

		TUESDAY 19 NOV 2024				
7:30am	Registration Desk Open	Registration Desk Open				
8:15am	Conference Opening Mihi	Whakatu Society Welcome				
9:00 – 9:50am	Keynote Speaker 1 Williar	n Anuru				
9:50 – 10:15am	Morning Tea					
	Bay Trust Forum	One Foundation Room	Skellerup Room	WSP Room		
THEME		Food Webs and Invertebrate Biodiversity	Climate responsiveness	Managing global impacts with local actions		
Session Chair		lan Duggan	Susan Clearwater	Brendan Hicks		
10:15 – 10:30am		Keystone communities reorganise freshwater metacommunities after pesticide contamination Tadeu Siqueira – University of Canterbury	The resistance and resilience of lake communities to high-intensity storms under increasing anthropogenic pressures Georgia Thomson-Laing - Cawthron Institute	Protecting a rare fish and headwater streams during the life of a mine and creating a protected post mine headwater catchment Richard Allibone - Water Ways Consulting Limited		
10:30 – 10:45am		Distribution patterns of Ephemeroptera, Plecoptera and Trichoptera in a lake outlet in Lunz (Lower Austria) * Martin Sarkezi - University of Waikato	Target attribute states for fine sediment are anticipated to shift under climate change Rachel Smith - NIWA	Enhancing Holistic Freshwater Management Through Continuous Water Quality Monitoring: A Case Study from Whatipū Eoin Conroy - AquaWatch Solutions		
10:45 – 11:00am		Understanding cross-boundary effects of biodiversity on ecosystem functioning Frank Burdon - University Of Waikato	Are human activities changing the energy (carbon) balance of braided rivers? Evidence from the Selwyn-Waikirikiri River Naomi Wells - Lincoln University	Mountains of challenges, springs of hope – tackling global freshwater biodiversity loss with local solutions in Nepal Richard Storey - Wildland Consultants		
11:00 – 11:15am		Dual explanations for top-heavy food webs (or 'Why are there so	Anthropogenically stressed lakes show low resistance but	Long-term trends in the water quality of Lake Rotoroa in the		

11:15 – 11:30am		many mudfish in my pool?') * Zoë Hamilton - University of Canterbury Long-term changes in zooplankton community composition in North Island lakes: What are the drivers of change?	high resilience to disturbance from an ex-tropical cyclone Jamie Howarth - Te Herenga Waka - Victoria University of Wellington Building climate change resilience into freshwater restoration at a catchment- scale	Waikato Brendan Hicks - Morphum Environmental Ltd Emerging climatic pressures: Connecting CO2 and river ecosystems in a warming world
		lan Duggan - The University Of Waikato	Susan Clearwater - Te Papa Atawhai Department Of Conservation	Adam Hartland - Lincoln Agritech Ltd
11:30 – 12:30pm	Lunch			
	Bay Trust Forum	One Foundation Room	Skellerup Room	WSP Room
THEME	Special Session: Ngāti Rangiwewehi and development of the Taniwha Spring drinking water joint consent	Waterways resilience and restoration actions	Long-term and large-scale data sets	Special session: Freshwater fish in relation
Session Chair	Te Rangikaheke Yvonne Moana	Dave West	Susie Wood	Joanne Clapcott & Aisling Rayne
12:30 – 12:45pm	Te Rangikaheke Yvonne Moana	Nuances of stream daylighting when there are multiple drivers Liza Kabrle - LEAD Alliance, Tonkin + Taylor	Programme expansion for long-term lake water quality monitoring in Auckland Jane Atoa - Auckland Council	Investigating the Interactions Between Large Migratory Galaxiids and Brown Trout in New Zealand's Coastal Streams * Adam Frimel - University Of Otago
12:45 – 1:00pm	Louis Bidois	Improving water quality and indigenous biodiversity on a Waikato dairy farm: lessons learned from rewetting and reconnecting a restored riparian wetland Rebecca Sylvia Eivers - Wai Kōkopu Consulting	How can we measure lake restoration success? Insights from a rigorous evaluation of eutrophication mitigation in Lake Rotoiti Deniz Özkundakci - University Of Waikato	Life history traits and food web ecology of a native galaxiid differ in lakes with and without introduced fishes * Lauren Hitt - University Of Canterbury
1:00 – 1:15pm	Hon Christopher Finlayson	Resilient rivers require room? Potential ecological effects from historic narrowing of New Zealand's braided rivers Michelle Greenwood - NIWA	From North to South: How many lakes are there in Aotearoa New Zealand? Susie Wood - Lincoln University	Tino rangatiratanga in highly modified systems: A comparative case study of Waituna and Waitarakao lagoons * Lucy Coulston – University Of Canterbury

1:15 – 1:30pm	Paul White	RotoTurf: a method to overcome barriers to restoring aquatic plants into degraded lakes Ben Woodward – NIWA	Relative importance of lake water quality drivers varies with time and depends on trophic state and mixing regime Whitney Woelmer – University Of Waikato	Valued introduced species and invasive natives: Negotiating species belonging in a changing world Aisling Rayne – Cawthron Institute
1:30 – 1:45pm	Hon Steve Chadwick	Land-based monitoring assessing the effectiveness of fencing and planting rural waterways in the Mahurangi Catchment Colleen Brent – Auckland Council	Morphometric distribution of depth and basin shape in Aotearoa New Zealand lakes Tadhg Moore – Limnotrack	Environmental and body-size controls on interactions between native and introduced fish: can galaxiids coexist with introduced trout? * Naomi Heller – University of Canterbury
1:45 – 2:00pm	Rangimarie (Lee-Ann)	Aotearoa freshwater biodiversity monitoring: beautiful dream, basic or bespoke Dave West – Department Of Conservation	Insights into the natural and cultural history of raupō (typha orientalis) in ②ew ai②a New Zealand Marcus Vandergoes – Gns Science	Trade-offs between isolation and invasion of native fish populations above in-stream barriers * Martha Jolly – University Of Canterbury
2:00 – 2:25pm	Afternoon Tea			
2:25 – 3.15pm	Keynote Speaker 2 Lan Pha			
	Bay Trust Forum	One Foundation Room	Skellerup Room	WSP Room
THEME		Special session: Should we bring back Upokororo, and if so, how, where and why?	Molecular tools for ecology	Policy and practice
Session Chair		Simon Stewart	Alastair Suren	Marc Schallenberg
3:20 – 3:35pm		Panel discussion with Prof. Gerry Closs, Dr Finnbar Lee, Dr Michele Melchior, Dr Aisling Rayne, Dr Georgia Thomson-Laing, and Dr Joanne Clapcott	'Conventional' vs eDNA Sampling of Aquatic Macroinvertebrates – a Comparison from 19 Horowhenua Waterways Alex James – EOS Ecology	Using spot measurements for oxygen and temperature attributes Thomas Wilding – Waikato Regional Council
3:35 – 3:50pm			eDNA is a useful environmental monitoring tool for assessing stream ecological health Alastair Suren – Bay Of Plenty Regional Council	Strategies for working at the science-policy interface Jennifer Price – Cobble Consulting

3:50 – 4:05pm			Working towards u	sing eDNA	Quantifying regulatory limits for
			for holistic lake bid	diversity	multiple stressors in an open and
			assessments		transparent way
			Lena Schallenberg	– Cawthron	Rick Stoffels – NIWA
			Institute		
4:05 – 4:20pm			Environmental DN	A sampling:	Very shallow lakes: A case for
			sampling effort,		managing them for wildlife values
			contamination pitf	alls, the	as opposed to water quality and
			influence of life his	story phases	recreation
			and interpretation	of results	Marc Schallenberg – University Of
			Richard Allibone –	Water Ways	Otago
			Consulting Limited	1	
5:00 – 7:00pm	Welcome Function & Post	ter Session – Energy Events C	Centre		
		WEDNES	SDAY 20 NOV 2024		
8:00am	Registration Desk Open				
9:00 – 9:50am	Keynote Speaker 3 Marnie P	rickett			
9:50 – 10:15am	Morning Tea			_	
	Bay Trust Forum	One Foundation Room	Skellerup Room	WSP Room	1
THEME	Ka mua, ka muri –	Fishes and Fisheries I	Aquatic indicators and	Special Se	ssion: Freshwater modelling
	Indigenous perspectives		contaminants I	horizons: e	emerging trends and directions I
	and knowledge I				
Session Chair	Richard Storey	Gerry Closs	Christoph Matthaei	Deniz Özku	ındakci
10:15 – 10:30am	Traditional knowledge leads	Disentangling the impacts	Effects of ibuprofen and	Slipping un	derwater: A review of freshwater
	to innovation in	of habitat degradation	imidacloprid on stream invertebrate	modelling i	n New Zealand
	conservation, using	and introduced fishes on	communities: an outdoor multiple-		er – Parliamentary Commissioner
	whakaweku to translocate	a highly-valued	stressor mesocosm experiment *	For The Env	vironment
	toitoi	amphidromous fish *	Nina Sarah Batucan – University Of		
	Kari Beaven – Zealandia Te	Chris Meijer –	Otago		
	Mara a Tane	Environment Canterbury			
10:30 – 10:45am	Adaption of a traditional	Local variation in the	Generic metrics of lake trophic		
	Māori fishing method for	timing of reproduction	condition conceal important		
	biomonitoring: using	and recruitment in a	ecological change		
		1		1	

Waikato

Rose Gregersen – University of

whakaweku for sampling

stream macroinvertebrates

Richard Storey – Wildland

Consultants

widely distributed

maculatus

Of Otago

diadromous fish, Galaxias

Gerry Closs – University

10:45 – 11:00am 11:00 – 11:15am	'Out of sync' – rethinking freshwater monitoring with Māori perspectives of time Joanne Clapcott – Cawthron Institute Monitoring of ②ew a (freshwater crayfish)	Bigger on their own: size structure of Chatham Island mudfish opulations with tuna (Anguilla spp.) * Grace Fortune-Kelly – University of Otago Pathways to the Sea – Aotearoa's first modified	Microplastics and riverine macroinvertebrate communities in a multiple-stressor context: a mesocosm approach Christoph Matthaei – University of Otago Taonga and Toxo: Kākahi as the missing link in understanding land-	Challenges with modelling E. coli at the catchment scale Richard Muirhead – Agresearch Using multiple lines of evidence to
	populations in Lake Rotorua Ian Kusabs – Kusabs and Associates	MacEwans pump – Is it fish friendly? Brenda Bartels – 2 Awa Ecology	to-sea transmission of Toxoplasma gondii in Aotearoa New Zealand * Abigail Schoup – Massey University	understand complex systems for management: Lake Ōkataina food-web dynamics Finnbar Lee – Cawthron Institute
11:15 – 11:30am	Tuku Iho Kōrero: Ki Uta Ki Tai – Interweaving Mātauranga Māori and Kaitiakitanga for Freshwater Stewardship, ArcGIS Storymaps Chantez Connor-Kingi – Ngā Kaitiaki O Ngā Wai Māori	Spatial scale insights for freshwater fish in wadeable streams using environmental DNA (eDNA) metabarcoding Josh Smith – Waikato Regional Council	Macroinvertebrate indices are insensitive to nutrient and sediment impacts on river ecosystems Richard White – NIWA	A software platform to provide a scalable solution to NZ's lake model deficit Deniz Özkundakci – University Of Waikato
11:30 – 12:30pm	Lunch	One Fermidation Beam	Challenny Been	WCD De ave
	Bay Trust Forum	One Foundation Room	Skellerup Room	WSP Room
THEME	Ka mua, ka muri – Indigenous perspectives and knowledge II	Special Session: Catchments and communities I	Aquatic indicators and contaminants II	Special Session: Freshwater modelling horizons: emerging trends and directions II
Session Chair	Frank Burdon	Juliet Milne	Paul Scholes	Rick Stoffels
12:30 – 12:45pm	Learnings from implementing a cultural monitoring programme Channell Thoms – Environment Canterbury	Who is doing what? Quantifying catchment community-based freshwater monitoring in Aotearoa New Zealand and prospects for data use in modelling applications Juliet Milne – Traverse Environmental	Wetland assessments: learnings and experiences moving from South Africa to New Zealand Andrew Briggs – SLR Consulting	What types of model area available to link land use to lotic ecology, and how do they fit together? Sandy Elliott – NIWA
12:45 – 1:00pm	Monitoring Te Mana o Te Wai: Assessing structural, functional, and cultural ecosystem health in	"I share mine, if you share yours" – The importance of peer-to-peer knowledge exchange	Does timing matter? Flow representation in river state of environment water quality datasets	Complex, deterministic models of the natural world: tools, toys, or tomfoolery? Marc Schallenberg – University Of Otago

	streams *	between rural	Laura Keenan – Traverse	
	Frank Burdon – University Of	communities for inter-	Environmental	
	Waikato	generational freshwater		
		restoration *		
		Kati Doehring – Cawthron		
		Institute		
1:00 – 1:15pm	Whakapapa as a Guide to Wairarapa Moana's Freshwater Ecosystems Rawiri Smith – Kahungunu Ki	On-the-ground support to build capability and capacity in freshwater management at	Heavy metal content of Kākahi from shallow wadeable depths at five locations in Lake Tarawera * Nico Donovan-Pereira – University	A river ecosystem model of Intermediate complexity for assessing impacts of low flows on fish Rick Stoffels – NIWA
	Wairarapa	catchment community scale: The Wai Connection Project Kim Jones – Mountains to Sea Conservation Trust	of Waikato	
1:15 – 1:30pm	Where Mātauranga Māori and Western-science Meet Sam Ludden – Kahungunu Wairarapa	Use of catchment community-based monitoring data to inform freshwater management	Wrangling the National Policy Statement for Freshwater Management Paul Scholes – Bay Of Plenty	Five years of SWAT-based dynamic catchment modelling in New Zealand: Model evaluation and lessons learned Linh Hoang – NIWA
		and decision-making: a modelling case study Mark Heath – Traverse Environmental	Regional Council	
1:30 – 1:45pm	Ngāti Manawa – Te Mana o Te Wai: Building kaitiaki capability and capacity in taonga species restoration and freshwater monitoring	How regional councils can implement the national community-based monitoring (CBM) framework and make the	Use of high-resolution spatial dataset to the benefit of regional water quality outcomes in Northland Manas Chakraborty – Northland	An ensemble model approach to Lake Ōkaro water quality management Maggie Armstrong – University of Waikato
	Erena Nuku – Te Rūnanga o Ngāti Manawa	most of catchment initiatives to improve freshwater health Amanda Valois – Greater Wellington Regional Council	Regional Council	
1:45 – 2:10pm	Afternoon Tea			
2:10 – 3.00pm	Keynote Speaker 4 Angus Mo	elntosh		
	Bay Trust Forum	One Foundation Room	Skellerup Room	WSP Room

THEME		Special Session: Catchments and	Fishes and Fisheries II	Lake ecosystems
		communities II		
Session Chair		Juliet Milne	Duncan Gray	Tina Bayer
3:05 – 3:20pm		Prospects for a Community-based Freshwater Monitoring (CBFM) Website Shelley McMurtrie – EOS Ecology	Long term, large scale remediation of a chemical barrier to fish migration Duncan Gray – Pdp	Evaluation of thermal dynamics and transport mechanisms in Lake Wānaka Aidin Jabbari – NIWA
3:20 – 3:35pm		The 'Wai Connection – Tatai Ki Te Wai' Focus Catchment Map Series – Supporting Catchment Groups across Aotearoa Shelley McMurtrie – EOS Ecology	Influence of river flow and temperature regimes on fish growth dynamics during early life history Andrew Watson – NIWA	Optimising hydrodynamic regimes to improve water quality in the shallow hypereutrophic Lake Waikare: Insights from a modelling study Matthew Prentice – University Of Waikato
3:35 – 3:50pm		Discussion: future prospects	Teaching fish new tricks: Repeated exposure to a velocity barrier improves passage performance * Rachel Crawford – University Of Waikato	Benthic primary production in the nearshore littoral zone of Lake Tarawera * Sarah Tetzlaff – University Of Waikato
3:50 – 4:05pm			Too big! An approach for assessing atutahi (īnanga) spawning habitat in massive rivers Hannah Rainforth – Kāhu Environmental Ltd	The proposed in-lake nutrient load modelling at Lake Ngatu in Northland Suha Sanwar – Northland Regional Council
4:05 – 4:20pm			Environmental drivers of glass eel migrations to Aotearoa * Siobhan Nuri – University of Waikato/NIWA	Low dissolved oxygen events in lakes are more common than we think Tina Bayer – Environment Canterbury
4:30 – 6:00pm	NZFSS AGM	•	•	
6:00 – 9:00pm	Early Career Function –Fainti	ng Goat, Rotorua		
		THURS	DAY 21 NOV 2024	
8:00am	Registration Desk Open			
9:00 – 9:50am	Keynote Speaker 5 Simon St	tewart		

9:50 – 10:15am	Morning Tea			
	Bay Trust Forum	One Foundation Room	Skellerup Room	WSP Room
THEME	Te mana o ②ew ai – balancing water, environment and people I	Algae and harmful blooms I	Catchment management and water quality I	Invasive species – detection, surveillance and management
Session Chair	Jenny Webster-Brown	Stephanie Koviessen	Chris Tanner	Nicholas Ling
10:15 – 10:30am	Why conserve rivers? Intrinsic value vs ecosystem services Philip Boon – Freshwater Biological Association	Phytoplankton community structure in deep chlorophyll maxima of Lake Ōkaro * Lola Rosa – University Of Waikato	Hydro-climatic drivers dominate the water quality in the catchments of Southern Murray-Darling Basin, Australia * Dilanka Athukoralalage – University Of Adelaide	Baseline survey of invasive gold clam (Corbicula fluminea) populations in two Waikato hydro lakes Michele Melchior – National Institute Of Water And Atmospheric Research
10:30 – 10:45am	How has the mission-led research of a National Science Challenge benefited freshwater management in Aotearoa? Jenny Webster-Brown – Geokem Consultancy	Cyanobacteria in cold waters: a study of nearshore cyanobacteria assemblages in Lake Superior Kirill Shchapov – Cawthron Institute	Freshwater Improvement Scenario Builder Web App Michael Kittridge – Headwaters Hydrology	Environmental DNA as a detection and quantitative tool for brown bullhead catfish (Ameiurus nebulosus): A comparison with conventional netting * Nicola Pyper – SLR Consulting
10:45 – 11:00am	Assessing the ecological and cultural health of the Tokaanu Stream * Kevin Eastwood – Waikato University	What a Nuisance! Assessment of water quality and nuisance algae blooms in urban stormwater ponds in Ōtautahi Christchurch, Aotearoa New Zealand * Stephanie Koviessen – University Of Canterbury	Contaminant loads associated with high river flows and the implications for policy Rich McDowell – Agresearch / Lincoln Uni	Detecting low densities of koi & other pest fish species in lowland lakes using eDNA * Ashton Reiser – University Of Waikato
11:00 – 11:15am	Catchment Groups Tackling Freshwater Issues – the 'Wai Connection – Tatai Ki Te Wai' Project in Waitaha/Canterbury	Monitoring cyanobacteria at the shoreline of Auckland's recreational lakes Natalie Gilligan – Auckland Council	Quantifying diffuse agricultural contaminant attenuation by constructed wetland across diverse agricultural landscapes Chris Tanner – NIWA	Invasion of non-native macrophytes alter macroinvertebrate communities * Saskia Brown – University Of Canterbury

	Jessica Halsey – EOS Ecology			
11:15 – 11:30am	A collaborative approach for developing catchment specific environmental flows across three of Rotorua's water supply springs Calyn Khoo – Pattle Delamore Partners	Nutrient Recovery from agricultural drainage using Filamentous Algae Nutrient Scrubbers (FANS) Rupert Craggs – NIWA	Characterisation and potential optimisation of seepage wetland for nitrate removal in pastoral hill country catchments Suha Sanwar – Northland Regional Council	Targeted removal of exotic fish at Lake Tomorata Nicholas Ling – Waikato University
11:30 – 12:30pm	Lunch			
	Bay Trust Forum	One Foundation Room	Skellerup Room	WSP Room
THEME	Te mana o @ew ai – balancing water, environment and people II	Algae and harmful blooms II	Catchment management and water quality II	Species and ecosystem conservation I
Session Chair	Dean Miller	Mafalda Baptista	Janine Kamke	Michael Lake
12:30 – 12:45pm	Turitea Windfarm Construction – adaptive monitoring and management for protection of sensitive freshwater systems Dean Miller – Tonkin + Taylor	Trace metal phytoplankton interaction in three New Zealand lakes of different trophic state Markus Dengg – Otago Regional Council	Sources of faecal contamination across the Auckland Region's River Monitoring Network Janine Kamke – Auckland Council	This should be easyonly it isn't – The challenges of creating novel habitat for black mudfish Michael Lake – Tonkin + Taylor
12:45 – 1:00pm	Practicing partnership: Iwiled eDNA research for Wairarapa Moana Katie Brasell – Cawthron / Kahungunu Ki Wairarapa	National Scale Operational Monitoring of Chlorophyll-a in Diverse Optical Water Types Across New Zealand Using Sentinel-2 and Machine Learning Mathew Allan – Waikato Regional Council	Development of the SedNetNZ sediment budget model to support freshwater policy implementation Hugh Smith – Manaaki Whenua – Landcare Research	Habitat creation for mudfish – a case study Raven Allen – Ecological Solutions
1:00 – 1:15pm	Mana o te Wai and the new rhetoric-of "what does that mean"? or Being Maori,	Diatomix – Redirecting nutrients back into the food chain and away from	Very simple catchment water quality models Ton Snelder – LWP Ltd	Northland Īnanga Spawning Habitat Restoration Project (NĪSHRP) Nicholas Naysmith – Mountains To Sea

	Being a woman, Being a kaitiaki, Being ahi kaa Raewyn Bennett – Te Arawa Ki Tai Trust	BGA Alexei Davies-Campbell – As Harrison		
1:15 – 1:30pm	Wetland enhancement amongst complicated hydrological settings – a case study of Whangamarino Wetland within the Lower Waikato Waipa Flood Control Scheme James Blyth – Collaborations	Cyanobacteria blooms and ecosystem health in Waikato riverine lakes Mafalda Baptista – Waikato Regional Council	Continuous Water Quality Monitoring – The Smart Approach to Water Resource Management Ebrahim Hussain – Aquawatch Solutions	Rethinking freshwater translocations in Aotearoa New Zealand Roland Eveleens – Cawthron Institute
1:30 – 1:45pm	ROTO-ORA – Designing Lake Cultural Models with Tangata Whenua to assess lake ecosystem health Mereana Wilson-Rooy – GNS	Understanding in-lake impacts of climate and extreme events using high-resolution monitoring - Chris McBride – Limnotrack	Real-time contaminant signatures from low-cost sensors to inform sub-catchment management actions * James Dare – Bay of Plenty Regional Council	Livin' on the edge – deep-water bryophytes in Otago's high-country lakes Mary de Winton – NIWA
1:45 – 2:10pm	Afternoon Tea			
2:10 – 3.00pm	Keynote Speaker 6 Olivier Au	ısseil		
	Bay Trust Forum	One Foundation Room	Skellerup Room	WSP Room
THEME			Catchment management and water quality III	Species and ecosystem conservation II
Session Chair			Andrew Hughes	Richard Allibone
3:05 – 3:20pm			Transforming Lowland Waterway Networks – a Catchment Management Plan for the Ararira/LII River Catchment, Waitaha/Canterbury Zoe Dewson – EOS Ecology	Assessing the Effectiveness of Freshwater Mussel Habitat Remediation & Translocation Following Cyclone-Induced Impacts in Rotokawau Ebrahim Hussain – Submerged Environmental
3:20 – 3:35pm			Joining the dots for rural communities: Using and translating multiple information sources to inform water quality discussions and freshwater farm planning –	Glass eel recruitment over twenty years: a case study in the Ashley Rakahuri - <i>Brittany</i> Earl – Department of Conservation

		Taiāri/Taieri catchment, Otago Juliet Milne – Traverse	
		Environmental	
3:35 – 3:50pm		What makes Te Whanga Lagoon tick? – a better understanding of one of New Zealand's largest coastal lakes/lagoons Adrian Meredith – Canterbury Regional Council	Predicting macrophyte survival in a degraded lake using estimates of photosynthesis and root oxygen release Ben Woodward – NIWA
3:50 – 4:05pm		The impact of steepland clear-cut harvesting on sediment-related water quality Andrew Hughes – NIWA	Aquatic values of the Takapo/Tekapo Military Training Area Richard Allibone – Water Ways Consulting Limited
6:30 – Late	Conference Dinner Te Puia		•
	F	RIDAY 22 NOV FIELD TRIPS	

* = eligible for Student Prizes