	Update	Budget \$000	Project status
Further land use change project	Yes	NA	100 ha	53 ha	Ōkāreka benchmark auditing was carried out in 2017/18 with one farm to be found in excess of their Rule 11 Benchmark. The non-compliant Landowner has agreed to work with an agricultural consultant to come into compliance and staff are currently facilitating this.  Fifty three hectares of land use change from gorse and pasture to mānuka was legally secured in the 2018/19 year. Gorse spraying has been undertaken and planting will occur in 2020.	<b>Budget</b> \$320 <b>Spend</b> \$114	
Install monitoring buoy	No	NA	NA	NA	This project is on hold until such time as BOPRC has a clear understanding of the costs associated with managing the multiple lake buoys. A proposal to manage all buoys is being sought from contractor.	<b>Budget</b> \$36 <b>Spend</b> \$0	
Lake Ōkāreka outlet streamworks	No	NA	NA	NA	Stage one, erosion protection work on the Waitangi Stream erosion is now complete. These repairs have been necessary to protect streambanks from the higher flows in response to exceptionally high lake levels in Lake Ōkāreka.  Stage two, erosion protection works will take place during 2019/20 financial year.	<b>Budget</b> \$150 <b>Spend</b> \$580	

Project	Deed funded	At lake target	12 month target	Annual reduction achieved	Update	Budget \$000	Project status
Sewerage Scheme	Yes	1.9 t N 0.02 t P	1.9 t N 0.02 t P	2.83 t N 0.23 t P	Reticulation complete, nutrient reductions recognised annually.	<b>Budget</b> \$0	N/A
Previous land use change	Yes	1.18 t N 0.22 t P	1.18 t N 0.22 t P	1.26 t N 0.37 t P	Land use change complete, nutrient reductions recognised annually. Reductions at root zone.	<b>Budget</b> \$0	N/A
<b>Total budget 2018/19</b>						<b>\$506</b>	
<b>Total expenditure 2018/19</b>						<b>\$694</b>	

## Part 6

# Annual Plan of Interventions – Non Deed funded

## Tarawera Lakes Catchments

The actions outlined in the table below are all actions in the Tarawera Lakes Restoration Plan which encompasses the seven lake catchments feeding and including Lake Tarawera. All actions within the restoration plan, which was developed in consultation with the community, are now either complete or underway with updates outlined here.

Te Arawa Lakes Trust are leading the next steps for action on Lake Tarawera, primarily working with the Nature Conservancy.

Lake Tarawera	Lake Tarawera achievement 2018/19
Farm Environment Plans for the inner and outer Tarawera Catchments	<p>This project was completed during the reporting period and completes actions 2 and 4 of the Tarawera Lakes Restoration Plan.</p> <p>The local farmer group - Project Rerewhakaaitu, Beef and Lamb New Zealand, Fonterra and BOPRC worked together to develop 48 customised Farm Environment Plans for farms in the inner and outer catchments of Lake Tarawera. This represents most farms in these catchments, with only a few farms opting not to participate.</p> <p>These plans will help farmers minimise nitrogen and phosphorus losses to waterways. This 18 month project involved farmers in the catchments of lakes Rotomahana, Okareka, Okaro, Rotokakahi, Rerewhakaaitu and Tarawera, plus some adjoining farms in the Rangitaiki and Waikato River catchments. Each farm plan was supported by an Overseer file which modelled the nutrient footprint of the farm enterprise.</p> <p>While the plans and Overseer files remain confidential to each Landowner, a summary report was compiled for each sector by each of the industry groups and presented back to the community in December 2018. These summary reports will provide valuable input to the Lake Tarawera Catchment modelling currently being undertaken.</p>

Lake Tarawera	Lake Tarawera achievement 2018/19
	The Land Management Team continues to work with Landowners to implement the mitigations identified in the individual Farm Environment Plans.
Sewerage reticulation	The Tarawera Sewerage Steering Committee have adopted a preferred option for sewerage reticulation at Lake Tarawera. This includes grinder pumps and reticulation down Tarawera Road back to the Lake Rotorua wastewater treatment plant. This option is to be confirmed through the development of a Cultural Impact Assessment.
Tarawera cultural health assessment	This action, led by Te Arawa Lakes Trust has been completed.
Nutrient modelling	Nutrient modelling to review nitrogen and phosphorus loads within the Tarawera Catchment has been complicated by difficulties in historical nutrient analytical technique changes. This issue has been resolved sufficiently to allow completion of the modelling in the near future.
Acacia control	<p>Acacia control was undertaken over 137 ha of land throughout the 2018 winter period. The 2019 winter control started in June 2019.</p> <p>A trial of two different herbicides for acacia control was undertaken but unfortunately proved ineffective. The contractors will continue using Glyphosate.</p>

## Lake Rotomā

Lake Rotomā	Lake Rotomā achievement 2018/19
Forest Harvesting Effects Investigation	Monitoring on forest harvest impacts are being undertaken. The results indicate high levels of nitrogen are leaching in the years after harvesting. A detailed report is expected December 2019.
Sewerage reticulation	Construction of the sewerage scheme is largely complete. Pre-commissioning of the wastewater plant is underway. The reticulation system and wastewater plant are expected to be operational by late August.

## Catfish incursion management

In December 2018, brown bullhead catfish were discovered by Mokoia Island in Lake Rotorua. This was the first time the pest fish had been discovered in the lake.

The 2018/19 season saw a total of 28,060 catfish netted, which is an 18% decrease on the 2017/18 season (34,117). The majority of the pest fish are being caught in Lake Rotoiti with low numbers in Lake Rotorua (170).

A coordinator for the Community Response to the Catfish Incursion was recruited by Te Arawa Lakes Trust. The position has been funded by BOPRC for a period of three years. Volunteers have netted approximately 3,125 catfish and have undertaken surveillance in the wider Rotorua Lakes. The volunteer programme has provided valuable information to the Regional Council while also engaging with the public.

An acoustic tracking trial is currently being undertaken, with 30 catfish tagged in Lake Rotoiti, along with spawning disruption surveys undertaken by the National Institute of Water and Atmospheric Research (NIWA), which aims to investigate and disturb spawning sites of catfish.

Research into the eDNA surveillance tool was undertaken by the University of Waikato to further develop the water monitoring tools to determine catfish presence. Trials were also undertaken using pheromone bait from NIWA which proved successful in catching more catfish than regular bait, although this is not yet a cost effective tool. The National Institute of Water and Atmospheric Research and BOPRC are currently refining the pheromone bait to point where it is cost effective.

A comprehensive communications campaign was run over the busy summer and autumn period targeting both local and out of town lake users. Communications included: signage, radio and online advertising, social media and a wide range of collateral distributed to stakeholders.



# Part 7

## Financials

This section provides financial information as per the Deed of Funding with the Ministry for the Environment. The information contained here aligns with the content of the Annual Plan 2018/19 for both Rotorua Lakes Council and Bay of Plenty Regional Council.

Rotorua Te Arawa Lakes Programme - Report B

Draft - Financial Progress Statement - Quarter 4 Report 2018/19 ( July to June 2019)

Interventions	Funding deed clause 5.4.1			Intervention Project progress indicator	Financial status to date	5.4.2 (a) Note 1	5.4.2 (b) / 5.2.2 (d)		5.4.2 (c)	5.4.2 (d) Note 2
	(A) Council Annual Plan Budget	(B) Actual year to date expenditure	(B - A) Variance to date over/(under) spend			(D) Council funding excluding Crown grants (50% of B)	(E) Approved Crown funding 2018/19	(F) Crown funding received to date	(G) = (B - D) 50% Crown funding applied to date	(H) Reserve interest accrued
	\$000	\$000	\$000			\$000	\$000	\$000	\$000	\$000
<b>Lake Rotoehu</b>										
Weed Harvesting	50	28	(22)		At risk	14	25	13	14	0
Phosphorus Locking Soda Springs	335	118	(217)		At risk	59	168	84	59	0
<b>Total Lake Rotoehu</b>	<b>385</b>	<b>146</b>	<b>(239)</b>			<b>73</b>	<b>193</b>	<b>96</b>	<b>73</b>	<b>0</b>
<b>Lake Ōkāreka</b>										
Land Management Change	320	114	(206)		At risk	57	160	80	57	0
<b>Total Lake Ōkāreka</b>	<b>320</b>	<b>114</b>	<b>(206)</b>			<b>57</b>	<b>160</b>	<b>80</b>	<b>57</b>	<b>0</b>
<b>Lake Rotorua</b>										
Advice and Support	500	197	(303)		At risk	98	250	125	98	0
Phosphorus Locking	770	392	(378)		At risk	196	385	193	196	0
Tikitere Diversions	500	111	(389)		At risk	55	250	125	55	0
Gorse	221	561	340		Moderate risk	280	111	55	280	0
Land Incentive Payments	7,000	641	(6,359)		At risk	320	3,500	1,391	320	0
Land Incentive Board Administration	559	141	(418)		At risk	70	279	140	70	0
Low Nitrogen Land Use Fund	500	129	(371)		At risk	64	250	125	64	0
Lakes Engineering Solutions	500	0	(500)		At risk	0	250	125	0	0
Sewerage Reticulation	180	0	(180)		At risk	0	90	0	0	0
<b>Total Lake Rotorua</b>	<b>10,730</b>	<b>2,171</b>	<b>(8,559)</b>			<b>1,085</b>	<b>5,365</b>	<b>2,278</b>	<b>1,085</b>	<b>0</b>
<b>Lake Rotoiti</b>										
Sewerage Reticulation	11,445	11,021	(424)		On track	5,511	5,723	2,736	5,511	0
<b>Total Lake Rotoiti</b>	<b>11,445</b>	<b>11,021</b>	<b>(424)</b>			<b>5,511</b>	<b>5,723</b>	<b>2,736</b>	<b>5,511</b>	<b>0</b>
<b>Total Programme by Council</b>										
Rotorua Lakes Council	11,625	11,021	(604)			5,511	5,813	2,736	5,511	18
Bay of Plenty Regional Council	11,255	2,430	(8,504)			1,215	5,627	2,455	1,215	43
<b>Total Programme Expenditure</b>	<b>22,880</b>	<b>13,451</b>	<b>(9,108)</b>			<b>6,726</b>	<b>11,440</b>	<b>5,191</b>	<b>6,726</b>	<b>61</b>

Programme reserve account interest accrued

5.4.2 (a) Note 1: Funding detail - Council

**Rotorua Te Arawa Lakes Programme - Report B**

Draft - Financial Progress Statement - Quarter 4 Report 2018/19 ( July to June 2019)

Interventions	Funding deed clause 5.4.1			Intervention Project progress indicator	Financial status to date	5.4.2 (a) Note 1	5.4.2 (b) / 5.2.2 (d)		5.4.2 (c)	5.4.2 (d) Note 2
	(A) Council Annual Plan Budget	(B) Actual year to date expenditure	( B - A) Variance to date over/(under) spend			(D) Council funding excluding Crown grants (50% of B)	(E) Approved Crown funding 2018/19	(F) Crown funding received to date	(G) = ( B - D) 50% Crown funding applied to date	(H) Reserve interest accrued
RLC general funding			5,511							
RLC reserve			5,511							
BoPRC reserves			1,215							
BoPRC targeted rates			608							
BoPRC general funding			608							
<b>Total funding detail - Council</b>			<b>13,451</b>							
<b>5.4.2 (b) Note 2: Funding detail - any other source</b>			<b>0</b>							
Miscellaneous income			0							
<b>Total funding from any other source</b>			<b>0</b>							

Less than 20%		On track
Between 21 - 29%		Moderate risk
Greater than 30%		At risk



ROTORUA LAKES COUNCIL

Chairperson and Members  
ROTORUA TE ARAWA LAKES STRATEGY GROUP

**UPDATE REPORT FROM ROTORUA LAKES COUNCIL**

**Report prepared by:** Jean-Paul Gaston, Group Manager Strategy and Partnerships

**Report approved by:** Geoff Williams, Chief Executive

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**1. PURPOSE**

To provide a short update on Rotorua Lakes Council (RLC) activity that relates to lake water quality.

**2. EXECUTIVE SUMMARY**

*RLC activity currently underway that impacts the Lakes Programme includes:*

- *Wastewater treatment and stormwater projects*
- *Planning Policy*

This report provides a brief update against each of these areas.

**3. RECOMMENDATIONS:**

- 1. That the report 'Update Report from Rotorua Lakes Council' be received.**

**4. WASTEWATER TREATMENT AND STORMWATER PROJECTS****Rotoiti On Site Pre-Treatment Systems**

- RLC continues to work with the Iwi Liaison Group to identify cultural criteria for tender evaluations for the pre-treatment systems. The Group met again on 28 August and committed to finalise these criteria (as required by the Resource Consent) in September with a view of calling tenders in mid-October. Once the outcome of these tenders has been confirmed a recommendation to Council will be provided by officers that will include the final and most accurate forecasting of the overall project costs. This information will then be provided to the Strategy Group as well.
- Note that the main trunk reticulation system for Rotoiti is in progress and focus is centred onto securing land owner agreements (especially for Māori Land) for the installation of the reticulation network.

**Rotomā / Rotoiti Sewerage Scheme**

- The first stage commissioning of the wastewater treatment plant has been completed and the plant has been officially opened on 12 August 2019.
- The pipeline from Rotomā to the treatment plant is completed. Installation of individual onsite systems has been substantially completed.
- The Rotoiti reticulation is now under construction, ahead of the original schedule.

**Rotorua Wastewater Treatment Plant**

- Further consultation with significant objectors continues.
- The finalisation of the Officers Report and recommendations from both consenting authorities, Bay of Plenty Regional Council and Rotorua Lakes Council has been delayed.

**Tarawera Sewerage Scheme**

- The finalisation of the Cultural Impact Assessment of all proposed sewerage servicing options has been delayed. The process to finalise the CIA is more involved than expected.
- The Cultural Impact Assessment development is facilitated by the Te Arawa Lakes Trust with significant input from the relevant Iwi and Mana Whenua.

**Rotorua Urban Area Comprehensive Stormwater Resource Consent**

- The Resource Consent application is being put on hold by Bay of Plenty Regional Council.
- Bay of Plenty Regional Council is currently reviewing their approach to stormwater management and the way stormwater resource consent applications are assessed.

**5. PLANNING POLICY AND STRATEGY****Bay of Plenty Regional Council - Plan Change 10: *Lake Rotorua Nutrient Management (PC10)*:**

The Environment Court has now issued its interim decision on PC10. Rotorua Lakes Council is positive that issues around long-term sustainability, equity and economic impact have been recognised by the Court.

RLC is keen to work with the other Strategy Group members to ensure the viability of the integrated framework and will continue to work closely with iwi on appropriate N allocations.

**Rotorua Lakes Council – Plan Change 3: *Significant Natural Areas***

Council has also notified plan change 3: Significant Natural Areas (SNA). The plan change identifies a number of additional SNA. This will provide a level of protection to these areas, e.g. from habitat destruction and earthworks. Some of these are located around Lakes Rotoiti and Rotorua, for example, the Ngapuna wetlands adjoining Lake Rotorua and Otutarara Springs adjoining Lake Rotoiti.

**6. CONCLUSION**

Rotorua Lakes Council continues to work across multiple areas towards improved lake water quality as a partner in the Rotorua Te Arawa Lakes Programme.

**Report to:** Te Arawa/Rotorua Lakes Strategy Group

**Meeting Date:** 27 September 2019

**Report From:** Te Arawa Lakes Trust

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### **Scope**

This report outlines the activities of the Te Arawa Lakes Trust in the Rotorua/Te Arawa Lakes Programme.

### **Summary**

The key focus of the first quarter of the 2019/20 year has been finalizing our Deed Fund arrangements with MfE, starting new projects and contracts.

### **Funding**

The Te Arawa Lakes Trust has progressed the development of our Deed with MfE.

The key focus on the Deed is to ensure that the a broader range of the Goals identified in the Lakes Strategy are delivered alongside the existing Lakes Programme. These are;

1. Goal 3 - Knowledge is linked to action and adaptation occurs
2. Goal 4 – The lakes catchment is managed through Te Arawa Values
3. Goal 7 – The eco-systems including ecosystems habitats for kai roto has improved since 2013
4. Goal 9 – A lakes catchment management framework that enables iwi to pursue sustainable business ideas and initiatives

The specific programme of work to enable this is outlined in a separate presentation.

In future Te Arawa Lakes Trust reports to the RTALSG will focus on our contribution to delivering the Deed funded programmes undertaken by both TALT and Councils towards the achievement of the Strategy.

## **Te Arawa/Rotorua Lakes Programme**

### **Te Tūāpapa is embedded into the Lakes Strategy programme**

1. This will be supported by the delivery of a series of wānanga with Regional Council staff on Te Tūāpapa to ensure that there is understanding with the Partner organisations on how to apply Te Tūāpapa within the programme and work across the Lakes. Further work on this will progress when the Deed funding is allocated.

### **Sewerage and reticulation**

2. The Te Arawa Lakes Trust is undertaking the second phase of the Cultural Impact Assessment (CIA) for the Tarawera Sewerage Scheme. This is ongoing and led by Lee Warbrick and Wally Lee.

### **Wetlands Project**

3. TALT, via William Anaru is working with the BOPRC Land Management team to support landowners in high nutrient catchments to protect the wetlands on their properties. This is a contribution to the 50 ton to be achieved from Engineering Solutions.

## **Te Arawa Lakes Trust - Statutory responsibilities**

### **Lakes structures and Consents**

4. The Cultural Mapping reports for the existing Lakes Structures are completed for Lakes Tarawera, Okareka, Rotoma, Rotoehu and Rotorua. Rotoiti is underway.

### **Cultural Monitoring Plan – Aquatic herbicide consent condition**

5. TALT are developing a Cultural Monitoring Plan as part of the Aquatic Herbicide consent. A desktop exercise is currently underway and this will be used to link to the Cultural health Index project already started in 2018.

## **Te Arawa Lakes Trust - Te Arawatanga**

### **Te Arawa Climate Change Working Group**

6. Te Urunga o Kea made an oral submission to the Environment Select Committee regarding the Zero Carbon Bill on 12<sup>th</sup> September.
7. The Strategy Development is progressing with further workshops with Te Arawa Rangatahi and our champions.



8. The Te Arawa Framework for Climate Change is in development and will inform the structure and shape of the Strategy. It is based on the journey of the Te Arawa waka.
9. Invited to speak at Wai Māori conference in Whangarei on the Te Arawa Climate Change mahi to date.

### **Te Arawa Environment Management Plan**

10. The DRAFT Plan was circulated to hapū and iwi in July 2019 and we have received feedback from 20 hapū and whanau.
11. We have worked through this feedback and had 5 hui to ensure we understand the feedback so we can make the amendments needed.
12. We hope to have a final draft confirmed in October 2019.

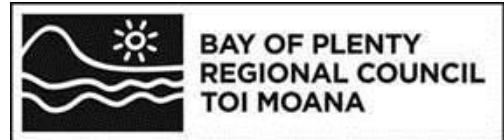
## Te Arawa Lakes Trust – Engagement

### Catfish Volunteer Programme

13. Volunteer recruitment going well (400 people, mostly school kids, 51 nets) with schools highly engaged. There are 18 + Toi oho Mai students. All schools are intending to stay on the catfish program in term 4.
14. We have 15 nets permanently set in Te Weta Bay and monitored by the schools during the week and by volunteers during the weekend.
15. Total volunteer catch sits at around 4,700 catfish. Numbers will increase as the months warm up.
16. We will be presenting alongside the BOPRC as part of the DoC Conservation week. Part time support coordinator in place (Davina Thompson) and her role is looking after most of the schools involved in the program.
17. We are working with Fish and Game to organise another Fishing Season Open day event to build awareness of the catfish issue among fishers. Volunteers are keen to be involved again.
18. Scientists from Massey assisted in determining the sex of the catfish without having to kill them. This was needed to help develop a new trap that uses a female fish to bring in the male fish. The idea is known as a Trojan or Judas model and has been very effective in other species. Also plan to look at the effects of vibrations on attracting fish as well as audio attractants.
19. We have been catching some of the biggest catfish around Ohinemutu. One catfish weighed in at 892 grams is close to an NZ record.
20. Our presence at the Coastguard Open Day and the Aronui Festival raised awareness of all aquatic pests. We managed to get more volunteers to sign up and will be training to check and clear nets in the coming weeks.
21. Looking ahead there are more nets to be placed in more lakes as part of surveillance and catfish control. Replicate the roster model at Okawa Bay and Okere.

### Support to whanau and hapū

22. Hosted Ministry for the Environment hui with Te Arawa hapū and iwi on 19<sup>th</sup> September in Rotorua.
23. Hunga Tiaki Wānanga at Tarimano in July, with the next one at Horohoro in November.
24. Distribution of approx. 300 Fishing Licences in September



Receives Only – No Decisions

**Report To:** Rotorua Te Arawa Lakes Strategy Group

**Meeting Date:** 27 September 2019

**Report From:** Yvonne Tatton, Governance Manager

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## 2019 Local Government Elections Update

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### Executive Summary

The Local Government elections are being held on 12 October 2019 which effectively ends the 2016 -2019 Council triennium and its associated committee structure and Councillor representative appointments on various co-governance forums.

This report provides members with key information regarding the upcoming local government elections and the process required to establish a new council for the 2019-2022 triennium.

### Recommendations

**That the Rotorua Te Arawa Lakes Strategy Group:**

- 1 Receives the report, 2019 Local Government Elections Update;**

#### 1 Background

Elections of members to the Bay of Plenty Regional Council Toi Moana are held once every three years with the close of polling day being Saturday 12 October 2019. Elections for local government are conducted by way of postal voting.

#### 2 Toi Moana Bay of Plenty Regional Council Elections

The council is comprised of 14 Councillors across the following constituencies:

Tauranga (five councillors), Rotorua, Western Bay of Plenty and Eastern Bay of Plenty (two each), while voters on the Māori roll elect one councillor from three Māori constituency areas – Kōhi, Mauao and Ōkurei.

### **3 Establishing a new council**

Following the elections the 2016-2019 Council triennium ends and all of Council's committees established under the Local Government Act are disestablished. This does not affect any co-governance forums which are established under separate legislation. However the term for the Councillor representatives on the Rotorua Te Arawa Lakes Strategy Group will end and the new council will appoint new representatives.

After the official election results have been declared in late October, the new Council will be established over the October – December period. This involves swearing the new Council into office, electing the Council's Chairperson and Deputy Chairperson, undertaking the Councillors' induction programme, adopting a new governance committee structure and associated appointments of committee chairpersons and deputies, appointments to the various committees and co-governance membership, and establishing the 2020 committee meeting schedule. Therefore it is anticipated that the next meeting of the Rotorua Te Arawa Lakes Strategy Group will be held early 2020.

In developing the 2020 Meeting Schedule, staff anticipate keeping the Rotorua Te Arawa Lakes Strategy Group meetings to the current quarterly meeting cycle and day of the week unless otherwise advised by the Rotorua Te Arawa Lakes Strategy Group Chair.

Merinda Pansegrouw  
**Committee Advisor**

**for Governance Manager**

**5 August 2019**