

SYMPOSIUM INTRODUCTION

Our 2022 Symposium is the 12th such event since 2001. Over this time, many topics related to water quality and lake restoration have been canvassed – with presenting the latest scientific information being a critical element. Freshwater resources in New Zealand are under threat of ongoing decline in quality and with this comes a threat to biosecurity, biodiversity, loss of amenity values and social, cultural and economic negative impacts.

Our 2022 Symposium focuses on being proactive and possibly pre-emptive in terms of actions needed to mitigate the impacts of climate change, urban development and intensification, land use change and potential incursions of pest animals and plants. Understanding the science and technical aspects of these issues plays a critical part of developing the management strategies for the future. Take the opportunity of the next two days to understand how to build more resilience into managing our freshwater resources and advocate for actions that have water quality and ecosystem values at the centre.

PRESENTERS INCLUDE



Dr Scott Larned
Chief Scientist,
Freshwater & Estuaries,
NIWA



Dr Deborah Hofstra
Principal Scientist,
NIWA



Hon David Parker
Minister for
the Environment



Eugene Berryman-Kamp
Director,
Te Mana o Te Wai,
Ministry for the Environment



Dr Susan Secker
Manager, Forest Operational
Policy, Te Uru Rākau/NZ
Forest Service



Helen Creagh
Manager,
Rotorua Catchments,
Bay of Plenty
Regional Council



Dr Susie Wood
Cawthron Institute



Prof Deniz Ozkundakci
Associate Professor,
University of Waikato,
Bay of Plenty Regional
Council Chair in Lake
and Freshwater Science



Prof David Hamilton
Australian Rivers Institute,
Griffiths University,
Queensland,
Australia



Dr Stewart Ledgard
Principal Scientist,
Ag Research



Paul Champion
Principal Scientist,
Freshwater Ecology,
NIWA



John Walsh
Director,
Readiness and Response
Services, MPI

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www.lakeswaterquality.co.nz/become-a-member

**INDIVIDUAL & FAMILY
MEMBERSHIP**
\$20 inc. GST
PER YEAR

- Actively participate in the Society
- Receive updates about what is happening around our lakes
- Attend our Annual General Meeting to meet like-minded lake advocates
- Contribute to our submissions
- Reduced symposium registration rates
- Demonstrates your support for our aims and objectives
- Contribute at the National level on future water reforms

**CORPORATE
MEMBERSHIP**
\$100 inc. GST
PER YEAR

- Supporting the activities of the Society
- Receive updates about what is happening around our lakes
- Attend our Annual General Meeting to meet like-minded lake advocates
- Reduced symposium registration rates
- Gateway to other community groups regarding lake water quality in New Zealand
- Demonstrates your support for our aims and objectives
- Contribute at the National level on future water reforms

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LAKES COUNCIL**



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LAKESWATER QUALITY

Lakeswater Quality Society
Te Kahui Kounga Wai

SYMPOSIUM 2022

10-11 NOVEMBER 2022



GET ON THE BOAT

LAKE RESTORATION
Changes, Challenges &
Maintaining Momentum

OFFICIAL PROGRAMME

DAY ONE

THURSDAY 10TH NOVEMBER

RESTORING AND MAINTAINING THE MAURI OF OUR LAKES

SESSION 1

State of our Lakes & Freshwater

Chair: John Gifford, Chair, LakesWater Quality Society, LWQS

8.30 **Mihi Whakatau/Karakia**
Dr Ken Kennedy: LWQS Committee

8.40 **Whakapapa - Rotorua Lakes**
Geoff Rolleston: Chair, Te Arawa Lakes Trust

8.50 **State of Our Lakes and Freshwater**
Dr Scott Larned: Chief Scientist, Freshwater, and Estuaries, NIWA

9.20 **Our Lake Health, Past, Present & Future**
Dr Marcus Vandergoes: Paleo-ecologist, GNS
Dr Susie Wood: Freshwater Scientist, Cawthron Institute

9.40 **Lake Rotorua Status**
Chris McBride: LimnoTrack & Dr Grant Tempora: University of Waikato

10.00 **Morning Break**

SESSION 2

Essential Water - Policies Impacting on the Management of Water Resources

Chair: Don Atkinson, Past Chair LWQS & Symposium Committee Member

10.30 **Te Mana O Te Wai and its Implementation**
Eugene Berryman-Kamp: Director Te Mana o Te Wai Implementation Partnership, Ministry for the Environment

10.55 **The Lens of Te Arawa (Vision and How to Get There)**
Nicki Douglas: Environmental Manager, Te Arawa Lakes Trust

11.20 **Implications of Climate Change Policy and Reduction of Greenhouse Gas Emissions on Dairy Farms for Nitrogen Losses to Water**
Dr Stewart Ledgard: Principal Scientist, Ag Research

11.40 **Managing Lakes in the Canterbury High Country**
Dr Tina Bayer: Environment Canterbury

12.00 **Lunch Break: Blessing**

SESSION 3

Maintaining and Enhancing the Biodiversity of the Lakes

Chair: Dr Stuart Corson, LWQS Committee

1.00 **Catfish Killa Programme - Rotorua Lakes**
Keeley Grantham: Biosecurity & Biodiversity Officer, Te Arawa Lakes Trust

1.20 **What Plants are in our Lakes?**
Paul Champion: Principal Scientist, Freshwater Ecology, NIWA, Hamilton

1.30 **Aquatic Plant Control Research**
Dr Deborah Hofstra: Principal Scientist, NIWA

1.50 **Reducing the Impacts of Aquatic Weed in South Island Lakes: Experience from Other Lake Environments**
Tracey Burton: Manager Biosecurity & Biodiversity, Toitū Te Whenua, LINZ

2.10 **Submerged Plant Indicators Reflect Lake Interventions?**
Mary de Winton: Freshwater Ecologist, Manager Aquatic Plant Group, NIWA

2.20 **Being Prepared for Whole Lake Treatment - What Needs to be Done to Meet Different Outcomes?**
Daniel Clements/Deborah Hofstra/Paul Champion/Mary de Winton NIWA

2.40 **Biosecurity Issues: Rotorua Lakes**
Speaker to be confirmed

3.00 **Afternoon Break**

SESSION 4

Meeting the Targets for the Rotorua Lakes

Chair: Te Taru White, Councillor, Bay of Plenty Regional Council

3.30 **Lake Rotorua PC 10 Science Review and Meeting the Targets**
Assoc Prof. Deniz Ozkundakci: Bay of Plenty Regional Council Chair in Lake and Freshwater Science, University of Waikato

3.55 **Te Arawa Lakes Programme Achievements and Future**
Helen Creagh: Rotorua Catchments Manager and Scott Kusabs, Land Management Team Leader, Toi Moana, Bay of Plenty Regional Council

4.15 **Towards the Lake Tarawera NPS FW- Policy Document**
James Dare: Environmental Scientist & Gemma Moleta, Senior Planner, Toi Moana, Bay of Plenty Regional Council

4.35 **Lake Taupo; Water Quality Issues and Catchment Management**
Dr Paul White: Chair Taupo Lakes and Waterways Group

5.00 **Symposium close for day: Karakia**
Dr Ken Kennedy: LWQS Committee

7.00 **Symposium Dinner at the Millenium Hotel**

DAY TWO

FRIDAY 11TH NOVEMBER

FUTURE CHALLENGES FOR PROTECTING LAKES AND FRESHWATERS

SESSION 1

Climate Change and the Lakes

Chair: Kevin Winters, Councillor, Bay of Plenty Regional Council

8.30 **Introduction**
John Gifford: Chair LWQS
Dr Ken Kennedy: Karakia

8.35 **Climate Crisis - How will our Lakes be Affected?**
Prof. David Hamilton: Deputy Director, Australian Rivers Institute, Griffith University, Queensland, Australia

9.05 **Building Lake Resilience for the Future**
Assoc. Prof. Deniz Ozkundakci: Assoc. Prof. Bay of Plenty Regional Council Chair in Lake and Freshwater Science, University of Waikato

9.25 **Climate Change: the NPS - FW and Land Use Change: A Te Arawa Perspective**
Dr Tanira Kingi: Te Arawa Primary Sector

9.45 **From Satellites to Communities: Effective Tools for Monitoring Cyanobacteria in the Rotorua Lakes**
Dr Moritz Lehmann: Adjunct Senior Research Fellow, University of Waikato

10.05 **Morning Break**

10.30 **NZ Government's Freshwater Reforms - Impacts on Lakes**
Hon David Parker: Minister for the Environment

SESSION 2

Landuse Change to Forest - Impacts on Water

Chair: Stewart Edward, LWQS Committee

11.05 **Managing our Plantation Forests to Reduce Environmental Impacts**
Dr Susan Secker: Manager Forestry Operational Policy, Te Uru Rākau/NZ Forest Service

11.25 **Carbon Forestry - Can Carbon Forestry Contribute to Catchment Restoration?**
Jeff Tombleson: Jeff Tombleson & Associates

11.45 **Modelling the impact of Forestry on Water Quality for Lake Okareka**
Gebiaw Ayele: Australian Rivers Institute, Griffith University, Queensland, Australia

12.05 **Lunch Break: Blessing**

SESSION 2 CONTINUED

1.00 **Planted Forests and Water Yield in New Zealand's Hydrological Landscape**
Dr MS Srinivasan: Principal Scientist, Catchment Hydrology, NIWA

1.20 **Forests and Water Quality**
Dr Jen Owens: Scion

1.40 **Right Tree Right Place - What to Consider when Establishing New Forests**
Dr David Palmer: Senior Spatial Analyst, Scion
Dr Tim Payn: Principal Scientist, Scion

SESSION 3

Integrating Land and Water Management Impact on Policy

Chair: Lyall Thurston, Councillor, Bay of Plenty Regional Council

2.00 **Biosecurity: National Strategy and its Implementation**
John Walsh: Director, Readiness & Response Services, Ministry of Primary Industries

2.20 **How Policies Have Shaped New Zealander's Relationships to Lakes**
Dr Kiely McFarlane: Social Scientist & Dr Charlotte Sunde: Social Scientist (Cawthron Institute)

2.40 **LandscapeDNA: Physiographic Approach to Land and Water Management**
Dr Lisa Pearson: Lead Earth and Environmental, Land and Water Science, Invercargill

3.00 **Afternoon Break**

SESSION 3 CONTINUED

3.30 **Land and Water Interactions in the Rotorua Lakes Catchments**
Dr Troy Baisden: University of Auckland & Affiliate Motu

3.50 **Economic & Urban Growth Impacts on Lake Water Quality**
Stavros Michael: Infrastructure and Environmental Solutions, Deputy Chief Executive, Rotorua Lakes Council

4.10 **Concluding Overview - Key Take Home Messages & Actions**
Warren Webber

4.30 **Conference Close**
John Gifford: LWQS Chair
Closing Karakia
Dr Ken Kennedy, LWQS Committee