## Sunday 19 November

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
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<tbody>
<tr>
<td>8:00am – 3:00pm</td>
<td>Registration Desk Opens</td>
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<tr>
<td>8:00am – 2:30pm</td>
<td><strong>Workshop</strong> Environmental efficiency of mitigation measures implementation in hydropower: how much do we know?</td>
<td>Claudelands: Oakley Room</td>
</tr>
<tr>
<td>10:00am – 2:00pm</td>
<td>Developing a decision support framework to guide eutrophication management and nutrient limit setting</td>
<td>Claudelands: Arena Lounge Room</td>
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<tr>
<td>10:00am – 3:00pm</td>
<td>NZ Functional Trait Database workshop</td>
<td>Claudelands: Brooklyn 2 Room</td>
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<tr>
<td>3:00pm – 6:00pm</td>
<td>pōwhiri (welcome ceremony) at Tūrangawaewae Marae Buses depart from Claudelands (Heaphy Terrace) at 3:00pm and will drop off at the Novotel and Claudelands</td>
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<tr>
<td>6:00pm – 7:00pm</td>
<td>Pre-Conference Mixer at Novotel Tainui Hotel</td>
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<tr>
<td>7:30am</td>
<td>Registration Desk Opens</td>
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<tr>
<td>8:45am</td>
<td>Welcome, Housekeeping and Opening</td>
<td>Heaphy 1&amp;2</td>
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</table>
| 9:30am – 10:15am | Keynote Speaker – **Gerald Kaufmann**  
Catchments, Watersheds, and Basins: The Global Governance and Policy of International River Science  
Chair – Bob Penter  
Location: Heaphy 1&2 |                   |
| 10:15 – 10:45am | Morning Tea - kindly sponsored by Kessels Ecology                    |                   |

| Session | Topic                                                                 | Chair                  | Location          |
|---------|-----------------------------------------------------------------------|------------------------|
|         | Special Session: Balancing Human and Ecological Objectives in River Restoration | Gardner Johnston     | Heaphy 1          |
|         | Special Session: Land-use Effects on In-stream Cycling and Retention of Nitrogen and Phosphorus | Lynn Bartsch          | Heaphy 2          |
|         | Climate Change                                                        | Alexander Milner       | Heaphy 3          |
|         | Connectivity                                                          | Eimear Egan            | Brooklyn 1        |
|         | Aquatic Resource Monitoring                                           | Alton Perrie           | Brooklyn 2        |

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| 10:45am – 11:00am | Balancing human and ecological objectives in river restoration design  
**Gardner Johnston**  
Inter-Fluve, USA | Heaphy 1          |
|              | Land use effects on nutrient cycling and loss from headwaters to Great Lakes in the Fox River Basin, Wisconsin, USA: project overview  
**Rebecca Kreiling**  
United States Geological Survey, United States | Heaphy 2          |
|              | Glacier shrinkage driving global changes in downstream ecosystems  
**Alexander Milner**  
University of Birmingham, United Kingdom | Heaphy 3          |
|              | Growth of adult inanga is related to when they hatch and when they migrate to freshwater  
**Eimear Egan**  
University of Canterbury, New Zealand | Brooklyn 1        |
|              | Patterns and drivers of spatio-temporal variability of turbidity in lakes at the regional scale  
**Deniz Özkundakçı**  
Waikato Regional Council, New Zealand | Brooklyn 2        |

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<tr>
<th>Time</th>
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| 11:00am – 11:15am | Ecogeomorphology and partnerships: strategies employed in building a watershed restoration programme in rural Washington State, USA  
**Will Conley**  
Massey University, New Zealand | Heaphy 1          |
|              | Phosphorus retention across land cover types in the Fox River Basin, Wisconsin, USA  
**Rebecca Kreiling**  
United States Geological Survey, United States | Heaphy 2          |
|              | Glacier reconstruction using the New Zealand freshwater bivalve  
_Echyridella menziesii_ from Lake Rotorua  
**Dilmi Herath**  
Macquarie University, Australia | Heaphy 3          |
|              | Genetic and ecological population structuring among and between landlocked and diadromous populations of a facultatively amphidromous fish  
**Jason Augspurger**  
University of Otago, New Zealand | Brooklyn 1        |
|              | Temporal trends in the relative abundance of New Zealand freshwater fishes  
**Shannan Crow**  
NIWA, New Zealand | Brooklyn 2        |

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| 11:15am – 11:30am | Stream restoration in the Hawaiian Islands: how mālama `āina is restoring traditional farming practices and improving stream conditions for native `o`opu  
**Gordon Smith**  
United States Fish and Wildlife Service, USA | Heaphy 1          |
|              | Instream nitrogen cycling and loss from Great Lakes in the Fox River Basin, Wisconsin, USA  
**Lynn Bartsch**  
United States Geological Survey, USA | Heaphy 2          |
|              | Does riparian management influence greenhouse gas emissions from soils and streams?  
**Nikki Burrows**  
University of Auckland, New Zealand | Heaphy 3          |
|              | Is salmonid migration initiated by juvenile intra-specific competition?  
**Pavel Mikheev**  
University of Otago, New Zealand | Brooklyn 1        |
|              | Ecology and the six values approach to managing Christchurch City’s waterways  
**Greg Burrell**  
Instream Consulting, New Zealand | Brooklyn 2        |
<table>
<thead>
<tr>
<th>Location</th>
<th>Heaphy 1</th>
<th>Heaphy 2</th>
<th>Heaphy 3</th>
<th>Brooklyn 1</th>
<th>Brooklyn 2</th>
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<tr>
<td>11:30am -</td>
<td>Waikato and Waipa River Restoration Strategy - an action plan for the</td>
<td>Land use change alters nutrient processing in streams along Brazil’s</td>
<td>Bottom-up quantification of mega inter-basin water transfer vulnerability</td>
<td>Transportation of spawners is more effective than multiple fish passage</td>
<td>Critical water quality assessment in Lamtaklong River, Thailand</td>
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<tr>
<td>11:45am</td>
<td>restoration of New Zealand’s longest river Keri Neilson</td>
<td>agricultural frontier</td>
<td>to climate change</td>
<td>facilities in the river Klaralven, Sweden</td>
<td>Nares Chuersuwan</td>
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<td>Waikato River Authority, New Zealand</td>
<td>Kathi Jo Jankowski</td>
<td>Enze Zhang *</td>
<td>Marco Blixt</td>
<td>Suranaree University Of Technology, Thailand</td>
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<td></td>
<td></td>
<td>United States Geological Survey, USA</td>
<td>Beijing Normal University, China</td>
<td>Fortum Sverige AB, Sweden</td>
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<td>11:45am –</td>
<td>Creating habitat for endangered fish in a managed river system - how</td>
<td>Starting at the top: attenuation of agricultural nitrogen loads by a</td>
<td>Non-linear effects of hydrological variability on fish population</td>
<td>Fish community response to the fragmentation of river networks</td>
<td>Implementing a real river and stream State of the Environment monitoring</td>
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<tr>
<td>12:00pm</td>
<td>created ecosystems are becoming the new focus of stream restoration:</td>
<td>headwater wetland</td>
<td>dynamics in extremely stochastic</td>
<td>Leah McIntosh *</td>
<td>programme</td>
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<td>Dry Creek, Sonoma County, California, USA Greg Koonce Inter-Fluve, USA</td>
<td>Chris Tanner</td>
<td>freshwater ecosystems.</td>
<td>University of New England, Australia</td>
<td>Alton Perrie</td>
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<td>NiWA, New Zealand</td>
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<td>Greater Wellington Regional Council, New Zealand</td>
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<td>12:00 – 1:30pm</td>
<td>Lunch</td>
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<td>Session</td>
<td>Special Session: Balancing Human and Ecological Objectives in River</td>
<td>Special Session: Land-use Effects on In-stream Cycling and Retention of</td>
<td>Invertebrate Ecology</td>
<td>Connectivity</td>
<td>Managing Within Limits</td>
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<td>Restoration</td>
<td>Nitrogen and Phosphorus Filters</td>
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<tr>
<td>Chair</td>
<td>Keri Nielsen</td>
<td>John Quinn</td>
<td>Richard Storey</td>
<td>Konrad Górski</td>
<td>Scott Larned</td>
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<td>1:30pm –</td>
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<td>1:45pm</td>
<td>A servant of many masters - when restoration has to meet many expectations:</td>
<td>Using beaver dam analogues to reduce downstream sediment loads: a pilot</td>
<td>Applying a combination of geomorphological and ecological techniques</td>
<td>Present state and future trends in the hydrologic connectivity of</td>
<td>Contaminant load limits and the “critical point”</td>
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<td>2:00pm</td>
<td>management and monitoring in a floodplain restoration project along a</td>
<td>project in California Creek, Spokane, Washington State, USA Sue Neizgoda</td>
<td>to understand the relationships between macroinvertebrate communities</td>
<td>central Chilean rivers: Effects on native fish diversity</td>
<td>Malcolm Green</td>
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<td></td>
<td>Danube stretch in Bavaria (Germany) Bernd Cyffka University of Eichstaett-</td>
<td>Gonzaga University, USA</td>
<td>and river morphology in New Zealand</td>
<td>Gustavo Díaz *</td>
<td>Streamlined Environmental, New Zealand</td>
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<td>Ingolstadt, Germany</td>
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<td>Massey University, New Zealand</td>
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<td>12:30pm –</td>
<td>“Freshwater in the media: who speaks for science?” Presenter: Dacia</td>
<td>Lunch</td>
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<td>Herbulock, Science Media Centre</td>
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<td>1:45pm –</td>
<td>He not busy being born is busy dying Clifford Ochs University of</td>
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<td>2:00pm - 2:15pm</td>
<td>Manuka-dominated ecosystems to improve water quality and provide economic and social return in the Lake Waikare catchment</td>
<td>Geospatial data and Overseer for nutrient management on dairy farms</td>
<td>Are rare, macroinvertebrate taxa important for freshwater community ecology?</td>
<td>Can local-scale longitudinal variability of low-flow width be a proxy of mesohabitat diversity?</td>
<td>Incorporating resilience and resistance in assessments of land-use suitability</td>
</tr>
</tbody>
</table>
|          | **Maria Jesus Gutierrez Gines**  
**Environmental Science and Research Institute, New Zealand** | **Hans Eikaas**  
DairyNZ, New Zealand | **Dimitrios Rados**  
Massey University, New Zealand | **Marie Spitoni**  
French National Centre for Scientific Research, France | **Scott Larned**  
NIWA, New Zealand |
| 2:15pm – 2:30pm | Artificial fish shelters developed by a statistical approach on natural fish habitats | Re-aligning stream rehabilitation theory and practice to attenuate edge-of-field and in-stream nitrate export in agricultural waterways in Canterbury, New Zealand | Oxidative stress response of caddisfly larvae *Stenopsyche marmorata* to combined effects of turbid water and temperature | Effects of connectivity on benthic macroinvertebrate community structure of secondary channels in the Mississippi River, USA | The Land Use Suitability Spatial Explorer (LUSSE)  
**Ton Snelder**  
Land Water People, New Zealand |
|          | **Sebastien Den Doncker**  
**Stream and River Consult, Belgium** | **Brandon Goeller**  
University of Canterbury, New Zealand | **Jumpei Suzuki**  
Central Research Institute of Electric Power Industry, Japan | **Audrey Harrison**  
University of Mississippi, USA | |
| 2:30pm – 2:45pm | Incorporating broader environmental objectives into Lower Waikato flood control infrastructure and drainage services | Drivers of periphyton biomass and community type along the gravel bed Tukituki River during summer. | Zooplankton influence on algal dynamics in rivers | The impact of historical mining activity on aquatic macroinvertebrates at Puhupuhi, Northland | Freshwater tipping points: What? Where? How? Why?  
**Marc Schallenberg**  
University of Otago, New Zealand |
|          | **Peter Roberts**  
**Waikato Regional Council, New Zealand** | **John Quinn**  
NIWA, New Zealand | **Anna Freeman**  
University of Reading, United Kingdom | **Marlese Fairgray**  
University of Canterbury, New Zealand | |
| 2:45pm – 3:00pm | Turning ‘nice to know’ into ‘need to know’: a decision support system to diagnose factors limiting stream fisheries | Effects of contrasting extreme flooding on biotic communities in Glacier Bay, Alaska | Changes in hydrologic connectivity of the largest river basin in Chile: effects on native fish with different dispersal abilities | Exploration of implications of capacity for land use intensification under water quality constraints at national scale | |
|          | **Robin Holmes**  
**Cawthron Institute, New Zealand** | **Alexander Milner**  
University of Birmingham, United Kingdom | **Konrad Górski**  
Universidad Católica de la Santísima Concepción, Chile | **Sandy Elliott**  
NIWA, New Zealand | |
| 3:00pm – | Afternoon Tea | | | | |
| 3:30pm – | Keynote Speaker – **Linda Te Aho**  
*Te Mana o te Wai. A Māori perspective on rivers and the place of indigenous values in river management.* | | | | |
| 3:30pm – 4:15pm | Chair – Julian Williams  
**Location:** Heaphy 1&2 | | | | |
| 4:15pm – 6:30pm | Mix & Mingle - kindly sponsored by Morphum Environmental  
Claudelands Upper Concourse Arena | | | | |
| 7:00pm | NZFSS Public Forum | | | | |
**Tuesday 21 November**

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<tr>
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<tbody>
<tr>
<td>8:00am</td>
<td>Registration Desk Opens</td>
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<tr>
<td>8:50am</td>
<td>Welcome and Housekeeping Location: Heaphy 1&amp;2</td>
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<tr>
<td>9:00am - 10:00am</td>
<td>Keynote Speaker – <strong>Catherine Knight</strong> <em>How have we valued New Zealand’s rivers? A historical perspective.</em> Chair: Laddie Kuta Location: Heaphy 1&amp;2</td>
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<tr>
<td>10:00am - 10:30am</td>
<td>Morning Tea</td>
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### Session: Special Session: Fish Passage Management

**Chair:** Sjaan Bowie  
**Session Leaders:** Ana Adeva Bustos, Jenny Webster-Brown, Josh Smith, Gillian Lewis, Juliet Milne  
**Location:** Heaphy 1, Heaphy 2, Heaphy 3, Brooklyn 1, Brooklyn 2, Brooklyn 3

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<thead>
<tr>
<th>Time</th>
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| 10:30am - 10:45am | The New Zealand Fish Passage Advisory Group – improved coordination and management of a key pressure facing our waterways Sjaan Bowie Department of Conservation, New Zealand  
Importance of integrating physical and biological processes along with societal needs for sustainable energy and protecting a river’s goods and services Allen Curry Canadian Rivers Institute, Canada  
Before and after integrated catchment management: changes in water quality Andrew Hughes NIWA, New Zealand  
Assembly and disassembly of aquatic invertebrate communities in a dynamic floodplain ecosystem Stefano Larsen Trento University, Italy  
Moving to real-time measurement of microbial health risks in rivers Rebecca Stott NIWA, New Zealand  
Riverine ecosystem services: Pledges and pitfalls of their integrative assessment Martin Pusch Leibniz Institute of Freshwater Ecology and Inland Fisheries, Germany  
E.coli standards and risks to human health in New Zealand waterways: what more? Ayokunle Christopher Dada Streamlined Environmental, New Zealand  
Development of linked frameworks to represent and manage catchment-scale contaminant transport for improved water quality outcomes Richard Muirhead AgResearch, New Zealand |
| 10:45am - 11:00am | Floating fish ramps: a new tool in the fish passage toolbox Dan Fake * Hawkes Bay Regional Council, New Zealand; The University of Waikato, New Zealand  
Assessing the limits of eco-sustainable hydropower development Carina Seliger University of Natural Resources and Life Sciences, Austria  
Understanding the linkage between hydrological and chemical signatures at catchment outlets and dominant contaminant transfer pathways Roland Stenger Lincoln AgriTech, New Zealand  
The influence of site connectivity on zooplankton assemblage dynamics within the Lower Mississippi River Floodplain Jarrod Sackreiter University of Mississippi, USA  
The world’s largest waterborne campylobacteriosis outbreak: Havelock North August 2016 Brent Gilpin Environmental Science and Research, New Zealand  
Evaluating Greater Wellington Regional Council’s Natural Resources Plan Lucy Baker Greater Wellington Regional Council, New Zealand |
| 11:00am - 11:15am | Evaluating the likelihood of fish passage success at culverts in New Zealand using expert knowledge Paul Franklin NIWA, New Zealand  
Using LiDAR to suggest an integrative environmental flow in a Swedish river Ana Adeva Bustos * Norwegian University of Science and Technology, Norway  
Nitrogen budgets in rivers: proteins can make an important, but varied contribution to dissolved organic nitrogen. Gavin Rees La Trobe University, Australia  
Spatial variability of invertebrate drift in coarse-bed streams: hydraulic and morphodynamic controls Piotr Cienciala University of Illinois at Urbana-Champaign, USA  
E.coli standards and risks to human health in New Zealand waterways: what more? Ayokunle Christopher Dada Streamlined Environmental, New Zealand  
Development of linked frameworks to represent and manage catchment-scale contaminant transport for improved water quality outcomes Richard Muirhead AgResearch, New Zealand |

* * indicates the presenter is from New Zealand.
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<tr>
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<tr>
<td>11:15am - 11:30am</td>
<td>How effective are spat ropes at providing for fish passage in culverts five years after installation? Dean Miller Tonkin &amp; Taylor, New Zealand</td>
<td>FISH-Net: A model to support sustainable hydropower planning, design and monitoring for fish passage in the temperate Southern Hemisphere Martin Wilkes Coventry University, United Kingdom</td>
<td>Nutrient limitation in the Waikato River catchment, from Lake Taupo to the estuary Piet Verburg NIWA, New Zealand</td>
<td>Waikato Regional Council freshwater fish monitoring programme – overview and preliminary results with a focus on connectivity Josh Smith Waikato Regional Council, New Zealand</td>
<td>Using a metagenomic sequencing approach for faecal source tracking Megan Devane Environmental Science and Research, New Zealand</td>
<td>Managing freshwater ecosystems: how do we measure success? Carl Howarth Ministry for the Environment, New Zealand</td>
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<tr>
<td>11:30am - 11:45am</td>
<td>Refinement of fish friendly criteria for hydropower and irrigation diversions Craig Boys Charles Sturt University, Australia</td>
<td>Strategies to implement cost-efficiency mitigation measures in hydroppeaking rivers: a focus on early life stages of salmonids Svein Jakob Saltveit University of Oslo, Norway</td>
<td>Temporal and spatial pollution dynamics in the river-style Three Gorges Reservoir on the Yangtze River, China Andreas Holbach Karlsruhe Institute of Technology, Germany</td>
<td>Not all faecal pollution is equal: targeted management relies on knowledge of the source Justine Quinn Tonkin + Taylor, New Zealand</td>
<td>‘Maintain or Improve’: how do we judge that? Graham McBride NIWA, New Zealand</td>
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<td>11:45am – 12:00 pm</td>
<td>Downstream migrant eel movements in the lower Waikato River and passage past Huntly power station Cindy Baker NIWA, New Zealand</td>
<td>Fish Hazard Index: a tool for assessing hydropower impacts on fish Christian Wolter Berlin, Germany</td>
<td>The effects of the 2017 wildfires in the Port Hills on stream water quality Jenny Webster-Brown Waterways Centre for Freshwater Management, New Zealand</td>
<td>Viral beach balls and bacterial backstroke: pathogen ecology in freshwater Gillian Lewis University of Auckland, New Zealand</td>
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<tr>
<td>12:00 - 1:30pm</td>
<td>Lunch</td>
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<tr>
<td>Session</td>
<td>Special Session: Fish Passage Management</td>
<td>Special Session: Insights from Long-term Temporal and Large-scale Spatial Datasets</td>
<td>Citizen Science and Ecosystem Services</td>
<td>Food Webs</td>
<td>Human Health</td>
<td>Mussel Biology and Conservation</td>
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<tr>
<td>Chair</td>
<td>Bryn Quilter</td>
<td>Martin Thoms</td>
<td>Roger Young</td>
<td>Karen Shearer</td>
<td>Rebecca Stott</td>
<td>Susan Clearwater</td>
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<tr>
<td>1:30pm - 1:45pm</td>
<td>Fish passage solutions: a bit of theory, give it a go, monitor, and learn from our mistakes. Logan Brown Horizons Regional Council, New Zealand</td>
<td>Use of long-term data in river science: recent successes and future challenges and opportunities Andrew Casper University of Illinois, USA</td>
<td>Volunteer water monitoring as a focus for community engagement in New Zealand Robert Davies-Colley NIWA, New Zealand</td>
<td>Quantifying basal trophic resources for shallow lake food webs Kevin Collier University of Waikato, New Zealand</td>
<td>Modelling differing human health risk from recreational water contact with different faecal sources David Wood Environmental Science and Research, New Zealand</td>
<td>Mass propagation of native freshwater mussels Echyridella menziesii Susan Clearwater NIWA, New Zealand</td>
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<td>Location</td>
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<td>1:45pm - 2:00pm</td>
<td>Engineering design for fish passage</td>
<td>Effects of climatic and trophic processes on freshwater invertebrate communities: recent insights from long-term studies on French streams and rivers</td>
<td>Community monitoring of water quality – do the E. coli numbers stack up?</td>
<td>Quantifying trophic interactions in shallow lake food webs using stable isotopes of carbon and nitrogen</td>
<td>Use of QMRA to assess the human health risk of the Mataura River, Southland</td>
<td>Effects of water temperature on the release and viability of glochidia of the freshwater mussel, Echyridella menziesii</td>
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<td></td>
<td>Bryn Quilter</td>
<td>Mathieu Floury</td>
<td>Paul Fisher Nelson City Council, New Zealand</td>
<td>Michael Pingram Waikato Regional Council, New Zealand</td>
<td>Elaine Moriarty * Environmental Science and Research, New Zealand</td>
<td>Michele Melchor * University of Waikato, New Zealand</td>
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<td>Tonkin &amp; Taylor, New Zealand</td>
<td>Istrea, France</td>
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<td>2:00pm - 2:15pm</td>
<td>Assessment of public road-river intersections for provision of fish passage in Southland, New Zealand: methods, interim results, and proposed management actions</td>
<td>Taxonomic and functional diversity in four large and intensively-monitored rivers</td>
<td>Just because I’m young, don’t count me out Kirsty Brennan EOS Ecology, New Zealand</td>
<td>The influence of nutrient enrichment on riverine food webs: are the defenses compromised? Adam Canning * Massey University, New Zealand</td>
<td>Do cyanobacteria blooms develop inshore or in the middle of the lake? Max Gibbs NIWA, New Zealand</td>
<td>Assessing habitat preference and in-stream distribution of New Zealand freshwater mussels using mark-recapture techniques Alicia Catlin Waikato Regional Council, New Zealand</td>
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<td>James Dare</td>
<td>Jerrrod Parker Illinois Natural History Survey, USA</td>
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<td>Environment Southland, New Zealand</td>
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<td>2:15pm - 2:30pm</td>
<td>Managing the effects of land drainage and flood control infrastructure on fish passage in the Waikato Mike Lake Waikato Regional Council, New Zealand</td>
<td>Macroeological analysis of rivers in temperate steppes of the USA and Mongolia: from hydrogeomorphology to food webs</td>
<td>Contributing science to collaborative group decision making: reflections on working with the Takaka Freshwater Land Advisory Group Roger Young Caithron Institute, New Zealand</td>
<td>Seasonal variations in consumer nitrogen recycling in an oligotrophic lake: a stable isotope study Simon Stewart * University of Waikato, New Zealand</td>
<td>Simple E. coli testing methods – how do they stack up for community volunteer monitoring? Rebecca Stott NIWA, New Zealand</td>
<td>Can the bio-deposition and physical structure of hyriid freshwater mussels alter benthic algae and invertebrate assemblages in floodplain rivers? Nicole McCasker Charles Sturt University, Australia</td>
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<td>James Thorp University of Kansas, USA</td>
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<td>2:30pm - 2:45pm</td>
<td>Use of passive integrated transponder tags and acoustic hydrophones to document eel movement and mortality through a non-gravity fed axial pumping station</td>
<td>Naughty rivers: conforming or deviating ecosystem responses to anthropogenic drivers</td>
<td>Riverine ecosystem services: exploring stakeholders’ views Gabriela Costea Leibniz Institute of Freshwater Ecology and Inland Fisheries, Germany</td>
<td>Canterbury mudfish food webs across a gradient of drought intensity Christopher Meijer * University of Canterbury, New Zealand</td>
<td>Little Oneroa Stream – Great for ducks, not for people Brett Stansfield Environmental Impact Assessments Ltd, New Zealand</td>
<td>Freshwater mussel research and conservation Aotearoa Susan Clearwater NIWA, New Zealand</td>
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<td>Bruno David</td>
<td>Jason DeBoer * Illinois River Biological Station, USA</td>
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<td>2:45pm – 3:00pm</td>
<td>Weir removal made easy</td>
<td>The non-effect of restoring a large river: the Darling River, Australia</td>
<td>Energy density of common New Zealand macroinvertebrates for freshwater invertebrate-fish relationships, models and indices Karen Shearer Caithron Institute, New Zealand</td>
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<td>Mussel conservation discussion</td>
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<td></td>
<td>Matthew Bloxham</td>
<td>Martin Thoms University of New England, Australia</td>
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<td>3:30pm – 4:15pm</td>
<td>Keynote Speaker - <strong>Sonja Jähnig</strong> <em>Modelling riverine biodiversity and ecosystems service delivery - simple, integrated, or complex?</em>&lt;br&gt;Chair – Deniz Özkadaci&lt;br&gt;Location: Heaphy 1&amp;2</td>
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<td>4:15 - 6:00pm</td>
<td>Poster Session, Claudelands Upper Concourse Arena</td>
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<td>6:00pm – 8:00pm</td>
<td>ISRS Boat Trip, Buses depart outside Claudelands – Heaphy Terrace</td>
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<td>Student Function, Roaming Giant</td>
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<td>6:30pm</td>
<td>SWIM Meeting, Claudelands Arena Lounge</td>
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<td>8:50am</td>
<td>Welcome and Housekeeping</td>
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| 9:00am - 10:00am | Keynote Speaker – **Gary Brierley** *A new dawn is upon us: The use of emerging technologies in river science and management*
|              | Chair – Brendan Hicks                                                |
| 10:00am - 10:45am | Morning Tea                                                          |

**Session**

<table>
<thead>
<tr>
<th>Location</th>
<th>Special Session: Fish Passage Management</th>
<th>Special Session: Making Room For Rivers</th>
<th>Ecohydraulics</th>
<th>Wetlands</th>
<th>Resilience</th>
<th>Algae and Macrophytes</th>
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<tbody>
<tr>
<td>Heaphy 1</td>
<td>Kati Doehring</td>
<td>Kyle Christensen</td>
<td>John Hayes</td>
<td>Yvonne Taura</td>
<td>Elizabeth Graham</td>
<td>Cathy Kilroy</td>
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**10:45am - 11:00am**

**What has been the contribution of fish passages for migratory fish conservation in tropical systems?**
- **Luiz Silva**
  UPSJ, Brazil

**The evolution of river width design for gravel bed rivers in New Zealand.**
- **Kyle Christensen**
  Independent Consultant, New Zealand

**Invertebrate drift transport modelling: it's been a wild ride!**
- **John Hayes**
  Cawthron Institute, New Zealand

**Managing wetlands for carbon storage in an agricultural landscape I: threats and management options**
- **Susanne Watkins**
  Murray Local Land Services, Australia

**Vulnerability of freshwater ecosystems to state shifts associated with tipping points**
- **Angus McIntosh**
  University of Canterbury, New Zealand

**Within mat nutrient cycling in *Phormidium* – alkaline phosphatase activity and regulation**
- **Laura Kelly**
  Victoria University of Wellington, New Zealand

**11:00am - 11:15am**

**Na ika i Viti - freshwater issues in the tropical islands of Fiji**
- **Kati Doehring**
  Cawthron Institute, New Zealand

**Defining braided river margins**
- **Jo Hoyle**
  NIWA, New Zealand

**Predicting the effects on mussels of decreased minimum flows**
- **James Layzer**
  Tennessee Tech University, USA

**Managing wetlands for carbon storage in an agricultural landscape II: project approach and achievements**
- **Sarah Ning**
  Murray Darling Wetlands Working Group, Australia

**Community structure and food web pathways in macro-algal dominated lakes: is this another stable state?**
- **David Kelly**
  Cawthron Institute, New Zealand

**Phormidium growth responses along hydrological gradients in three south Canterbury rivers**
- **Tara McAllister**
  Waterways Centre for Freshwater Management, New Zealand

**11:15am - 11:30am**

**Case study at River Orkla in Central Norway: numerical modelling of hydraulic conditions at a river section combined with fish telemetry data in 3D**
- **Marcell Szabo-Meszaros**
  *Norwegian University of Science and Technology, Norway*

**One small river and one road - so why two large bridges?**
- **Iain Smith**
  Beca, New Zealand

**Analysis of bedload transport processes during flood events based on numerical simulations**
- **Kurt Glock**
  University of Natural Resources and Life Sciences, Austria

**Te Reo o Te Repo – The voice of the wetland, a cultural wetland handbook**
- **Yvonne Taura**
  Manaaki Whenua, New Zealand

**Sediment geochemistry indicators of lake resilience**
- **Sean Waters**
  Cawthron Institute, New Zealand

**When and why do *Phormidium* blooms occur, and when are toxins produced and released?**
- **Soozie Wood**
  Cawthron Institute, New Zealand

**11:30am - 11:45am**

**Impacts of weirs on downstream passage of native fish in the Murray-Darling Basin**
- **Craig Boys**
  Charles Sturt University, Australia

**Vulnerability zone identification and river channel change sensitivity in the Ruamahanga catchment**
- **Will Conley**
  Massey University, New Zealand

**A physical objectives approach to achieving desired periphyton removal using environmental flows**
- **Andrew Neverman**
  Massey University, New Zealand

**Loss of freshwater wetlands since 1990 in Southland, New Zealand: causes and consequences**
- **Hugh Robertson**
  Department of Conservation, New Zealand

**Does nutrient enrichment affect the response of stream communities to large floods?**
- **Yen Dinh**
  Massey University, New Zealand

**Redefining “accrual period” improves ability to predict annual maximum chlorophyll a in rivers**
- **Cathy Kilroy**
  NIWA, New Zealand
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<th>Location</th>
<th>Heaphy 1</th>
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<tbody>
<tr>
<td>11:45am – 12:00 pm</td>
<td>Fish passage research needs to diversify its concepts and methods to work on a global scale</td>
<td>“Big” rivers, big pressures</td>
<td>Flow-vegetation interactions at the patch scale</td>
<td>An introduction to wetland delineation protocols in the USA</td>
<td>Resilience is not always good! A framework for overcoming negative resistance and resilience in stream restoration</td>
<td>Understanding factors that affect macrophytes in agricultural waterways</td>
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<tr>
<td>Martin Wilkes</td>
<td>Dave West</td>
<td>Hamish Biggs</td>
<td>Daniel Gerber</td>
<td>Helen Warburton</td>
<td>Katie Collins *</td>
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<td>Coventry University, United Kingdom</td>
<td>Department of Conservation, New Zealand</td>
<td>NIWA, New Zealand</td>
<td>University of Wisconsin, USA</td>
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<td>Session</td>
<td>Special Session: Spatial Patterns and Processes of Biota in River Networks</td>
<td>Traditional Knowledge</td>
<td>Lake Water Quality</td>
<td>Macroinvertebrate Indicators</td>
<td>Hydrogeomorphology</td>
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<td>Chair</td>
<td>Johannes Radinger</td>
<td>Julian Williams</td>
<td>David Hamilton</td>
<td>Joanne Clapcott</td>
<td>Ian Fuller</td>
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<td>1:30pm - 1:45pm</td>
<td>The interacting effects of connectivity and global change on fishes in river networks</td>
<td>Development of a strategic and enduring approach to managing and improving</td>
<td>Modelling of trophic state of New Zealand lakes and visualisation with the geospatial platform Takiwa</td>
<td>Macroinvertebrate indicators: presence or absence in national policy?</td>
<td>Integrating geomorphology and ecology for resilient river engineering</td>
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<tr>
<td>Johannes Radinger</td>
<td>Mahinga Kai within the Ngati Tahu-Ngati Whaoa rohe – Te Awa o Waikato</td>
<td>Ngati Tahu-Ngati Whaoa Runanga Trust, New Zealand</td>
<td>David Hamilton</td>
<td>Joanne Clapcott</td>
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<td>Leibniz-Institute of Freshwater Ecology and Inland Fisheries, Germany; Universitat de Girona, Spain</td>
<td>Jolene Kelly / Evelyn Forrest</td>
<td>Griffith University, Australia</td>
<td>Cawthron Institute, New Zealand</td>
<td>Massey University, New Zealand</td>
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<td>1:45pm - 2:00pm</td>
<td>Interactive effects of hydrogeomorphic characteristics on fish community structure in a floodplain river</td>
<td>The application of a maatauranga whakapapa framework by Ngati Tahu Ngaati Whaoa towards mahinga kai attributes within the National Objectives Framework</td>
<td>The relationship between watercolor, CDOM absorption and remotely-sensed reflectance spectra of New Zealand lakes</td>
<td>Predicting the invertebrate community reference condition for New Zealand rivers</td>
<td>Direct and indirect effects of multiple stressors on stream fauna across watershed, reach and site scale: a path modelling analysis revealing the role of hydromorphology</td>
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<td>Michael Delong</td>
<td>Evelyn Forrest / Sue Clearwater</td>
<td>Ngati Tahu-Ngati Whaoa Runanga Trust, New Zealand; NIWA, New Zealand</td>
<td>Martin Neale</td>
<td>Martin Jenkins, New Zealand</td>
<td>Jeremy Piifady</td>
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<td>Winona State University, USA</td>
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<td>Martin Neale</td>
<td>Martin Jenkins, New Zealand</td>
<td>Massey University, New Zealand</td>
<td>Irstea, France</td>
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<td>2:00pm - 2:15pm</td>
<td>Does genetic introgression between stocked and wild populations affect patterns of dispersal? A case study in a brown trout (Salmo trutta) population.</td>
<td>Water colour trends over 18 years in all New Zealand lakes from Landsat observations</td>
<td>Development of stressor-specific invertebrate metrics – does it work and what for?</td>
<td>A technique to assess river habitat change – the missing dimension for water resource management.</td>
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<td>Keoni Saint-Pé</td>
<td>Yvonne Taura / Kiri Reihana</td>
<td>Moritz Lehnmann</td>
<td>Annika Wagenhoff</td>
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<td>Meredith Davis</td>
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<td>Station d’Ecologie Theorique et Experimentale du CNRS, France</td>
<td>Manaaki Whenua, New Zealand</td>
<td>University of Waikato, New Zealand</td>
<td>Cawthron Institute, New Zealand</td>
<td>Massey University, New Zealand</td>
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<td>2:15pm - 2:30pm</td>
<td>Network connectivity and complexity drive population persistence and stability in connected landscapes</td>
<td>Lake Waahi hauanga kai-science project</td>
<td>Within-lake measurement of phosphorous bioavailability: a multimethod approach</td>
<td>Incorporating biological traits in New Zealand freshwater biomonitoring and assessment</td>
<td>Influence of bank habitat type on fish and invertebrate communities in the Waikato River</td>
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<td>Angus Webb</td>
<td>Mathew Allan / Norm Hill University of Waikato, New Zealand; Boffa Miskell, New Zealand</td>
<td>Huma Saeed * University of Waikato, New Zealand</td>
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<td>Brian Smith NIWA, New Zealand</td>
<td>Toni Shell Tonkin &amp; Taylor, New Zealand</td>
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<td>University of Melbourne, Australia</td>
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<td>Spatial patterns in fish assemblages driven by confluence complexity mediating invasive species interactions</td>
<td>The continuing journey towards kaitiaki monitoring.</td>
<td>Lakes as organic matter upgraders – seasonal variation in biochemical compositions of in- and outflowing particles in pre-alpine Lake Lunz, Austria</td>
<td>The role of macroinvertebrates in nutrient processing in the Tukituki River</td>
<td>Characteristics of the very rare Whakatāne flood of 6 April 2017 and implications for design</td>
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<td>Nixie Boddy * University of Canterbury, New Zealand</td>
<td>Brett Cockeram Greater Wellington Regional Council, New Zealand</td>
<td>Samiullah Khan University of Otago, New Zealand</td>
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<td>Elizabeth Graham NIWA, New Zealand</td>
<td>Peter Blackwood Bay of Plenty Regional Council, New Zealand</td>
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<td>2:45pm – 3:00pm</td>
<td>Targeting connectivity restoration in inland waters: a spatial network analysis approach</td>
<td>Kaitiaki layers: visualising mātauranga Māori and science</td>
<td>Contribution of organic phosphorus to phytoplankton phosphorus demand in a phosphate-depauperate lake</td>
<td>Morphological effects of altered flow and sediment regime and vegetation encroachment in dam-impacted braided rivers: a numerical modelling study</td>
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<td>Pedro Segurado University of Lisbon, Portugal</td>
<td>Maui Hudson The University of Waikato, New Zealand</td>
<td>Matthew Prentice Griffith University, Australia</td>
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<td>Guglielmo Stecca DICAM University of Trento, Italy</td>
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<td>Traditional Knowledge</td>
<td>Fish Ecology</td>
<td>Urban/Stormwater</td>
<td>Modelling/Hydrology</td>
<td>Monitoring and Assessment Methods</td>
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<td>Phil Jellyman</td>
<td>Damian Young</td>
<td>Christian Zammit</td>
<td>Eloise Ryan</td>
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<td>3:30pm - 3:45pm</td>
<td>River Network Toolkit – easing freshwater network data management</td>
<td>Kia Mahitahi – working together: a cultural perspective for freshwater management in Te Tau Ihu o te Waka a Māui.</td>
<td>Large longfin eels in an unfished Taranaki landslidedammed lake</td>
<td>Watercourse assessment and catchment management in Hamilton City</td>
<td>Hydrodynamic catchment to sea modelling</td>
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<td>Pedro Segurado University of Lisbon, Portugal</td>
<td>Aneika Young Cawthron Institute, New Zealand</td>
<td>Dylan Smith University of Waikato, New Zealand</td>
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<td>Damian Young Morphum Environmental, New Zealand</td>
<td>Graeme Smart NIWA, New Zealand</td>
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<td>3:45pm - 4:00pm</td>
<td>Species distribution and species dispersal models, instruments for tomorrow’s river basin management?</td>
<td>Te Wai Koiora – stream restoration and cultural stream health monitoring</td>
<td>Predicting the biodiversity consequences of altered thermal regimes in rivers: the need to understand fundamental thermal niches</td>
<td>Integrating ecological and stormwater mitigation and offsetting</td>
<td>Estimating water residence time distribution in river networks by boosted regression trees (BRT) model</td>
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<td>Daniel Teschlade University of Duisburg-Essen, Germany</td>
<td>Katie Blakemore Taranaki Regional Council, New Zealand</td>
<td>Rick Stoffels Murray-Darling Freshwater Research Centre, Australia</td>
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<td>Mark Lowe Morphum Environmental, New Zealand</td>
<td>Centrifugal Macrophyte Elutriation (CME): a novel method to separate macroinvertebrates from organic matter in streams with high macrophyte biomass</td>
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<td>Michael Greer Greater Wellington Regional Council, New Zealand</td>
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<td>4:00pm - 4:15pm</td>
<td>Gene flow simulations demonstrate resistance of long-lived species to genetic erosion of habitat fragmentation Matthew Fuller Duke University, USA</td>
<td>Protecting ancient Māori rock art in a changing freshwater management environment <strong>Mandy Home</strong> NIWA, New Zealand</td>
<td>Wet and dry season flows influence juvenile fish abundance in a tropical river <strong>Alison King</strong> Charles Darwin University, Australia</td>
<td>Watercourse assessment reports: a framework for integrated stream management <strong>Michael Lindgreen</strong> 4sight Consulting, New Zealand</td>
<td>Cumulative Hydrological Effects Simulator: a tool for characterising the consequences of water use on multiple values <strong>Jan Diettrich</strong> NIWA, New Zealand</td>
<td>A global approach for assessing environmental flow requirements: considering organic matter budget and energy transportation <strong>Yui Shinozaki</strong> * University of Tsukuba, Japan</td>
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<td>4:15pm - 4:30pm</td>
<td>Incorporating cultural values and perspectives of First Peoples’ (Aboriginal People) into water planning and environmental water management <strong>Nicole McCasker</strong> Charles Darwin University, Australia</td>
<td>The impact of didymo on adult trout abundance – has there really been an effect? <strong>Phil Jellyman</strong> NIWA, New Zealand</td>
<td>Drainage geometric networks and catchment management to support freshwater outcomes <strong>Emily Reeves</strong> Morphum Environmental, New Zealand</td>
<td>Improving instream habitat and mitigation studies with spatially extensive groundwater – surface water interaction models <strong>Christian Zammit</strong> NIWA, New Zealand</td>
<td>The value of high-frequency water quality monitoring before, during and after high flow events for describing temporal and spatial dynamics in an intensively farmed lowland floodplain <strong>Eloise Ryan</strong> Waikato Regional Council, New Zealand</td>
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<td>4:30pm - 4:45pm</td>
<td>The importance of network discontinuity in the ecology and conservation biology of African headwater stream minnows <strong>Darragh Woodford</strong> University of the Witwatersrand, South Africa</td>
<td>Colourful urban streams: microplastic pollution of the freshwater systems in the Auckland region. <strong>Nadia Dikareva</strong> * University of Auckland, New Zealand</td>
<td>Tidal flood modelling at Dargaville <strong>Hugh MacMurray</strong> Barnett &amp; MacMurray, New Zealand</td>
<td>A new multi-scale approach to predict potential hyporheic exchange flow in rivers <strong>Chiara Magliozi</strong> * Cranfield University, United Kingdom</td>
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<td>5:00pm - 5:30pm</td>
<td>NZFSS Medal Award Plenary - <strong>Dr John Hayes</strong> - <em>The paradox of integrating immigrants: how salmonids have influenced freshwater values, environmental law and policy, water wars and research in New Zealand</em></td>
<td>Optional Informal Social Function Meet other delegates across the road, at the Roaming Giant (own expense)</td>
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<td>8:00am</td>
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<td>8:50am</td>
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| 9:00am - 10:00am | Keynote Speaker – **Melissa Parsons**  *Extreme floods and river resilience: a social-ecological perspective*  
                | Chair – Martin Thoms                                                    |
| 10:00am - 10:30am | Morning Tea                                                              |
| 10:30am - 10:45am | Special Session: Balancing Environmental Flow Objectives  
                | **Chair**  Paul Franklin  
                | **Location**  Heaphy 1  
                | **Speaker**  Paul Franklin  
                | **Affiliation**  NIWA, New Zealand  
                | **Title**  Water quantity limits to support multiple values in New Zealand rivers: are minimum flows enough?  
                | **Notes**  Minimum flow considerations in estuaries  
                | **Speaker**  Eleanor Gee  
                | **Affiliation**  NIWA, New Zealand  
                | **Title**  Big data on New Zealand riparian restoration: who, what, where, why, how much, and is it working?  
                | **Notes**  Richard Storey  
                | **Affiliation**  NIWA, New Zealand  
                | **Title**  Can proven geo-engineering products increase water clarity and decrease sediment phosphorus fluxes in a Waikato peat lake?  
                | **Notes**  Ben Woodward  
                | **Affiliation**  NIWA, New Zealand  
| 10:45am - 11:00am | Special Session: Estuaries – Environments in Transition  
                | **Chair**  Fleur Matheson  
                | **Location**  Heaphy 2  
                | **Speaker**  Fleur Matheson  
                | **Affiliation**  NIWA, New Zealand  
                | **Title**  Stream enhancement – what actually happens?  
                | **Notes**  Alex James  
                | **Affiliation**  EOS Ecology, New Zealand  
                | **Title**  Responses of the fish community and biomass in Lake Ohinewai to fish removal and a carp exclusion barrier  
                | **Notes**  Brendan Hicks  
                | **Affiliation**  University of Waikato, New Zealand  
| 11:00am - 11:15am | River Restoration                                                        |
|             | **Chair**  Soozie Wood  
                | **Location**  Heaphy 3  
                | **Speaker**  Soozie Wood  
                | **Affiliation**  NIWA, New Zealand  
                | **Title**  Nutrient cycling in Lake Horowhenua and restoration options  
                | **Notes**  Piet Verburg  
                | **Affiliation**  NIWA, New Zealand  
| 11:15am - 11:30am | Lake and Wetland Restoration                                             |
|             | **Chair**  Chris Hickey  
                | **Location**  Brooklyn 1  
                | **Speaker**  Chris Hickey  
                | **Affiliation**  NIWA, New Zealand  
                | **Title**  The search for the source of phosphorus in the Tukituki River: the role of diurnal fluctuations in water column pH from periphyton photosynthesis  
                | **Notes**  Craig Depree  
                | **Affiliation**  NIWA, New Zealand  
|             | **Chair**  Murray Hicks  
                | **Location**  Brooklyn 2  
                | **Speaker**  Murray Hicks  
                | **Affiliation**  NIWA, New Zealand  
                | **Title**  Effects of change in catchment sediment load on sediment rating curves and particle size  
                | **Notes**  Murray Hicks  
                | **Affiliation**  NIWA, New Zealand  
|             | **Chair**  Eleanor Gee  
                | **Location**  Brooklyn 3  
                | **Speaker**  Eleanor Gee  
                | **Affiliation**  NIWA, New Zealand  
                | **Title**  Light regime in a large river using flow-path, snap-shot, and fixed-site measurement approaches  
                | **Notes**  John Gardner  
                | **Affiliation**  Duke University, USA  
|             | **Chair**  Paul Franklin  
                | **Location**  Heaphy 1  
                | **Speaker**  Paul Franklin  
                | **Affiliation**  NIWA, New Zealand  
|             | **Title**  Enabling an Indigenous community to inform environmental flow setting processes: examples from the results of Cultural Flow Preference Studies undertaken in New Zealand.  
                | **Notes**  Gail Tipa  
                | **Affiliation**  Tipa and Associates, New Zealand  
|            | **Chair**  Doug Booker  
                | **Location**  Heaphy 2  
                | **Speaker**  Doug Booker  
                | **Affiliation**  NIWA, New Zealand  
|            | **Title**  Mapping water quantity allocation across New Zealand  
                | **Notes**  John Zeldis  
                | **Affiliation**  NIWA, New Zealand  
|            | **Chair**  Doug Booker  
                | **Location**  Heaphy 2  
                | **Speaker**  Doug Booker  
                | **Affiliation**  NIWA, New Zealand  
|            | **Title**  The New Zealand Estuary Trophic Index (ETI) Tools  
                | **Notes**  John Zeldis  
                | **Affiliation**  NIWA, New Zealand  
|            | **Chair**  Doug Booker  
                | **Location**  Heaphy 2  
                | **Speaker**  Doug Booker  
                | **Affiliation**  NIWA, New Zealand  
|            | **Title**  Stream enhancement – what actually happens?  
                | **Notes**  Alex James  
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| 11:15am - 11:30am | Environmental flows for ecosystem function: plausible reality or impossible dream? *Fiona Dyer*  
*University of Canberra, Australia* | Fish composition of permanently open and intermittently closed estuaries in east coast of Otago, New Zealand  
*Fasil Wolebu*  
*University of Otago, New Zealand* | Effectiveness of whole ecosystem and in-stream lime applications to restore acid-stressed Adirondack Mountain stream communities: leaf decomposition and nutrient uptake responses  
*Randy Fuller*  
*Colgate University, USA* | Using environmental DNA to characterise contemporary and historic lake communities  
*Soozie Wood*  
*Catchment Institute, New Zealand* | ‘NZ inc.’ takes a step towards national consistency in river and lake water quality monitoring – a new National Environmental Monitoring Standard (NEMS)  
*Juliet Milne*  
*NIWA, New Zealand* | Effects of different size sediment deposition on the riparian forestation  
*Takashi Asaeda*  
*Saitama University, Japan* |
| 11:30am - 11:45am | Characterising diverse river landscapes using hydro-geomorphic classification and dimensionless hydrographs  
*Belize Lane*  
*University of California, USA* | Specialist estuarine fishes: not just diadromous transients  
*Nicholas Ling*  
*University of Waikato, New Zealand* | Reintroduction of invertebrate communities – a field experiment in a German lowland stream  
*Armin Lorenz*  
*University of Duisburg-Essen, Germany* | The temporal coherence of lake phytoplankton community composition across a regional set of lakes  
*Bingqin Xu*  
*The University of Auckland, New Zealand* | Updating the ANZECC water quality guidelines for copper and zinc  
*Chris Hickey*  
*NIWA, New Zealand* | Measurement and estimation of fine suspended sediment-related attributes in NZ waters  
*Robert Davies-Colley*  
*NIWA, New Zealand* |
| 11:45am – 12:00pm | Habitat assessment in an irrigation system conjoint with a spring-fed stream  
*Shinji Fukuda*  
*Tokyo University of Agriculture and Technology, Japan* | Spatio-temporal analysis of geomorphological changes in the Nadi coastal and delta areas  
*Preetika Singh*  
*University of New England, Australia* | Riparian shading as a tool to manage nuisance instream plants: testing the concept in Hawkes Bay and Waikato streams and rivers  
*Fleur Matheson*  
*NIWA, New Zealand* | Investigation of drainage impacts on wetland hydrology, and restoration planning  
*James Blyth*  
*Jacobs New Zealand Limited, New Zealand* | Isotopes in nitrate and organisms can target opportunities for improved agricultural management to reduce eutrophication.  
*Troy Baisden*  
*GNS Science, New Zealand* | Using fluorimetry to better assess the effects of suspended sediment on phytoplankton: an agricultural bayou case study  
*Richard Lizotte*  
*United States Department of Agriculture, USA* |
| 12:00 – 1:30pm | LUNCH | | | “Draft NEMS Water Quality – drop-in discussion”  
*Brooklyn 2 Room* | |
| Session | Special Session: Balancing Environmental Flow Objectives  
Chair: Paul Franklin | Aquatic Ecosystem Restoration  
Chair: Jürgen Geist | Threatened Species and Ecosystems  
Chair: James Shelley | Contaminants  
Chair: Brenda Baillie | Environmental relationships  
Chair: Gerry Closs | 1:30pm - 1:45pm | Developing tiered environmental flow targets using a functional flows approach for California streams  
*Rob Lusardi*  
*University of California, USA* | Aquatic ecosystem restoration: priority setting and indicators of success  
*Jürgen Geist*  
*Technical University of Munich, Germany* | Sitting on the fence: testing the stock exclusion paradigm on a threatened high country galaxiid  
*Jarred Arthur*  
*Environment Canterbury, New Zealand* | Mechanism elucidation and performance evaluation of Pb(II) and Cd(II) removal by low-cost Citrullus lanatus rind in batch and continuous systems  
*Qian Wang*  
*The Hong Kong Polytechnic University, Hong Kong* | Does size matter? The ecological consequences of decreased body size with temperature rise  
*Emma Moffett*  
*The University of Auckland, New Zealand* |
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| 1:45pm - 2:00pm | When to "piggyback" an environmental water release: balancing flood risks and environmental outcomes **Mike Stewardson**  
The University of Melbourne, Australia | Dispersal and fate of augmented gravel in a boulder-bed channel: early implications for restoring salmonid habitat **David Gilvear**  
Plymouth University, United Kingdom | Ecosystem productivity dynamics in a rare chain of ponds system: Mulwaree Ponds, Southern Highlands, New South Wales, Australia **Lorraine Hardwick**  
Macquarie University, Australia | Emerging organic contaminants in a predominantly rural aquatic environment – what do we know and should we be worried? **Michael Stewart**  
Streamlined Environmental, New Zealand | Allometric body mass – abundance scaling relationships vary in response to a gradient of mining impacts **Justin Pomeranz** *  
University of Canterbury, New Zealand |
| 2:00pm - 2:15pm | Adaptive management of environmental water through Australia’s Long-Term Intervention Monitoring project **Angus Webb**  
University of Melbourne, Australia | Is riparian vegetation helpful in better management of the riverine corridor? Some tricks to take advantage of a cheap and natural fluvial component **Andrew Neverman** *  
Massey University, New Zealand | Assessing Canterbury mudfish (*Neochanna burrowsii*) translocation viability using a graphical metapopulation model **Simon Coats** *  
University of Canterbury, New Zealand | Use of pesticides and fertilisers in New Zealand’s planted forests – implications for water quality **Brenda Baillie**  
Scion Research, New Zealand | Influence of species, hydrological disturbance, and habitat size on the trophic position - body mass relationship of freshwater fishes **Kevin Fraley** *  
University of Canterbury, New Zealand |
| 2:15pm - 2:30pm | Mapping environmental flow objectives to spatial and temporal scales of response **Rick Stoffels**  
CSIRO Land and Water, Australia | Multidimensional evaluation of freshwater restoration efficacy in coastal wetlands: conceptual model from molecules to functional groups of the macrobenthos **Xiaoxiao Li** *  
Beijing Normal University, China | Is the Kimberley in remote north-western Australia a cradle of freshwater fish biodiversity or a museum? **James Shelley**  
NIWA, New Zealand | Accelerating uptake of constructed wetlands and riparian buffers by quantifying contaminant attenuation performance: a proposed national investigation **Asian Wright-stow**  
DairyNZ, New Zealand | The breeding of a passerine bird, the white-throated dipper (*Cinclus cinclus*), and the potential influence of Atlantic salmon (*Salmo salar*) and brown trout (*Salmo trutta*)  
**Svein Jakob Saltveit**  
University of Oslo, Norway |
| 2:30pm - 3:00pm | Afternoon Tea | | | | |
| 3:00pm - 3:45pm | Keynote Speaker – **Julian Olden**  
New vision, new life, new hope, for dammed rivers  
Chair – Angus McIntosh  
Location: Heaphy 1&2 | | | | |
| 3:45pm - 4:15pm | Conference Close  
Location: Heaphy 1&2 | | | | |
| From 6:30pm | Conference Dinner, Hamilton Gardens  
Buses depart the Novotel Tainui Hotel at 5:30pm / 5:45pm / 6:00pm  
Pre-Dinner drinks begin at 6:30pm and guests are to be seated at 7:00pm | | | | |