

Operational Plan for Te Arawa Lakes Aquatic Weed Management

**Koheri ra! Kohera e!
Tutapa mai nuku, tutapa mai whiti
Kia rongo te pō, kia rongo te ao
Kia pā tata mai tō hau manawa
Ki tōku aronga manawa
Hai puta ki te whai ao, ki te ao mārama
Tihē Mauri Ora!
*Toitū te wai,
toitū te whenua,
toitū Te Arawa***

Resource consents

- **68367-AP** (Bay of Plenty Regional Council, Land Information New Zealand)
- **RM16-0520-AP** (Bay of Plenty Regional Council)

Te Arawa Lakes Treatment Areas

Aquatic weed control operations will be taking place intermittently from 2nd of May 2022 until 6th of June 2022 in Lake Rotorua, Lake Rotoiti, Lake Tarawera, Lake Ōkātaina, Lake Rotomā and Lake Rerewhakaaitu using the herbicide Diquat Dibromide. Follow up treatment may be applied following this period depending on the results of the initial treatment. A rāhui on the area of control prohibiting swimming, taking food, and collecting drinking water will be in place for 24 hours following control operations. Signage will be erected during this time to ensure all lake users are aware of this rāhui. See Appendix 1 for control sites.

Table 1. Treatment areas and proposed dates of control for each lake.

Lake	Treatment area (ha)	Treatment area as a percentage of lake area (%)	Application method	Proposed date range
Rerewhakaaitu	1.36	0.2	Boat	2 – 6 May 2022
Ōkātaina	6.59	0.6	Boat	9 – 20 May 2022
Rotorua	55	0.6	Boat	2 – 6 May 2022
Rotoiti	57.05	1.6	Boat	6 – 20 May 2022
Rotomā	2.54	0.2	Boat	9 – 20 May 2022
Tarawera	4.02	0.09	Boat	2 – 6 May 2022



Consent conditions

Water takes: Affected water takes will be notified prior to control works.

Areas of native nesting bird roosting or breeding: No native nesting birds roosting or breeding near sites at this time of year.

Sites of significance to tangata whenua: No known sites of cultural significance within control sites.

Notification: all practical steps will be taken to ensure that the community, including the Rotorua Lakes Council, the Medical Officer of Health, iwi with mana whenua, landowners and occupiers adjoining or adjacent to areas to be sprayed, and the public are aware of control operations and subsequent rāhui and provided with contact information to discuss any queries or concerns. See Appendix 2 for Communications Plan.

Current weed conditions: A pre-spray monitoring survey was undertaken from the 14th of March to the 27th of March. At the time of survey, weed and water conditions were suitable for Diquat application in the lakes listed in Table 1. above. Lake Rotoehu was surveyed however weed conditions are not suitable for Diquat application. Lake Okareka has not been included due to successful results from previous aquatic weed control operations.



Appendix 1: Control sites for each lake

Rerewhakaaitu



Site name	Treatment Area (Hectares)	Application Method	Preferred Date Range
Homestead Arm	1.35	Boat	2 – 6 May 2022



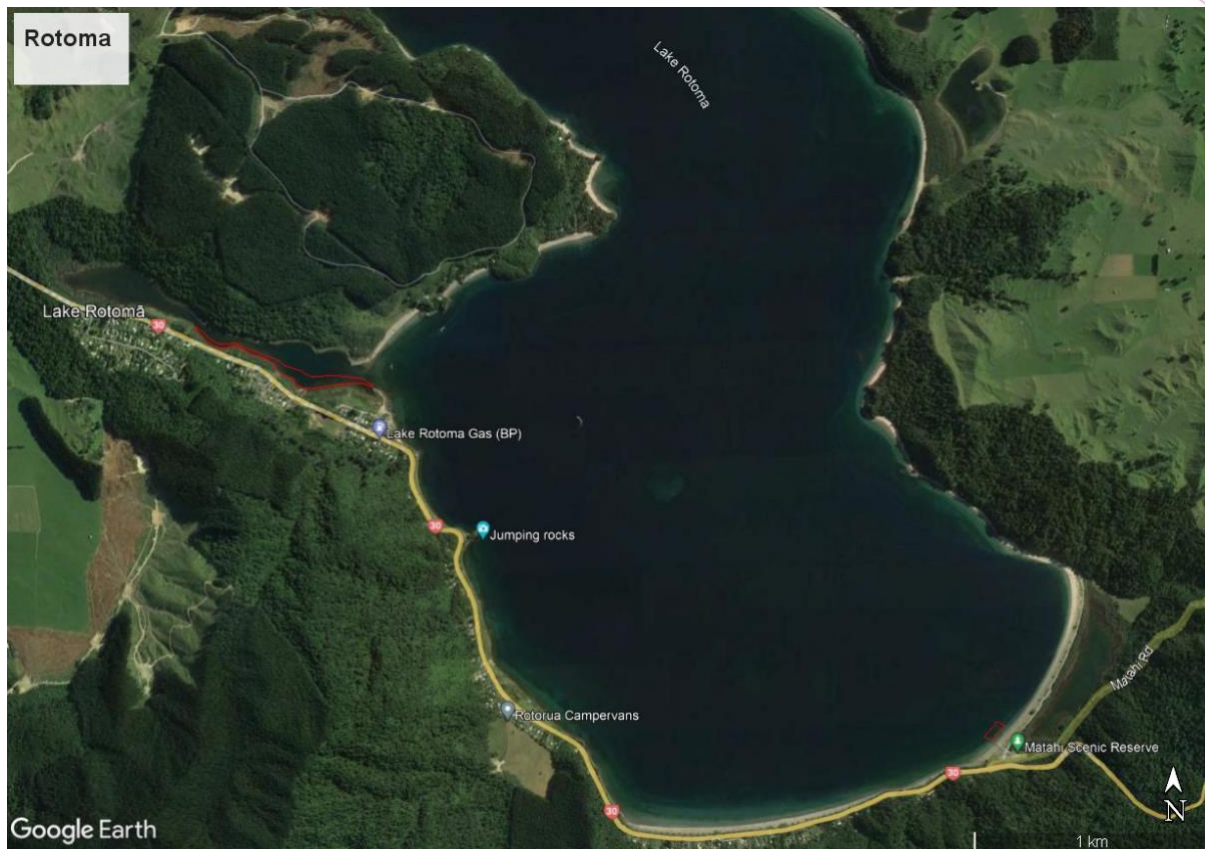
Tarawera



Site name	Treatment Area (Hectares)	Application Method	Preferred Date Range
Boat Shed Bay	0.18	Boat	2 - 6 May 2022
Kotukutuku Bay/The Landing	0.11	Boat	2 - 6 May 2022
Stoney Point	0.52	Boat	2 - 6 May 2022
Stoney Point Uwhi Site	0.70	Boat	2 - 6 May 2022
Otumutu Lagoon/Humphries Bay	1.21	Boat	2 - 6 May 2022
Te Rata Bay/Hot Water Beach	0.23	Boat	2 - 6 May 2022
Te Karamea Bay	0.21	Boat	2 - 6 May 2022
Wairua Stream Mouth	0.53	Boat	2 - 6 May 2022
Rapatu Bay	0.42	Boat	2 - 6 May 2022



Rotomā



Site name	Treatment Area (Hectares)	Application Method	Preferred Date Range for spray
Matahi Spit	0.3	Boat	9-20 May 2022
Whangaroa Inlet	2.24	Boat	9-20 May 2022



Ōkātaina



Site name	Treatment Area (Hectares)	Application Method	Preferred Date Range for spray
Log Pool Bay	0.87	Boat	9-20 May 2022
Oruroa bay and Point Beach	4.14	Boat	9-20 May 2022
Turanganui/Boat Ramp	0.20	Boat	9-20 May 2022
South West Corner	0.53	Boat	9-20 May 2022
Haumingi Bay	0.36	Boat	9-20 May 2022
Ngahaua Bay	0.49	Boat	9-20 May 2022



Rotoiti



Okawa Bay

Okawa Bay 1	2.6	Boat	9 May 2022
Okawa Bay 2	1.4	Boat	23 May 2022
Okawa Bay 3	1.4	Boat	6 June 2022

Site name	Treatment Area (Hectares)	Application Method	Preferred Date Range for spray
Gisborne Point	17.1	Boat	6-20 May 2022
Te Ruato Bay	1.53	Boat	6-20 May 2022
Hauparu Bay	0.16	Boat	6-20 May 2022
Okahuturoa/Cherry Bay	3.63	Boat	6-20 May 2022
Te Weta Bay	0.62	Boat	6-20 May 2022
Te Ti Bay	3.23	Boat	6-20 May 2022
Otaramarae	3.31	Boat	6-20 May 2022
Okere Inlet	7.58	Boat	6-20 May 2022
Kakaho Bay	1.65	Boat	6-20 May 2022
Hot Springs	0.1	Boat	6-20 May 2022
Whangamoā Drive	0.1	Boat	6-20 May 2022
Tapuaekura bay	0.15	Boat	6-20 May 2022
Te Waiiti Point	5.99	Boat	6-20 May 2022
Tokerau Bay	0.63	Boat	6-20 May 2022
Teal Bay	0.70	Boat	6-20 May 2022
Wairau Bay	0.89	Boat	6-20 May 2022
Te Akau Bay	4.15	Boat	6-20 May 2022
Manupirua Bay	0.11	Boat	6-20 May 2022



Rotorua



Site name	Treatment Area (Hectares)	Application Method	Preferred Date Range for spray
Kawaha Point	55	Boat	2 - 6 May 2022

Appendix 2: Communications Plan

This communications plan is written in accordance with Resource Consent 68367-AP granted by Bay of Plenty Regional Council for the purpose of controlling aquatic weeds with Diquat Dibromide across Te Arawa Lakes.

Communication objectives

- Engage with stakeholders and audiences to notify them of aquatic weed control works and use this as an opportunity to empower lake users with information about invasive lakeweeds and aquatic weed management.
- Provide a clear pathway for lake users to enquire about operations. Follow up on enquiries and supply sufficient information to ease any concerns.
- Ensure relevant audiences are informed of aquatic spraying operations including location and timing of proposed spraying and withholding period or rāhui for taking of water, swimming, and taking of fish for consumption.
- Comply with resource consent conditions.

Stakeholders and target audiences

- Target audiences are broken down into four categories:
 - **Mana whenua:** iwi and hapū who hold mana whenua status over spraying areas and/or have wāhi tapu or māhinga kai within spraying areas.
 - **Adjacent landowners:** public and private landowners adjacent to spraying areas.
 - **Business owners:** parties with economic or resource interests in spraying areas, including tourism operators and consent holders.
 - **Community groups:** community associations, schools, recreational lake users and any other local parties which have an interest in the spraying area.
- **Delivery partners**
 - Bay of Plenty Regional Council (BOPRC)
 - Toitū Te Whenua Land Information New Zealand (LINZ)
 - Te Arawa Lakes Trust (TALT)
 - Rotorua Lakes Council (RLC)
 - Department of Conservation (DOC)
 - Fish and Game (F&G)
 - National Institute of Water and Atmospheric Research (NIWA)
 - AquaAg Ltd.
 - Medical Officer of Health (enquiries@toiteora.govt.nz). To be informed of proposed spray works and of any poisoning events and/or environmental contamination.

Key messages

- Aquatic weed spraying will be occurring in _ area on _ date.
- A 24-hour rāhui or stand down period applies for swimming, taking of water and taking of fish for consumption.
- Invasive lakeweeds are a particular problem in Te Arawa rohe due to their ability to form large dense weed beds that have a negative impact on the lake ecosystem including our native species.
- Spraying invasive lakeweeds with the herbicide Diquat is a safe and effective way of suppressing these invasive lakeweeds based on current research and when used correctly it has no adverse effects on native species or humans.

- Consent has been granted by BOPRC to discharge the herbicide diquat into waterbodies for the purposes of controlling aquatic weeds.
- Any questions or comments concerning these matters can be directed to Te Arawa Lakes Trust via aquaticweed@tearawa.iwi.nz or 0220283969

Approach

Engagement will occur at three levels:

1. **Notify target audiences** via **letter, email** and/or **phone call** detailing the location and timing of proposed spraying dates and rāhui information about taking of water, swimming, and taking of fish for consumption, and contact details for TALT. All target audiences identified above will be notified at this level. A template for this notification has been provided below and will be altered to cater to each target audience group and their specific needs.
2. Distribute written and video **media release** about upcoming aquatic weed spraying, the nature of diquat and invasive lakeweeds through local and regional newspapers, radio, stakeholder websites and social media.
3. **Signage** will be erected at each lake detailing the location and timing of control operations, their duration, information about rāhui for taking of water, swimming, and taking of fish for consumption, and contact details for TALT. See Appendix 3 for signage locations. Signage will be removed following this rāhui.

Channels of engagement

Channel	Details of engagement	Timing (approximate)
Written and video media release	Informative written and video media release distributed via social media and stakeholder websites.	1 - 2 weeks prior to control operations
Email/letter/phone call	All target audience groups to receive notification through this channel.	1-2 weeks prior to control operations and throughout control operations
Websites	Copy of Operations Plan and information about the nature of Diquat provided on stakeholder websites.	2 weeks prior to control operations
Newspaper	Notices in NZME publications and Rotorua Daily Post.	1 week prior to control operations
Radio	Announcements made before and during control operations.	1 week prior to control operations
Social media	Posts will be made on TALT social media pages and shared by stakeholder social media pages. Content will be developed by TALT and once posted a link will be distributed to stakeholders to share.	3 days prior to control operations and throughout control operations
Signage	Signage erected at each spray site.	2 days prior to control operations



Contact details

Any queries should be directed to Te Arawa Lakes Trust via email aquaticweed@tearawa.iwi.nz or phone 0220283969. Further updates in relation to the work and treatment progress can be found on www.tearawa.iwi.nz and www.linz.govt.nz.

Feedback form

Te Arawa Lakes Trust Weed Spray Feedback Form

Please fill this form out and return to 1194 Haupapa Street, Rotorua, or email it to aquaticweed@tearawa.iwi.nz if you have any feedback regarding aquatic weed management operations.

This form will be assessed by Te Arawa Lakes Trust Health and Safety Officer.

Contact details

Name:	
Contact Number:	
Email address:	
Postal address: (optional)	
Signature: Date:	

Location of interest:

Method of application:	Yes/No
Boat	
Helicopter	
Manual (knapsack)	

Feedback:



Appendix 3: Signage locations

Table 1. Locations of signage for each lake

Lake name	Signage locations
Rotorua	<ul style="list-style-type: none"> • Lakefront boat ramp • Hannahs Bay boat ramp • Hamurana boat ramp • Ngongotahā boat ramp • Ohinemutu Church • End of Whittaker Road • End of Bennetts Road • Karenga St Reserve • Manahi Ave Reserve • Haumoana St Reserve • Hei matau paddlers reserve
Rotoiti	<ul style="list-style-type: none"> • Otaramarae boat ramp • Delta boat ramp • Gisborne Point boat ramp • Okawa Bay boat ramp • Hinehopu boat ramp • Rotoiti Holiday Park boat ramp • Takinga Marae • Taheke Marae • VR Lake Resort • Ngareta Rd • Te Akau Reserve • Okere Rd • Te Weta Bay walkway
Tarawera	<ul style="list-style-type: none"> • The Landing • Boatshed Bay • Stoney Point boat ramp • Stoney Point Reserve • Otumutu lagoon boat ramp
Rotomā	<ul style="list-style-type: none"> • Merge boat ramp • Matahi spit boat ramp • Rest stops around inlet (2) • Otangiwa Point
Ōkātina	<ul style="list-style-type: none"> • Lodge boat ramp • Main beach in front of lodge
Rerewhakaaitu	<ul style="list-style-type: none"> • Brett Road boat ramp • Half Moon Bay boat ramp • Brett Road DOC campsite • Guy Roe Reserve boat ramp

