

Rotorua Te Arawa Lakes Programme 2019/20 Annual Report



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Part 1: **Purpose**

The purpose of this document is to report against the 2019/20 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.

Part Four of this report provides an update on deed funded activities, including their financial status. Part Five provides an update on non-deed funded activities that are captured in the annual work plan as part of the Rotorua Lakes Catchment.

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.

This Annual Report outlines the on-the-ground work undertaken by the Partners to collectively work towards the aspirations for the Te Arawa Lakes set out in the Vision and Strategy.

Part 2: **Overview**

Lake Rotorua

RLC and BOPRC Annual Plan Budget 2019/20 (\$000)	Actual year to date expenditure (\$000)	Approved Crown Funding (\$000)	Crown Funding received to date (\$000)	Crown Funding applied to date (\$000)
6,279	1,260	2,679	1,339	630

On 9 August 2019, the Environment Court released its (Stage 1) decision in favour of the Regional Council's proposed method for allocating nitrogen to landowners in the Lake Rotorua Catchment, via Plan Change 10. That decision directed Regional Council to provide further evidence on listed matters which included identifying additional nutrient allocation in relation to Treaty Settlement Land.

Appeal parties attended Court assisted mediation during November 2019 to work through the listed matters - resulting in an agreement resolving a number of appeal points. A Consent Order was granted by the Court on 29 May 2020 on all but one outstanding issue. The Stage 2 Environment Court hearing, to consider the remaining outstanding issue relating to the provision of an allocation to Treaty Settlement Land, occurred 7-11 September 2020.

Under Plan Change 10, 39 resource consents have been granted for properties over 40 ha in the Lake Rotorua Catchment and five properties have been assessed as being low-intensity (permitted activities). All remaining properties over 40 ha are now required to hold resource consent and staff will be ensuring this via the Advice and Support Service by year end 2020.

The Gorse Conversion Project has now concluded with all major gorse blocks within the catchment converted.

The Incentives Scheme has secured 22.5 t of nitrogen and staff continue to negotiate deals with property owners - with several in the pipeline. It had previously been reported that 25.9 t of nitrogen had been secured. This was due to the Incentives Committee approving an agreement for a deal of 3.5 t of nitrogen. Subsequent to the Incentives meeting on 2 October 2019, the Trustees of that land advised staff that they did not wish to progress with the deal, due to continuing uncertainties associated with the Plan Change 10 appeals. However, following a dNITRO demonstration and the resolution of Plan Change 10, the Trustees have now re-engaged and it is expected that an improved deal will be finalised in the near future, which may bring the total nitrogen removed from the lake to more than 26 t. There are also further deals in the negotiating pipeline and it is considered that the Scheme will continue to make progress over the next couple of years.

The Low Nitrogen Land Use Fund continues to be implemented. The Hemp Trial Project has been expanded to include additional flux meters to provide more accurate soil data. Operational milestones for the Miscanthus, Hazelnut and Volcanic Creamery Projects have been completed and the Caromal Orchard Funding Agreement is currently being finalised. Operational milestones for the Perrin Ag Farm Forestry Project are being met.

Rotorua Lakes Council (RLC) lodged their resource consent application for the Rotorua Wastewater Treatment Plant Alternative Disposal Site in August 2018. After a public notification process, a significant number of submissions opposing the application were received. The next stage is for the three parties to work collaboratively to develop the long term solution. Rotorua Lakes Council, Central North Island (CNI) Iwi Holdings, and Te Arawa Lakes Trust (TALT) have agreed to work together towards a new long term solution for the discharge of recovered wastewater. Council have applied from the Environment Court to place the direct referral on hold, pending a further request in the near future to formally withdraw the application. The Environment Court has approved that the proceedings can be put on hold. Catfish incursion management continued during 2019/20 on Lakes Rotorua and Rotoiti with 75,000 catfish netted, which is more than the previous four years netting combined. Research is ongoing, including investigating potential biocontrol options with National Institute of Water and Atmospheric Research (NIWA) and other research agencies, along with various pest fish management tools to reduce the catfish populations within the lakes.

Te Arawa Lakes Trust Catfish Programme dubbed "Catfish Killas" won the Community Pihanga Award and the Supreme Award at the New Zealand Biosecurity Awards in November 2019. The programme was also recently awarded the Supreme Award at the annual SOLGM Awards, along with the Te Puni Kokiri Award in Bi-Cultural Leadership. The Trust have around 750 volunteers and are continually growing and engaging the community on both catfish and wider aquatic pest issues in the Rotorua lakes, with an increased presence expected in the coming summer.

Lake Rotoehu

RLC and BOPRC Annual Plan Budget 2019/20 (\$000)	Actual year to date expenditure (\$000)	Approved Crown Funding (\$000)	Crown Funding received to date (\$000)	Crown Funding applied to date (\$000)
285	96	143	71	48

For the fourth year running, weed harvesting was unable to be undertaken due to limited lake weed caused by high algae growth.

Phosphorus locking was put on hold in June 2018 due to inefficiencies and has not been undertaken since. To overcome inefficiencies, a dosing protocol adding in-lake dosing has been proposed in the new resource consent application. The consent application is being progressed.

Wastewater reticulation will be a valuable addition to water quality improvement interventions at Rotoehu. Bay of Plenty Regional Council (BOPRC) and RLC will be working with the local communities to progress funding agreements for reticulation, in alignment with the completion timeframes of the Rotoiti reticulation.

Lake Ökāreka

RLC and BOPRC Annual Plan Budget 2019/20 (\$000)	Actual year to date expenditure (\$000)	Approved Crown Funding (\$000)	Crown Funding received to date (\$000)	Crown Funding applied to date (\$000)
320	234	160	80	117

During the year, the further Lake Ōkāreka Landuse Change Project approved by the Rotorua Te Arawa Lakes Strategy Group (RTLSG) in 2016 was completed. A further 78 ha of landuse change from gorse and pasture to mānuka and native species has been secured, taking the total landuse retirement in the catchment by the Programme to just under 236 ha. A period of monitoring is now required to establish the effect on lake water quality of the further change.

A new long term resource consent has been granted for the Lake Ōkāreka outlet that allows double the flow in Waitangi Stream (up to 500 L/s) during high lake levels. The first and second stages of stream protection works along the Waitangi Stream and mouth of the Waitangi Stream are complete, which will enable the increased flow. Upgrading of the gravity pipe is the final stage of the project and will be undertaken in the 2020/21 financial year. All of this project has been funded entirely by the Regional Council (not Deed funded).

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Lake Rotoiti

RLC and BOPRC Annual Plan Budget 2019/20 (\$000)	Actual year to date expenditure (\$000)	Approved Crown Funding (\$000)	Crown Funding received to date (\$000)	Crown Funding applied to date (\$000)
5,445	4,789	3,002	1.501	4,789

The Rotoiti/Rotomā Wastewater Treatment Plant was officially opened on 12 August 2019, and has gone through nine phases of testing and is now fully operational.

The pre-treatment systems for the Rotomā community (STEP) have been installed (208 of 212) and are operating. The mains reticulation network for Rotoiti area is now almost complete. Formal approvals to install infrastructure on land in Māori ownership, is required to enable construction of the final remaining reticulation network. Applications to the Māori Land Court will be submitted where registered owners are unknown.

The remaining work comprises the installation of pre-treatment systems at Rotoiti (currently under final tendering phase).

A condition inspection was carried out on the Ohau Wall to confirm corrosion rates in 2018. The inspection identified the first signs of holes in the wall since inspections started. The installation of 400 steel walers is underway and is expected to take 12 months.

Part 3: Rotorua Te Arawa Lakes annual water quality results

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

Working as one to protect out lakes with funding assistance from Ministry for the Environment

Lake Statistics (Water Quality Attributes)

Lake	Trophic	Level Index	National Policy Statement for Freshwater Management (NPS-FM)			10 Year Trends				Contact Recreational Attributes			
					ttributes		Improving	Ind	eterminate	Worsening			
	TLI 2019/20 [^] (TLI Target)	TLI 3 Year Avg	2019/20 Total Nitrogen Median	2019/20 Total Phosphorus Median	2019/20 Chl- <i>a</i> Median	2019/20 Chl- <i>a</i> Max	Total Nitrogen	Total Phosphorus	Chl-a	Water Clarity	Blue-green health warning	Cyano- bacteria Biovolumes 2017-20	Swimming water quality – faecal ²
Ōkāreka	3.0 (3.0)	3.3	А	А	В	А				_	N/A	N/A	Good
Okaro	4.5 (5.0)	5.0	С	с	С	В		<u> </u>		-	Yes	С	Good
Ōkataina	2.6 (2.6)	2.7	А	А	А	А			—	_	N/A	N/A	N/A
Rerewhakaaitu	3.6 (3.6)	3.9	В	А	В	А		_		_	N/A	N/A	Good
Rotoehu	4.4 (3.9)	4.8	В	В	С	С	-				Yes	C/D	N/A
Rotoiti	3.7 (3.5)	3.8	B/B	C/C	C/B	B/B					Yes	А	Excellent
Rotokakahi*	3.5 (3.1)	3.6	В	В	В	В	-	-		N/A	N/A	N/A	N/A
Rotomā	2.2 (2.3)	2.3	А	А	А	А					N/A	N/A	Excellent
Rotomahana	3.6 (3.9)	3.8	В	В	В	А		_		_	N/A	N/A	N/A
Rotorua	4.1 (4.2)	4.2	B/B	B/B	c/c	В					No	А	Poor
Tarawera	2.7 (2.6)	2.8	А	А	А	А					No	N/A	Excellent
Tikitapu	2.8 (2.7)	2.9	В	А	В	А	-		-	-	N/A	N/A	Good

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

^ No sampling occurred for March to May 2020 due to COVID lockdown; an average of February and June is used to supplement this missing data

² NPS-FM Human contact attribute based on 95 percentile E.coli during the bathing season

The Trophic Level What is Index?

The Trophic Level Index is a number used to indicate the health of lakes in New Zealand. As a general rule of thumb the higher the number, the worse the water quality in the lake.

The number is calculated using four separate water quality measurements – total nitrogen, total phosphorous, water clarity, and chlorophyll-a.

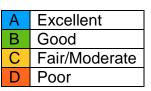
National Policy Statement for Freshwater **Contact Recreation** Attributes

To protect ecosystem and human health, attributes are measured to help determine the extent to which specific values are provided for. There is a range of different physical, chemical, microbiological and ecological attributes, and one attribute may apply to more than one value.

Attributes are graded A-D (E), with the National Bottom Lines set for some attributes. 'A' indicated ecosystems are healthy and resilient, or low risk to human health; to 'D' aquatic communities are in a persistent degraded state, or risk to human health from contact recreation is high.

Bathing and contact recreation sites are monitored during Summer throughout the Rotorua Lakes, to inform the public when and where it is safe to interact with the water. Not all lakes, or all bathing sites can be monitored, so popular and culturally significant sites are prioritised. Sites can be graded from Poor to Excellent based on attribute statistics in the NPS-FM.

Cvanobactreria are monitored in lakes with a history of algal bloom activity. Health warnings are issued by Toi Te Ora based on the volume of potentially harmful cells in the water, and sites are graded according to the NPS-FM.





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

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Lake Statistics (Ecological Attributes)

	Lake Submerged Plant Index ¹				Kōu	ra	Kākah	i	Catfis	sh
Lake	LakeSPI	LakeSPI Native	LakeSPI Invasive	Invasive Submerged Plants	Abundance	Trend	Abundance	Trend	Abundance Worsening	Trend
Ōkāreka	High	Index B	Index C	Present d	Moderate ³	-	Present ⁵	N/A	Absent⁵	N/A
Okaro	Moderate	С	С	u c	Absent ³		Absent ⁵	N/A	Absent ⁵	N/A
Ōkataina	Moderate	В	С	c,d	Abundant ⁴	N/A	Present ⁵	N/A	Absent⁵	N/A
Rerewhakaaitu	Moderate	С	С	b,c,d	Present ⁴	N/A	Present⁵	N/A	Absent⁵	N/A
Rotoehu	Moderate	С	С	a,c,e	Moderate ²	-	Moderate⁵	N/A	Absent⁵	N/A
Rotoiti	Poor	С	С	a,b,c,d	Moderate ¹		Abundant ¹		Abundant ¹	
Rotokakahi*	Moderate	С	С	с	Moderate ⁴	N/A	Abundant ⁵	N/A	Absent⁵	N/A
Rotomā	High	В	В	d	Abundant ³	—	Abundant ⁵	N/A	Absent ⁵	N/A
Rotomahana	Moderate	С	С	a,b,e	Absent ⁴	N/A	Absent ⁵	N/A	Absent ⁵	N/A
Rotorua	Moderate	С	С	b,c,d	Moderate ¹		Abundant ¹	-	Common ¹	
Tarawera	Moderate	С	С	a,b,c,d,f	Abundant ³	-	Abundant ⁵	N/A	Absent ⁵	N/A
Tikitapu	Moderate	С	С	d	Moderate ⁴	N/A	Absent⁵	N/A	Absent⁵	N/A

¹based on 2018 and 2019 LakeSPI survey data.

Invasive Submerged Plants: a) Ceratophyllum; b) Egeria; c) Elodea; d) Lagarosiphon; e) Potamogeton crispus; f) Ranunculus trichophyllus

¹ Seasonal monitoring; ² Spring and Summer monitoring; ³ 5-10 yearly monitoring; ⁴ Baseline survey only; ⁵ Observational data only

Lake Submerged Plant Index (Lake SPI)

The LakeSPI programme monitors macrophytes (aquatic plants) which are used to classify the ecological condition of lakes. The ecological status of a lake can be characterised by the composition of native and invasive plants.

'LakeSPI' index is a synthesis of components from both the native condition and invasive impact condition of a lake, and provides an overall indication of lake condition. The higher the score the better the condition.

Kōura and Kākahi Monitoring

Kōura and Kākahi monitoring is carried out by Dr Ian Kusabs of Kusabs and Associates Ltd. Kōura monitoring is undertaken on all the Rotorua Te Arawa Lakes. Regular kākahi monitoring surveys are carried out in Lakes Rotorua and Rotoiti to monitor the long-term effects of lake restoration initiatives on kākahi populations in the shallow littoral zone of these lakes.

Catfish Monitoring

Catfish were first detected in Lake Rotoiti in March 2016 and in Lake Rotorua in December 2018. Surveys have been undertaken to detect their presence in the other lakes. So far they are limited to Lakes Rotorua and Rotoiti.

Excellent
Good
Fair/Moderate
Poor



Part 4: Annual Plan of Interventions – Deed Funded Activities

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 Regional Policy Statement and provides a clear direction for water quality improvement on Lake Rotorua.

Led by	Project	At lake target	12 month target	Annual reduction achieved	Update	Budget \$000	Project status
BOPRC	Lake Rotorua Gorse Conversion Project	215 ha	215 ha	Complete	The Gorse Conversion Project has concluded with all major gorse blocks in the catchment converted.	Budget \$222 Spend \$70	
SHARED	Brunswick / Rotokawa Sewerage Reticulation Connections	N/A	N/A	N/A	A programme to connect all remaining properties within the Brunswick/Rotokawa scheme is in progress. For various reasons a number of properties remain unconnected with either site difficulties or affordability the main reasons. Progress is steady but slow requiring both landowner agreement and building consents to be issued.	Budget \$295 Spend \$52	•

Led by	Project	At lake target	12 month target	Annual reduction achieved	Update	Budget \$000	Project status
	Incentives	100 t N	35 t N	22.35 t N	Staff are using the updated dNITRO landowner decision support tool to progress landowner engagement for potential Incentives deals. dNITRO was developed with funding from the Low Nitrogen Land Use Fund and first released online in 2017. The tool is	Budget \$3,500	
					designed to enable landowners to easily understand the financial implications of converting all or part of their property to trees.	Spend \$510	
BOPRC					The tool has recently been updated to reflect a number of significant policy and economic changes, including the 1 Billion Tree Fund, enhancements to the NZ Emissions Trading Scheme, increases in NZUs (carbon units) price and increased knowledge of mānuka plantation performance. These changes have acted to make the growing of commercial forests more financially attractive and increased the financial benefit of growing permanent forests for carbon. In combination with Incentives funding, this makes tree planting a very attractive option for landowners in the Lake Rotorua Catchment and several landowners not previously in the Incentives pipeline are currently considering landuse change and sale of N as a result of property-specific dNITRO demonstrations.		
					It had previously been reported in the past as 25.9 t nitrogen secured. This was due to the Incentives Committee approving an agreement for the in-lake purchase of 4,018 kg N. Subsequent to the Incentives meeting on 2 October 2019, the Trustees advised staff that they did not wish to progress with the Agreement due to continuing uncertainties around the allocation of nitrogen resulting from the Plan Change 10 Appeals process. However, following a dNITRO demonstration, the Trustees have now re-engaged with Incentives and it is expected that an Incentives deal will be finalised in the near future.		

Led by	Project	At lake target	12 month target	Annual reduction achieved	Update	Budget \$000	Project status
SHARED	Engineering Solutions Including Lakeside Reticulation	50 t N	9.74 t N 0.8 t P	9.74 t N 0.8 t P	The reductions achieved to date are attributed to lakeside reticulation. Further engineering interventions are difficult - cost escalations have stopped the Tikitere Zeolite Project. Development and enhancement of wetlands has been identified as the main option to achieve the remaining target, but the level of nitrogen reduction is not clear. Staff have been working with landowners to progress wetland work, but these discussions can take time as 'package' of change is needed to get some landowners across the line. Staff have also been working with contractors to get removal of nitrogen fixing trees out of the catchment, in particular, alders in the Puarenga Catchment which provides some practical improvements for biodiversity also.	Budget \$30 Spend \$1	
BOPRC	Advice and Support Service	N/A	N/A	N/A	147 properties are now registered with Advice and Support; 89 over 40 ha and 58 under 40 ha. 39 resource consents have been granted under Plan Change10 for properties over 40 ha in the Rotorua Catchment. Five properties have been assessed as being low-intensity permitted activity.	Budget \$504 Spend \$120	•
BOPRC	Low Nitrogen Land Use Fund	N/A	N/A	N/A	The Low Nitrogen Land Use Fund has run two funding rounds since its inception and accepted some minor applications on an ad-hoc basis. Contracts in progress include a hemp trial project which has been expanded to include additional flux meters to provide more accurate soil data. Operational milestones for the Miscanthus, Hazelnut and Volcanic Creamery projects have been completed and the Caromal Orchard funding agreement is currently being finalised. Operational milestones for the Perrin Ag Farm Forestry Project are being met.	Budget \$502 Spend \$187	•

Led by	Project	At lake target	12 month target	Annual reduction achieved	Update	Budget \$000	Project status
BOPRC	Phosphorous Locking (Utuhina and Puarenga)	As required	As required	3.63 t P	Phosphorus locking was undertaken as usual to control in-lake phosphorus level. Phosphorus locking was put on hold during COVID-19 lockdown resulting in no issues with cyano blooms in Lake Rotorua, but some evidence of cyano accumulation in parts of Lake Rotoiti.	Budget \$665 Spend	
BC					The Puarenga plant requires tank renewal which will be undertaken in 2020/21. The Puarenga plant has been out of commission since August 2018. The lower dose from Utuhina plant has managed algal blooms for the past 20 months.	\$260	
BOPRC	Re-consenting of Phosphorus Locking on Lakes Rotorua and Rotoehu	N/A	N/A	N/A	The resource consent for phosphorus locking on Lake Rotorua is in its final stages of processing. The cultural impact assessment for Lake Rotoehu has been received and final discussions with iwi on conditions is being undertaken.	Included in above spend	
					Total budget Deed-funded 2019/20 Total expenditure Deed-funded 2019/20	\$5,718 \$1,200	

Lake Rotoehu

Key measures required to meet water quality expectations at Rotoehu are considered to be: phosphorous locking (with some changes to the historical alum dosing regimen), weed harvesting, landuse change and sewerage reticulation. Landuse change agreements were completed in the Catchment some time ago and monitoring of these is ongoing, along with monitoring of the Rule 11 benchmarks for the Catchment set through regulation. Sewerage reticulation is a project worth pursuing in the future. Phosphorous locking and weed harvesting are ongoing projects on the Lake.

Led By	Project	At lake target	12 month target	Annual reduction achieved	Update	Budget \$000	Project status
BOPRC	Weed harvesting	N/A	N/A	N/A	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. The clarity of Lake Rotoehu has improved over the last season and staff are hopeful that this will allow better weed growth for harvest next year.	Budget \$50 Spend \$26	
BOPRC	Phosphorus locking	N/A	N/A	N/A	The alum dosing for Rotoehu was turned off in June 2018, as the lake level was exceptionally high and the effectiveness of the alum was low. A new dosing protocol adding in-lake dosing has been proposed in the new consent application and this is expected to overcome this issue and provide a more effective dosing option. An update on the progress of the application is provided above.	Budget \$235 Spend \$69	
					Total budget Deed-funded 2019/20 Total expenditure Deed-funded 2019/20	\$285 \$95	

Lake Rotoiti

To meet community expectations for water quality the Ohau Diversion Wall and Sewerage reticulation are key interventions, along with Rule 11 benchmarks set for landuse in the Catchment.

Led By	Project	At lake target	12 month target	Annual reduction achieved	Update	Budget \$000	Project status
RLC	Sewerage Scheme Curtis Road to Hinehopu	4.9 t N 1.1 t P	0 t N 0 t P	0 t N 0 t P	 The Rotomā Wastewater Treatment Plant was officially opened on 12 August and is now fully operational. The reticulation network for Rotoiti area is about 75% complete. Formal approvals from Māori landowners are needed to enable construction of the remaining reticulation network as this is over a large number of parcels of Māori land. This will involve applications to the Māori Land Court where registered owners are not known. A Registration of Interest tender process has shortlisted suitable contractors and on-site systems at Rotoiti. Formal tenders will be sought over the next three months. For 2019/20, there were no nutrient gains associated with the Lake Rotoiti reticulation. 	Budget \$5,445 Spend \$4,789	
					Total budget Deed-funded 2019/20 Total expenditure Deed-funded 2019/20	\$5,445 \$4,789	

Lake Ökāreka

To meet community expectations for water quality, sewerage reticulation and landuse change are the key projects. Sewerage reticulation was completed some time ago now and landuse change has now been completed in two tranches on the Lake – as outlined below.

Led By	Project	Total Land Retirement Target	Total Land Retirement Achieved	Land Retirement Achieved this year	Update	Budget \$000	Project status
BOPRC	Land Use Retirement (Original + Further Approved 2016)	200 ha	236 ha	78 ha	The Land Use Fund project has brokered a deal with another landowner in the Lake Ōkāreka Catchment. This agreement has secured the conversion of 78 ha of pasture and gorse to mānuka and native species. This latest agreement takes the landuse change secured for this project to a total of 236 ha of newly planted or assisted regenerating native vegetation. This project is now closed.	Budget \$320 Spend \$234	
					Total budget Deed-funded 2019/20 Total expenditure Deed-funded 2019/20	\$320 \$234	

Part 5: Annual Plan of Interventions – Non Deed Funded Activities

Lake Rotorua

Led by	Project	Update	Budget \$000	Project status
RLC	Rotorua Wastewater Treatment Plant Alternative Disposal Site	Rotorua Lakes Council lodged their resource consent application for the Rotorua Wastewater Treatment Plant Alternative Disposal Site in August 2018. After a public notification process, a significant number of submissions opposing the application were received. The next stage is for the three parties to work collaboratively to develop the long term solution. Rotorua Lakes Council, CNI Iwi Holdings, and TALT have agreed to work together towards a new long term solution for the discharge of recovered wastewater. Council have applied from the Environment Court to place the direct referral on hold, pending a further request in the near future to formally withdraw the application. The Environment Court has approved that the proceedings can be put on hold.	Budget \$500 Spend \$803	
TALT	Cultural Impact Assessment for Rotorua Urban Stormwater Consents	This activity is on hold until RLC further the Rotorua Stormwater Consent and commission TALT to undertake the cultural impact assessment as part of the Stormwater Consent Project.	Budget \$100 Spend \$0	•
TALT	lwi Engagement Forum	Two hui held which were funded by other agencies: Freshwater Package (Te Ao Marama 2019), RMA reform and PWA Amendments hui (Te Tatou 2020).	Budget \$20 Spend \$0	

Led by	Project	Update	Budget \$000	Project status
	Plan Change 10	On 9 August 2019, the Environment Court released its (Stage 1) decision in favour of the Regional Council's proposed method for allocating nitrogen to landowners in the Lake Rotorua Catchment, via Plan Change 10. That decision directed Regional Council to provide further evidence on listed matters which included identifying additional nutrient allocation in relation to Treaty Settlement Land.	\$0	
BOPRC		Appeal parties attended Court assisted mediation during November 2019 to work through the listed matters - resulting in an agreement resolving a number of appeal points. A Consent Order was granted by the Court on 29 May 2020 on all but one outstanding issue. The Stage 2 Environment Court hearing to consider the remaining outstanding issue relating to the provision of an allocation to Treaty Settlement Land is set for 7 September 2020.		
		Under Plan Change 10, 39 resource consents have been granted for properties over 40 ha in the Lake Rotorua Catchment and five properties have been assessed as being low-intensity (permitted activities). All remaining properties over 40 ha are now required to hold resource consent and staff will be ensuring this via the Advice and Support Service by year end 2020.		
SHARED	Catfish Incursion Management (Lakes Rotorua and Rotoiti)	Catfish are currently contained to Lakes Rotoiti and Rotorua, with surveillance being undertaken in the wider Rotorua Lakes and Bay of Plenty. The catfish catch rate has significantly increased in Lakes Rotoiti and Rotorua in 2019-20 with a total of nearly 75,000 catfish being caught by contractors and volunteers. This is more than the previous four years netting combined. Research is ongoing, and investigating potential biocontrol options with NIWA and other research agencies along with various pest fish management tools to reduce the populations within the lakes.	Budget \$300 Spend \$251	
		Te Arawa Lakes Trust's catfish programme dubbed "Catfish Killas" won the Community Pihanga Award and the Supreme Award at the New Zealand Biosecurity Awards in November 2019. The program was also recently awarded the Supreme Award at the annual SOLGM Awards along with the Te Puna Kokiri Award in Bi-Cultural Leadership. The Trust have around 750 volunteers and are continually growing and engaging the community on both catfish and wider aquatic pest issues in the Rotorua Lakes, with an increased presence expected in the coming summer.		
		Total budget 2019/20 Total expenditure 2019/20	\$920 \$1,054	

Lake Rotoiti

Led by	Project	Update	Budget \$000	Project status
BOPRC	Install Monitoring Buoy	A contract has been let for the management and installation of the monitoring buoy network on six lakes. This replaces the now dated network that BOPRC owned, and provides an ongoing lake data collection system that provides real time access to lake water quality. Installation will be undertaken in 2010/21.	Budget \$36 Spend \$0	•
BOPRC	Ohau Diversion Wall	Ohau wall strengthening works are underway, including the installation of around 400 steel walers to the wall. The project is expected to take 12 months. MfE have approved for Deed money to be used for strengthening works being undertaken.	Budget \$684 Spend \$285	
TALT	lwi Engagement Forum	See Part 6 Lake Rotorua iwi engagement forum activity.	See Part 6	
		Total budget 2019/20 Total expenditure 2019/20	\$720 \$285	

Lake Ökāreka

Led by	Project	Update	Budget \$000	Project status
BOPRC	Lake Ōkāreka Streamworks	A new long term resource consent has been granted at Lake Ōkāreka that allows double the flow in Waitangi Stream (up to 500 L/s) during high lake levels. Stream protection works along the Waitangi Stream and mouth are complete with upgrading of the gravity pipe to be undertaken in the 2020/21 financial year.	Budget \$400 Spend \$406	

Led by	Project	Update	Budget \$000	Project status
BOPRC	Install Monitoring Buoy	A contract has been let for the management and installation of the monitoring buoy network on six lakes. This replaces the now dated network that BOPRC owned and provides an ongoing lake data collection system that provides real time access to lake water quality. Installation will be undertaken in 2010/21.	Budget \$36 Spend 0	•
TALT	Iwi Engagement Forum	See Part 6 Lake Rotorua iwi engagement forum activity.	See Part 6	
		Total budget 2019/20 Total expenditure 2019/20	\$436 \$406	

Lake Rotoehu

Led by	Project	Update	Budget \$000	Project status
RLC	Rotoehu Sewerage Reticulation	Engagement with the community is on hold pending the completion of Rotomā/Rotoiti sewerage scheme. Subsidy funding is being explored.	Budget \$0 Spent 2	
TALT	lwi Engagement Forum	See Part 6 Lake Rotorua Iwi Engagement Forum activity.	See Part 6	
		Total budget 2019/20 Total expenditure 2019/20	\$0 \$2	

Lake Tarawera

Led by	Project	Update	Budget \$000	Project status
SHARED	Farm Environment Plans for the inner and outer Tarawera Catchment	The Land Management team continues to work with landowners to implement the mitigations identified in the individual FEPs produced during this project. Attendance at a 'drop in day' a Rerewhakaiitu was excellent and there is strong interest in Council funded environmental programmes to retire land and protect waterways.	Budget \$0	
RLC	Sewerage Reticulation	The Tarawera community steering group identified a preferred option of reticulation along the roadside back to the Rotorua Wastewater Treatment Plant. Te Arawa Lakes Trust has provided two cultural impact assessments (the first looked at the importance of reticulation, the second the preferred option). Engagement with iwi and Maori landowners is continuing.	Budget \$0 Spent \$35	
ТАLТ	Tarawera Cultural Index	No update available.	Budget \$0	
TALT	Collective Impact Framework Developed	Funded via TALT Deed Fund with MfE. Engagement with the wider community has started with a survey and interviews. Initial phase one to be completed by end July 2020	Budget \$0	
BOPRC	Nutrient Modelling	The University of Waikato have initiated the modelling programme to check nutrient targets in Lake Tarawera. The output for this is expected in August 2020.	Budget Funded through MOA with university	•
BOPRC	Acacia Control	The Lake Tarawera Acacia control period ran for 15 weeks from June to September 2019, with a total of 24.1 ha controlled. The 2020 control programme commenced on 22 June on the Te Ariki Isthums.	Budget \$0 Spend \$46	

Led by	Project	Update	Budget \$000	Project status
		Total budget 2019/20 Total expenditure 2019/20	\$0 \$81	

Lake Rotomā

Led by	Project	Update	Budget \$000	Project status
BOPRC	Forest Harvesting Effects Investigation	The four year monitoring programme around the impact of forest harvesting has been completed and the final report received. The key conclusions from this study indicate that three years after harvest, nitrogen losses were reduced back to below pre-harvest levels and soil phosphorus losses were predicted to increase during harvest, actual groundwater levels were extremely low.	Budget \$0	
		Total budget 2019/20 Total expenditure 2019/20	\$0 \$0	

Lake Ōkataina

Led by	Project	Update	Budget \$000	Project status
ТАLТ	WaiOra Stage Two	Aligning the WaiOra Project with the Cultural Health Index.	Budget \$0	
		Total budget 2019/20 Total expenditure 2019/20	\$0 \$0	

Lakes Rotomahana and Okaro

Led by	Project	Update	Budget \$000	Project status
ТАLТ	Cultural Health Index	No update available.	Budget \$0	
		Total budget 2019/20 Total expenditure 2019/20	\$0 \$0	

Part 6: 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 2019/20 for both Rotorua Lakes Council and Bay of Plenty Regional Council.

Rotorua Te Arawa Lakes Programme - Report B

Final - Financial Progress Statement - Quarter 4 Report 2019/20 (July 2019 to June 2020)

	Fun	ding deed clause 5	4.1	5.4.2 (a) Note 1	5.4.2 (b) / 5.2.2 (d)			5.4.2 (c)	5.4.2 (d) Note 2
Interventions	(A) Final Annual Plan (with carry forwards)		(B - A) Variance to date over/(under) spend	(D) Council funding excluding Crown grants (50% of B)	(E) Approved Crown funding 2019/20	(F) Crown funding received to date	(G) = (B - D) 50% Crown funding applied to date	(H) Reserve interest accrued	(I) Other funding sources
Lake Rotoehu		\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000
Weed Harvesting	50	26	(24)	13	25	13	13	0	0
Phosphorus Locking Soda Springs	235	69	(166)	35	118	59	35	0	0
Aeration Projects	0	1	1	1	0	0	1	0	0
Total Lake Rotoehu	285	96	(189)	48	143	71	48	0	0
Lake Ōkāreka									
Land Management Change	320	234	(86)	117	160	80	117	0	0
Total Lake Ōkāreka	320	234	(86)	117	160	80	117	0	0
Lake Rotorua									
Advice and Support	504	120	(384)	60	252	126	60	0	0
Phosphorus Locking	665	260	(405)	130	333	166		0	0
Tikitere Diversions	0	8	8	4	0	0	4	0	0
Gorse	222	70	(152)	35	111	55	35	0	0
Land Incentive Payments	3,500	510	(2,990)	255	1,289		255	0	0
Land Incentive Board Administration	561	47	(514)	23	281	140	23	0	0
Low Nitrogen Land Use Fund	502	187	(315)	94	251	126	94	0	0
Lakes Engineering Solutions	30	1	(30)	0	15	8	0	0	0
Sewerage Reticulation	295	52	(243)	26	148	74	26	0	0
Total Lake Rotorua	6,279	1,260	(5,019)	630	2,679	1,339	630	0	0
Lake Rotoiti									
Ohau Wall	0	0	0	0	0	0	0	0	0
Sewerage Reticulation	5,445	4,789	(656)	2,394	3,002	1,501	2,394	0	0
	5,445		(656)	2,394	3,002			0	0
Total Lake Rotoiti	5,445	4,789	(656)	2,394	3,002	1,501	4,789	0	0
Total Programme by Council									
Rotorua Lakes Council	5,740	4,841	(899)	2,420	3,149	1,575	2,420	5,926	0
Bay of Plenty Regional Council	6,590	1,538	(5,051)	769	2,834			77	0
	12,330	6,379	(5,950)	3,190	5,983	2,991	3,190	6,003	0

5.4.2 (c)	5.4.2 (d) Note 2
(H)	(1)
Reserve interest	Other funding
accrued	sources

Rotorua Te Arawa Lakes Programme - Report B

Final - Financial Progress Statement - Quarter 4 Report 2019/20 (July 2019 to June 2020)

-	Fun	ding deed clause 5	.4.1	5.4.2 (a) Note 1	5.4.2 (b) / 5.2.2 (d)			
	(A)	(B)	(B - A)	(D)	(E)	(F)	(G) = (B - D)	
	Final Annual Plan	Actual year to	Variance to date	Council funding	Approved Crown	Crown funding	50% Crown	
Interventions	(with carry forwards)	date expenditure	over/(under)	excluding Crown	funding 2019/20	received to date	funding	
			spend	grants			applied to date	
				(50% of B)				
Total Programme Expenditure	12,330	6,379	(5,950)	3,190	5,983	2,991	3,190	
Programme reserve account interest accrued								
5.4.2 (a) Note 1: Funding detail - Council								
RLC general funding			2,420					
RLC reserve			2,420	Percentage indicato	rs based on: YTD	Spend vs YTD Bu	get	
BoPRC reserves			769	Less than 20%				
BoPRC targeted rates			385	Between 21 - 29%				
BoPRC general funding			385	Greater than 30%				
Total funding detail - Council			6,379					
5.4.2 (b) Note 2: Funding detail - any other sou	irce		0					
Miscellaneous income			0					
Total funding from any other source								



5.4.2 (d) Note 2 (I) Other funding sources

6,003

0

On track Moderate risk At risk