

2026 Technical Workshop Programme

Tuesday 24 th March			
Time	Item	Speaker	Organisation
8:00	Registrations Open - Tea & Coffee Available		
	Day 1 Session 1 Facilitator	<i>Evan Baddock</i>	<i>Earth Science NZ</i>
9:00	Opening Karakia	Gordon Iafeta	
9:05	Welcome to Technical Workshop & West Coast	Samwell Warren	West Coast Regional Council
9:10	Opening Address	Darryl Lew	West Coast Regional Council
9:25	Keynote Speaker Session: Critical assessment of SWOT's ability to capture complex braided river dynamics	Marissa Hughes	The University of North Carolina at Chapel Hill
9:55	Application of Image-Based Grain Size Analysis to Bed Material for Improving Sediment Data Reliability	DaeWung Lee	Korea Institute of Hydrological Survey
10:15	Duty of Care: The Mental-Health Implications of Hydrological Practice in the Agricultural Sector	Holly Munro	Aqualinc Research Ltd
10:35	Morning Tea		
	Day 1 Session 2 Facilitator	<i>Mic Clayton</i>	<i>Snowy Hydro</i>
11:00	Coordinate Systems, Height Datums and Quality Control – Minimising errors in measurements on the water	Richard Harrison	Global Survey
11:20	A Builders take on Environmental Monitoring Installations	Glen Wratt	Bay of Plenty Regional Council
11:40	Some Basic Hydrology	Graeme Horrell	G H Engineering Hydrologist
12:00	Surface alpha – Field observations and an initial attempt at Discharge – Alpha curves	Darren Gerretzen	Earth Sciences NZ
12:20	Precision in the Flood Zone: Comparing Slope–Area, Drone/STIV, and Radar Gauging, West Coast Style	Reuben Stuart & Pete Mason	West Coast Regional Council
12:40	Lunch		
	Day 1 Session 3 Facilitator	<i>Reuben Stuart</i>	<i>West Coast Regional Council</i>
13:30	Positioning Hydrometric Monitoring Assets in the Modern Era	Matthew Pilkington	Queensland Hydro & AHA
13:50	Rainfall, resilience and data sovereignty: Lessons from the Ōtetao Reti Marae rain gauge	Marcus Schlesier	Northland Regional Council
14:10	Flood measurement systems: Stereoscopic camera stations, drones with RTK GPS, towed depth sounder systems, and aerial GPR	Hamish Biggs	Earth Sciences NZ
14:30	RTK GPS on ADCP boats for discharge gauging and bedload transport	Hamish Sutton	Earth Sciences NZ
14:50	Bedload transport measurements from ADCP bottom track: Rakaia River flood event (October 2025)	Colin Rennie	University of Ottawa
15:10	Afternoon Tea		
	Day 1 Session 4 Facilitator	<i>Evan Baddock</i>	<i>Earth Sciences NZ</i>
15:30	Sponsor and Trade Stand Presentations	Sponsor & Trade Stand Representatives	
16:30	Field Day Information	Samwell Warren	West Coast Regional Council
16:40	Data Day & Additional Workshop Information	Evan Baddock	Earth Sciences NZ
16:45	Workshop Wrap Up & Close	Evan Baddock	Earth Sciences NZ
6pm to 9pm	Official Workshop Icebreaker Function - All invited	<i>Monteiths Brewery, 60 Herbert Street, Greymouth</i>	

Wednesday 25 th March – Gauging Regatta / Field Day		
Time	Item	Details / Venue
8:00	Bus departing for field site	Pick up points: Greymouth Train Station (8:00), Ashley Hotel (8:15) and Hokitika (8:45 at 2 Railway Terrace)
9:30 to 13:00	Annual flow gauging regatta	Hokitika Gorge Field Site
13:00	Bus departing for Greymouth	Drop off point: Shantytown Venue (Bus to return to pick up points after Specialist Workshops)
14:40 to 16:30	Specialist Workshops: <i>PowerBox, Global Survey Ltd, Sommer, Earth Sciences NZ</i>	Shantytown Workshop Venue

Wednesday 25 th March – Data Day			
Time	Item	Speaker	Organisation
8:30	Arrival Tea & Coffee		
	Data Day Session Facilitators	<i>Angela Perks, Jennifer Tregurtha</i>	<i>Bay of Plenty Regional Council & Environment Canterbury</i>
9:00	Data Day Welcome & Introduction	Angela Perks, Jennifer Tregurtha	Bay of Plenty Regional Council & Environment Canterbury
9:10	Automating data processing, the benefits and the considerations	Shane Buswell	KISTERS
9:30	Development of water level prediction model using ISTM	SangYu Lee	Korea Institute of Hydrological Survey
9:50	Session 1: Discussion Topics - Data validation, importance of metadata and emerging A.I.	Group Discussions	
10:20	Session 1: Reporting Results to Room	Group Representatives	
10:30	Morning Tea		
11:00	Automated data quality auditing and visualisation	Nandakumar Thachapilly	Marlborough District Council
11:20	Session 2: Discussion Topics - Data auditing, data visualisation and science communication.	Group Discussions	
11:50	Session 2: Reporting Results to Room	Group Representatives	
12:00	Lunch		
12:45	Sorting the good from the bad: real-time continuous optical nitrate data grading	Lucy McKergow	Earth Sciences NZ
13:05	Update and Overview of NEMS Dissolved Oxygen standard	Lucy McKergow	Earth Sciences NZ
13:25	Session 3: Discussion Topics - Water quality data processing and grading, water quality sensor deployment metadata.	Group Discussions	
13:45	Session 3: Group Exercise - Sensor deployment	Group Exercise	
14:15	Session 3: Reporting Results to Room	Group Representatives	

14:25	Data Day Wrap Up & Close	Angela Perks, Jennifer Tregurtha	Bay of Plenty Regional Council & Environment Canterbury
14:30	Afternoon Tea		
14:40 to 16:30	Specialist Workshops: <i>PowerBox, Global Survey Ltd, Sommer, Earth Sciences NZ</i>		Shantytown Workshop Venue
17:00	Social Event proudly sponsored by Envco. All welcome.		<i>The Speight's Ale House, 130 Mawhera Quay, Greymouth</i>

Thursday 26 th March			
Time	Item	Speaker	Organisation
8:00	Arrival Tea & Coffee		
	<i>Day 3 Session 1 Facilitator</i>	<i>Evan Baddock</i>	<i>Earth Science NZ</i>
8:30	Keynote Speaker Session: Image Velocimetry Tools (IVy)	Frank Engel	US Geological Survey
8:50	Rectification of Image Velocity Results (RIVeR) - Open source LSPIV software	Antoine Patalano	National University of Córdoba, Argentina
9:00	Hydro-STIV incorporating low-cost cameras	Logan Cameron	Queensland Government Department of Local Government, Water and Volunteers & AHA
9:20	Tracer Dilution: a case study in a super dynamic environment	Christoph Sommer	Sommer Messtechnik
9:40	Hydrometric-Data Uncertainty: Stage-Discharge Method	Terry Kenney	Aquatic Informatics
10:00	Morning Tea		
	<i>Day 3 Session 2 Facilitator</i>	<i>Jennifer Tregurtha</i>	<i>Environment Canterbury</i>
10:20	Insights from the 15th Biennial National Hydrologic Warning Council Conference	Nicholas Holwerda	Basins Environmental
10:40	Direct-to-device (D2D) satellite connectivity	Ron Schop	Unidata Pty Ltd
11:00	Industry Updates: - NEMS - NZ Diploma in Field Hydrology - Korea Institute of Hydrological Survey MOU - Australian Hydrographers Association (AHA)	Mike Ede & Tara Matthews	Tasman District Council & Australian Hydrographers Association
11:20	NEMS Topics - How are we going? Gaps, Grading, updates on NEMS for Open Channel Flow Measurement	Evan Baddock & Alex Ring	Earth Sciences NZ & Environment Canterbury
11:40	Interactive Session: NEMS Discussion Topics		Breakout Group Work
12:10	Lunch		
12:25	Black Powder Gun Club Show	Demo and Train Robbery/Holdup by Black Powder Gun Club	
	<i>Day 3 Session 3 Facilitator</i>	<i>Pete Mason</i>	<i>West Coast Regional Council</i>
13:10	Dusty Things - Do You Still Have them Hanging Around (Annoyingly)?	Mic Clayton	Snowy Hydro
13:30	Flood Warning System Implementation and Performance - Arnold Dam Construction	Thomas Jamieson-Lucy	Riley
13:50	Slippery Slope: The Development of Technology	Phil Downes	Environment Canterbury
14:10	Using the Same Data Differently: Hydrology's Role in Operational and Strategic Decision-Making	Sarah Dyer	Watercare
14:30	Where I've been and where I'm going. A Technical Report from Greater Wellington Regional Council	Hamish Ogilvie	Greater Wellington Regional Council
14:50	Afternoon Tea		
	<i>Day 3 Session 4 Facilitator</i>	<i>Phil Downes</i>	<i>Environment Canterbury</i>
15:10	The power of machine learning in optical flow measurements	Daniel Wagenaar	Xylem
15:30	Panel Discussion - Core Principles for a New Era	Facilitated by Joe Gendall (Watercare). Panel Members: Marissa Hughes (UNC at Chapel Hill), Georgia Spankie (GWRC), Nick Holwerda (Basins Environmental), Mike Ede (Tasman District Council)	
16:00	Closing Karakia	Gordon Iafeta	
16:05	Workshop Wrap Up & Close	Evan Baddock	Earth Sciences NZ
6pm till Midnight	Formal Workshop Dinner and Prizegiving.		<i>Shantytown, Greymouth</i>