



Kawarau River Lakeweed Spraying Public Notification Protocol

Kawarau River Aquatic Weed Management
Prepared for Land Information New Zealand

14 March 2024



1.0 Document purpose

This document sets out the public notification standards for boat-based aquatic weed spraying in Kawarau River as part of Toitū Te Whenua Land Information New Zealand's (LINZ) annual aquatic control work programme. The public notification standards are made up of five separate but interlinked standards for:

- warning signs
- print and online local newspapers
- email notifications to a stakeholder list
- email notifications to owners of consented water takes
- information on the LINZ website.

The public notification standards ensure that the local community is notified via various channels with different target audiences.

2.0 About lagarosiphon

Lagarosiphon major (also known as South African oxygen weed) is an unwanted organism under the Biosecurity Act 1993. There are severe penalties for people who knowingly sell or distribute this species. It is a highly challenging and expensive weed to control. Once established, the ability to eradicate it is extremely difficult (see [Freshwater Invasive Species of New Zealand 2020](#) for more information). The most feasible control objective within the Kawarau River is a mixed approach of progressive containment and eradication. The goal is to expand the Eradication Zone downstream as we remove weeds from the areas currently under progressive containment. This is the most effective approach under the Otago Regional Pest Management Plan 2019-29.

The areas of control in Kawarau River are agreed upon by the Lake Wakatipu Aquatic Weed Management Group and are included in the *Ten-year Lagarosiphon Management Plan for Lake Wakatipu: 2020 to 2030* (NIWA, 2020).

3.0 Aquatic herbicides

Treatment of lagarosiphon at Kawarau River uses diver-based control methods and herbicide treatment using diquat dibromide. Diquat is one of two herbicides in New Zealand that are registered for direct application into water for the purpose of controlling aquatic weeds (endothall being the other). Diquat is the active ingredient in Reglone®, a herbicide used in New Zealand for over 60 years for agricultural operations and lake weed control.

Diquat is a selective herbicide that controls unwanted aquatic weed species. Most native plant species are not affected by diquat at the rates at which they are applied, nor are fish species affected. When diquat comes into contact with aquatic weeds, it is rapidly absorbed, producing

peroxide that acts like a bleach, desiccating plant tissue and disrupting cell membranes. It is recommended that lake users do not swim, fish, consume, or use water for irrigation until 24 hours after control.

The use of diquat in Otago waterways is a permitted activity under the Regional Plan: Water for Otago rule 12.B.1.1 (https://www.orc.govt.nz/media/12421/regional-plan_water-for-otago-updated-to-4-june-2022-chapters-1-19.pdf).

For more information on diquat please see the factsheet provided by NIWA [Diquat FAQs_A4.indd \(niwa.co.nz\)](#).

4.0 Public notifications

Before undertaking boat-based weed spraying, a range of public notification channels are used to inform lake and river users, including owners of consented water takes, neighbouring landowners, district and regional councils, iwi, advocacy groups, and the local community, of the timing and use of herbicide treatment at Kawarau River.

4.1 Warning signage

Warning signs will be erected at key access points to the planned treatment sites. Figure 1 below shows the signage locations around Kawarau River.

Figure 1. Warning signage locations

Table 1: Signage Locations Kawarau River:

Pin name	Location	Sign location
Sign 1	Riverside Rd paddock access track	On gate of access road
Sign 2	Riverside Rd river access road	On fence along river access road
Sign 3	Riverside Rd Twin Rivers trail	On fence at start of Twin Rivers trail
Sign 4	Twin Rivers trail intersects road	At trail fork
Sign 5	River access at very end of Riverside Rd	At river access
Sign 6	Intersection of Twin Rivers trail and Queenstown trail	At trail fork
Sign 7	Shotover Delta Rd Queenstown trail intersection	At trail fork

Signage will be erected 24 hours before the scheduled date of control and will remain in place for at least 24 hours. Signs will be removed once the 24-hour stand-down period for swimming, fishing, and taking water has lapsed following control operations.

Figure 1 shows the signage that will be erected. This sign includes information on:

- the proposed treatment dates
- the diquat label recommendations for stand-down times
- target weed species, application method and hazard classification of diquat
- a scannable QR code that links to the LINZ webpage, giving up-to-date information on specific sites and timing for when sites were controlled and when they are safe to use again
- an 0800 number that can be called during business hours if a member of the public has questions about the control operations

A signage register is kept up to date to record information on the location of signs and when they are erected and removed.



Figure 2. An example of a warning sign that will be erected at key lake access points proximate to the application areas.

4.2 Newspaper advertisements

Newspaper notifications will be placed in local newspapers seven days prior to the scheduled date of control, as well as on the first day of the period in which spraying is planned to be carried out.

The information included in the newspaper notifications includes:

- the proposed treatment dates and location
- the diquat label recommendations for standdown times
- target weed species, application method and hazard classification of diquat
- an 0800 number that can be called during business hours if a member of the public has questions about the control operations.

Notifications will be placed in the following newspapers:

- Wanaka Sun (print and online)
- Otago Daily Times (print and online)

4.3 Stakeholder emails

Emails are sent to a comprehensive list of stakeholders, which include district and regional councils, DOC offices, community groups, relevant businesses, schools, and affected

individuals. Emails are sent in advance of proposed spray dates and 24 hours before application on the day(s) of application and after application.

The information included in the email notifications includes:

- the proposed treatment dates and locations
- maps showing the proposed spraying locations
- a PDF version of the NIWA diquat fact sheet
- the diquat label recommendations for standdown times
- target weed species, application method and hazard classification of diquat
- an 0800 number that can be called during business hours if a member of the public has questions about the control operations

Please email biosecurity@boffamiskell.co.nz if you would like to be added to the distribution list.

4.4 Notifications to owners of consented water takes

Identification of consented water takes is undertaken 10 days before application using the Otago Regional Council's surface water take information database. The owners of consented water takes within one kilometre of application areas will be notified via email at least seven days before the planned application.

The information included in the email notifications includes:

- the proposed treatment dates and location
- the diquat label recommendations for standdown times
- target weed species, application method and hazard classification of diquat
- an invitation to discuss how spraying could occur without contaminating water supplies. Mitigations may include temporarily disabling the water take or electing not to treat the proposed control site

4.5 LINZ website

Notification of spraying is published on the [LINZ website](#), giving up-to-date information on current and upcoming control at lakes and specific sites. This information includes the scheduled date of control, the actual date of treatment, and if the site is safe to swim at, gather food from, and/or take water for irrigation or domestic purposes.

This LINZ website can be accessed using a scannable QR code on warning signage.



Figure 2. An example of a scannable QR code included on warning signage that will be erected at key lake access points proximate to the application areas.

4.6 Public queries

Should a member of the public have any queries, concerns, or feedback, they are encouraged to contact Boffa Miskell on 0800 638 943 or email biosecurity@boffamiskell.co.nz. All enquiries are responded to during business hours as soon as possible and logged for future reference.

About Boffa Miskell

Boffa Miskell is a leading New Zealand professional services consultancy with offices in Whangarei, Auckland, Hamilton, Tauranga, Wellington, Nelson, Christchurch, Dunedin, and Queenstown. We work with a wide range of local and international private and public sector clients in the areas of planning, urban design, landscape architecture, landscape planning, ecology, biosecurity, cultural heritage, graphics and mapping. Over the past four decades we have built a reputation for professionalism, innovation and excellence. During this time we have been associated with a significant number of projects that have shaped New Zealand's environment.

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