



# 2024 Technical Workshop Programme

9<sup>th</sup> – 12<sup>th</sup> April 2024 – Queenstown

## *Managing Expectations: Quality, Quantity, Resources, Resilience*

Tuesday 9 <sup>th</sup> April		Coronet Room, Rydges Hotel	
Time	Item	Speaker	Organisation
9:30	Registrations Open	Tea and Coffee available	
10:00	<b>Morning Tea</b>		
10:30	Welcome to Technical Workshop & Queenstown	Nick Boyens & Evan Baddock	Otago Regional Council NIWA
10:40	Opening Address by Council Chairperson	Gretchen Robertson	Otago Regional Council
11:00	The role of hydrological data empowering environmental management & decisions	Lee Boon	Pattle Delamore Partners Limited
11:20	Ensuring Monitoring Network Resilience – Opportunities Gained Through Communications Redundancies	Kirstine Malloch	NIWA
11:40	Otago Regional Council's lake buoy monitoring network	Nick Boyens	Otago Regional Council
12:00	Searching for Groundwater - Pacific Island Style	Pete Mason	West Coast Regional Council
12:20	<b>Lunch</b>		
13:20	<b>Keynote Speaker Session:</b> Automating Time Series Data Processing at the USGS: Current Approaches and Vision for the Future	Amber S. Jones	USGS
13:50	Data collaboration across domains and organisations	Paul Sheahan	KISTERS
14:10	Bringing data to life	Michael McDonald	Environment Southland
14:30	NEMS Updates (New QC matrices, Water Temp, DO) & Results of recent Water Quality Regattas	Juliet Milne	Traverse Environmental
14:50	Homegrown Environmental Monitoring: AquaWatch's Journey to Scalable and Precise Real-Time Water Quality Monitoring	James Muir	AquaWatch
15:10	<b>Afternoon Tea</b>		
15:40	Field Day / Gauging Regatta Details	Nick Boyens	Otago Regional Council
15:50	Exhibitor / Trade Stand Presentations	Facilitated by Evan Baddock	
18:00	<b>Social Event at Venue - All invited</b>	<i>Queenstown &amp; Wakatipu Rooms, Level 5, Rydges Hotel</i>	

## Wednesday 10<sup>th</sup> April – Gauging Regatta / Field Day

Time	Item	Details / Venue
9:00	Bus leaves / travel to field site Field Day - Flow Gauging Regatta & demos	Bus leaves outside Rydges Hotel, Queenstown Tucker Beach on Shotover River
15:00	Bus returns to Rydges Hotel	Outside Rydges Hotel, Queenstown

## Wednesday 10<sup>th</sup> April – Data Workshop

Coronet Room, Rydges Hotel

Time	Item	Speaker	Organisation
<b>08:30</b>	<b>Arrival Tea &amp; Coffee</b>		
9:00	Data Workshop Welcome & Introduction	Jennifer Tregurtha	Environment Canterbury
9:10	An Introductory Overview to Hydrologic Information Systems for Aquatic Sensor Data	Amber S. Jones	USGS
9:30	Machine Learning and AI Speed up Data Validation for Quality Assurance	Sean Quereshi	Aquatic Informatics
9:50	Session One Topics	Group Discussion	
<b>10:20</b>	<b>Morning Tea</b>		
10:50	Community Based Monitoring	Juliet Milne	Traverse Environmental
11:10	Session Two Topics	Group Discussion	
11:40	<b>Interactive Session:</b> A Python Package for Automating Aquatic Data QA/QC	Amber S. Jones	USGS
<b>12:30</b>	<b>Lunch</b>		
13:30	How to <del>lower</del> manage expectations and meet annual data targets	Shontelle Milne	Environment Canterbury
13:50	What is happening with my data?	Darren Gerretzen & Jas Robb	NIWA
14:10	Groundwater Quality Metadata: Problems, Solutions & Outcomes	Jennifer Tregurtha	Environment Canterbury
14:30	Session Three Topics	Group Discussion	
15:00	Data Workshop Wrap Up & Feedback	Jennifer Tregurtha	Environment Canterbury
<b>15:05</b>	<b>Data Workshop Close &amp; Afternoon Tea</b>		

Thursday 11<sup>th</sup> April

Coronet Room, Rydges Hotel

Time	Item	Speaker	Organisation
<b>8:30</b>	<b>Arrival Tea &amp; Coffee</b>		
<b>9:00</b>	<b>Keynote Speaker Session:</b> Progress towards quantifying New Zealand's seasonal snow	Jono Conway	NIWA
<b>9:30</b>	Access Granted: Stepping up our rivers	Sam Gibbens	West Coast Regional Council
<b>9:50</b>	Stereoscopic camera station development and installation, and HydroSTIV portable overview.	Evan Baddock & Mark Randall	NIWA / Queensland Government
<b>10:10</b>	Old Dogs and New Tricks. STIV & Slope Area meet head on at the mighty Orikaka River in the Buller Gorge	Reuben Stuart & Pete Mason	West Coast Regional Council
<b>10:30</b>	<b>Morning Tea</b>		
<b>11:00</b>	Guidance on using automated anomaly detection for high-frequency water quality data: A collaborative approach	David Wood	NIWA
<b>11:20</b>	Harnessing Data for Water Resource Management: The Otago Regional Council's Innovative Approach	Nicole Nally & Susan Wells	Aquatic Informatics Otago Regional Council
<b>11:40</b>	Evaluating surrogate technologies for river suspended sediment load monitoring	Andrew Willsman	NIWA
<b>12:00</b>	ADCPs and tow tanks – They don't mix	Mic Clayton	Cooma, Australia
<b>12:20</b>	<b>Lunch</b>		
<b>13:20</b>	<b>Keynote Speaker Session:</b> Advancements in Automating Aquatic Time Series QA/QC: Research and Applications	Amber S. Jones	USGS
<b>13:50</b>	Increasing efficiencies and quality of river flow gaugings using autonomous boats	Michael Rogers	Marlborough District Council
<b>14:10</b>	Comparison of high frequency nitrate sensors and consequences for data quality	Alex Vincent	NIWA
<b>14:30</b>	Managing expectations – A case study comparing two remote flood warning flow monitoring sites in the Bay of Plenty	Brent Hutchby	Bay of Plenty Regional Council
<b>14:50</b>	High frequency visual clarity sensing – low range turbidity sensor tests	Lucy McKergow	NIWA
<b>15:10</b>	<b>Afternoon Tea</b>		
<b>15:40</b>	Application of index velocity method in complex flow conditions	Daniel Wagenaar	Xylem Water Solutions
<b>16:00</b>	<b>Panel Discussion:</b> More than Measurement: Balancing Expectations, Data Demands, and Resilience	Facilitated by Joe Gendall (Watercare). Panel Members: Rob Davies-Colley (NIWA) Emma Chibnall (Marlborough District Council) Steph Bowis (Tasman District Council) Phil Downes (Environment Canterbury)	
<b>18:00</b>	<b>Formal Workshop Dinner &amp; Drinks</b>	<i>Bazaar Queenstown, 30 Brunswick Street</i>	

**Friday 12th April****Coronet Room, Rydges Hotel**

<b>Time</b>	<b>Item</b>	<b>Speaker</b>	<b>Organisation</b>
<b>8:30</b>	<b>Arrival Tea &amp; Coffee</b>		
<b>9:00</b>	<b>Keynote Speaker Session:</b> Mutual benefits from integrating river sediment and water quality monitoring	Rob Davies-Colley	NIWA
<b>9:40</b>	Surfbee Application and Findings in Otago	Bradley Thomas	Otago Regional Council
<b>10:00</b>	Groundwater Sampling - The importance of groundwater monitoring bore design and construction	Caitlin Frazer & Nic Love	Pattle Delamore Partners Limited
<b>10:20</b>	<b>Morning Tea</b>		
<b>11:00</b>	Deep groundwater sampling challenges	Ryan Nicol	Pattle Delamore Partners Limited
<b>11:20</b>	Predicting low oxygen concentrations in lowland streams using stream metabolism and atmospheric reaeration	Ben Woodward	NIWA
<b>11:40</b>	Special Guest Presentation from AHA	Jaymee Woods	Water Corporation, Western Australia
<b>12:00</b>	<b>Prize Giving &amp; Close of Workshop</b>		