

# Newsletter - August 2025

## Contents

Chair’s Message .....	2
NZSOLD-ANCOLD 2025 Conference .....	4
NZSOLD Life Membership .....	5
NZSOLD Life Member: Tony Pickford .....	5
Q&A with Tony .....	5
NZSOLD Life Member: Murray Gillon .....	7
Q&A with Murray .....	7
Young Professional Group Update .....	9
YP Turns Ten! .....	9
The Young Professional Group is Evolving! .....	9
Connect .....	10
Dam Safety Regulations .....	12
Meet Your Management Committee .....	13
ICOLD Bulletins .....	13
News and Links .....	14

## Contact us!

Communication Subcommittee convenor: Petra O’Bery (petra.obery@stantec.com).

## Newsletter Content

Do you have some interesting news to share with NZSOLD and its members? We welcome content from our members. Content can be provided to Petra for inclusion.

## Chair's Message

I must admit I was taken by surprise when looking at the calendar and seeing it's been almost 6 months since I took over from Kaley as NZSOLD Chair. Thinking back to some words from the outgoing ICOLD President Michel Lino at the recent ICOLD Congress, he reflected on his time in the role and regrettably admitted there was one goal he did not achieve. The goal itself is not what got me thinking; it was his approach to reflection and acknowledgement. When I was nominated as Vice-Chair in 2023, I was tied up on a remote site with no coverage so I had to send through my pitch via text message after climbing the nearest hill. I pulled out that text this morning to see how my vision has held up in the two years since. The key themes were:

- Ensure NZSOLD serves its members in the best way possible by focusing our time on the right things.
- As a volunteer organisation, time is valuable for all, and it is critical we spend the time wisely.
- NZSOLD has, and will continue to evolve, but at our core we must remember our underpinning purpose and function.

I stand by these today as Chair. NZSOLD is by members, for members. Over recent years we have put effort into developing a clearer strategy and direction for NZSOLD; this is essential to help guide us. This work is not yet complete but is progressing well. Member surveys formed a key component of this work, and it is critical we hear the voice of our members. Thank you to all who took the time to participate.

Notable highlights so far this year include:

- Key milestones achieved by the 2025 NZSOLD ANCOLD Combined Conference organising committee, with an unprecedented number of abstract submissions received, reviewed, and approvals confirmed. Preparation for pre-conference workshops, post-conference tours, and a comprehensive technical programme are all well underway. Excitement is building amongst the ANCOLD community, and there were even murmurs of a few visitors from further afield at ICOLD; this may be more about a long overdue visit to the stunning countryside NZ has to offer rather than the conference, but we'll take it! Registrations opened in early July, and we are seeing great numbers sign up already. Be sure to check the [conference website](#) for details.
- Management Committee representatives met with MBIE to discuss queries from MBIE relating to implementation of the Regulations. Whilst NZSOLD is not responsible for the implementation, we provide valuable insight into what our members are experiencing and provide a holistic view due to our familiarity across the full regulatory spectrum; the Regulations themselves, Recognised Engineers, subject matter experts, dam owners, and the wider dams community.
- The 28th ICOLD Congress and 9th Annual Meeting in Chengdu, China. As a Congress year it was a busy week. Thank you to our 7 Technical Committee representatives for their time and commitment throughout the year and during the ICOLD workshops and meetings. Special mention also to Trevor Matuschka (past NZSOLD Chair and current NZ representative on ICOLD Technical Committee B - Seismic Design Aspect of Dams) who was the General Reporter for congress question Q111: Earthquake Performance and Safety of Dams, and David Cameron-Ellis (NZSOLD Member) who presented two congress papers. As mentioned earlier, this year saw a change in post of ICOLD President, with Devendra Kumar SHARMA from India taking over from Michel Lino who completed his term.
- NZSOLD submission on the Emergency Management Reform. Big thanks to Ramon Strong, conveyor of our Regulatory and Environment sub-committee, for leading this off and to all who helped contribute.
- 10 years of NZSOLD Young Professionals. This year also marks a pivot for this group as they rebrand and refocus as the NZSOLD Emerging Professionals. More information on this will come from this group in the near future.

Participation at the ICOLD Congress confirmed two things for me; NZ has a welcome and valued presence amongst the ICOLD community, and the NZ technical committee representatives continue to be strong active contributors. Across our 7 representatives, the fact we have two committee chairs, and two vice-chairs speak volumes.

Involvement on ICOLD technical committees has been a recent topic of discussion amongst the Management

Committee, and the Committee recently developed and adopted a decision-making framework for new representatives. I believe there is benefit to be gained from strengthening the connection between our TC representatives and the wider NZSOLD community; this will not only ensure we continue to bring valuable contributions to these committees, but will also aid in developing depth and succession for these roles as well as opportunities for our emerging professionals.

NZSOLD is a Technical Interest Group of Engineering New Zealand. Engineering, New Zealand is currently undertaking a Groups Strategy Review. I represent NZSOLD on the Steering Group for this project and as well as being in a position to influence the direction of the project and shape the support the Groups get, it has been invaluable to build relationships with the other group Chairs and get a clearer picture of what it means to be a Group within Engineering New Zealand. This project is scheduled for completion later this year.

Looking 3 months ahead, key objectives for myself and the Management Committee include:

- Completion of the NZSOLD strategic plan
- Delivery of the 2025 Combined NZSOLD ANCOLD Conference
- Progression of guidance material for the Building Consent process for dams
- Planning and preparation for the 2026 Symposium
- Release of new NZSOLD website

Engagement with our members is fundamental to the success of NZSOLD, so please do not hesitate to reach out to myself or others on the Management Committee. Thank you to all that have been in touch providing feedback, support, and input.

Many thanks  
**Andrew Balme**  
NZSOLD Chair  
[andrew.balme@genesisenergy.co.nz](mailto:andrew.balme@genesisenergy.co.nz)  
027 232 6458

# NZSOLD-ANCOLD 2025 Conference

Preparations are well underway for the Combined ANCOLD-NZSOLD Conference 'Building on the past, to deliver the future'. We received an unprecedented number of abstract submissions. The conference is being held between 19 - 21 November 2025 at Te Pae Christchurch Convention Centre, Ōtautahi Christchurch, New Zealand.

REGISTRATIONS ARE NOW OPEN. Early Bird Registration Closes - Friday 12 September 2025

## PROGRAMME OUTLINE:

### Wednesday 19th November

- Pre-Conference Workshops with three separate streams on:
  - ANCOLD Guidelines on Tailings Dams
  - Stopbanks/Levees Design and Management
  - Dam Regulations - Learnings and Perspectives from New Zealand/Australia
- Welcome Function

### Thursday 20th November

- Full day of plenary and concurrent sessions
- Conference Dinner

### Friday 21st November

- WILD Breakfast
- Full day of plenary and concurrent sessions

For more information or to register go to the NZSOLD 2025 website: [New Zealand Society on Large Dams \(NZSOLD\) 2025 Conference, Ōtautahi Christchurch, New Zealand](#)

## NZSOLD Life Membership

NZSOLD were pleased to recognise two new Life Members at the Annual General Meeting in March - Tony Pickford and Murray Gillon.

Life Membership is awarded to individuals in recognition of their outstanding work within the dam industry. Any three financial members of NZSOLD can recommend someone to the management committee for life membership. The management committee will consider the recommendation and if successful, will make a unanimous recommendation for ratification at an Annual or Special General Meeting of NZSOLD.



### NZSOLD Life Member: Tony Pickford

Tony Pickford has been involved in the hydro and dams' industry for all of his career. He has been, and remains, an active member of NZSOLD since its early years. Tony has been a valuable member of the Management Committee for over 14 years, representing

- Members for the period 1982 to 1987
- Special Corporates for the period 1990 to 1999

Tony was NZSOLD Chair for the period 1993 to 1996. In addition, he was Convenor of the Environmental Sub-committee for the period 1992 to 1996 and part of the Executive Sub-committee for the period 1995 to 1996(it was only established in 1995).

In that period as chair, he oversaw the preparation and publication of several NZSOLD's first industry guideline documents, including:

- "Guidelines for the Safe Construction and Operation of Dams in New Zealand"
- "Procedures for Monitoring and Inspecting Small Dams of Low Hazard Potential"
- "Understanding Dams and their Safety"

Tony represented NZSOLD at ICOLD between 1990 and 1996. He was also a member of ICOLD's Environmental Committee between 1993 and 1996.

Tony was the primary author of the 2015 update of the "Dam Safety Guidelines" starting with the project in 2012. The 2015 version of the Guidelines marked a significant improvement to dam safety in New Zealand and introduced several new concepts.

A key part of Tony's contribution has been his ongoing involvement in dam safety reviews and the promotion of best practice through those reviews to the current day.

## Q&A with Tony

### How did you start your career? What led you into the dam industry?

I started my career with the Ministry of Works in Turangi in 1969 and spent an enjoyable three years supervising the construction of two embankment dams in the western diversions scheme (Te Whaiau and Otamangakau), playing rugby for the Turangi club and exploring the local area. I was fortunate to be able to lean on engineering and construction personnel who had many years of experience building embankment and concrete dams on the Waikato River.

I always wanted to be a structural engineer and when the Ministry of Works transferred me to Wellington I was keen to join their structural division. However, I was told that there were no vacancies in the structural division but that I could gain some structural design experience in power division. As a result, I transferred to Wellington in 1972 and spent three years in power division as a member of the design team responsible for designing the civil works for the Tekapo scheme and the hydraulic structures at Pukaki dam. I developed a love for the mix of geotechnical, hydraulic and structural engineering required for the design of dams and hydraulic structures, and

I'm forever thankful to the Ministry of Works for pointing me in the right direction.

### **What are one or two of your career highlights?**

I transferred to Cromwell in 1975 as the first Project Investigations Engineer for the Clutha Valley Development scheme and spent three years managing an investigation unit which included engineering geologists, engineering cadets, a drilling overseer and a number of drilling personnel. Investigation activities were focussed on determining the feasibility of development at six potential dam sites in schist bedrock and glacial outwash materials on the Clutha and Kawarau Rivers. Working with the investigation unit and design personnel in Wellington, and experiencing the outdoor Central Otago environment (many family outings and a lot of fishing) was certainly one career highlight.

Another career highlight was forming my own consultancy practice in 2006, specialising in dam engineering. While working as a 'one-man band' has had its challenges, such as maintaining network contacts and experiencing variations in cash flow, the rewards have been great. I've worked with generation companies, local authorities and private sector clients, and have always thoroughly enjoyed working with my clients and supporting consultants.

### **Do you have any advice for others starting out in the industry?**

I was very lucky to work during a period of strong infrastructure development which included the design and construction of dams and hydraulic structures for hydropower, water supply and irrigation projects. The Ministry of Works was an excellent training ground for dam engineering, and opportunities for pursuing a dam engineering career today are significantly less than those that were around in the 1970s and 80s. For those starting out in dam engineering today I think it's important to seek employment with a well-known dam engineering consultant or dam owner, in New Zealand or overseas, and endeavour to initially obtain a broad background of experience in dam design and construction. Those most likely to succeed are those with a willingness to travel within New Zealand and overseas, and work in a team environment.

### **What is your favourite NZ dam/hydro scheme/canal/stopbank/appurtenant structure, and why?**

I've been associated with the design, construction and review of dams and hydraulic structures in the upper Waitaki valley for about 45 years and my enthusiasm hasn't faded over time. I've always enjoyed the environment and working on the dams and hydraulic structures in the valley, and my favourite structure has always been the Pukaki spillway. I designed the spillway in the early 1970s and the design included the consideration of geotechnical conditions, hydraulic effects and structural challenges. The design also included liaison with construction personnel in Wellington and Twizel, and a number of site visits during its construction. Pukaki spillway was also the first hydraulic structure in the upper Waitaki valley to be constructed under contract. Every time I drive across the Pukaki spillway on my way to Twizel I find it difficult not to stop and look up to Mt. Cook and look over the spillway gate structure, downstream channel and stilling basin.



## NZSOLD Life Member: Murray Gillon

Murray Gillon has been involved in the hydro and dams industry for all his career. He has been, and remains, an active member of NZSOLD since its early years. Murray has been a valuable member of the Management Committee for over 15 years, representing

- Members for the period 1988 to 1999; and
- Small and Medium Corporate Members for the period 2002 to 2005

Murray was Convenor of the “Materials for Fill Dams” sub-committee for the period 1992 to 1996 and a member of NZSOLD’s executive committee for the period 1996 to 1999.

In that period, he contributed significantly to the preparation and publication of the NZSOLD’s second industry guideline documents, the New Zealand Dam Safety Guidelines 2000 including its appendices.

Murray represented NZSOLD at ICOLD between 1990 and 1999. He was also the chairman of ICOLD’s Reservoir Landslide Working Group and subsequent ad-hoc Committee on Reservoir Slope Stability between 1993 and 1999. He was instrumental in the development of ICOLD Bulletin 124 “Reservoir landslides: investigation and management - Guidelines and case histories”.

Murray represented NZSOLD at ANCOLD in 1996 and 1997.

A key part of Murray’s contribution has been his ongoing involvement in dam safety reviews and the promotion of best practice through those reviews to the current day. Murray has also contributed to best practice as an expert on numerous failure modes and effects workshops.

## Q&A with Murray

### How did you start your career? What led you into the dam industry?

As part of a secondary school geography field trip in 1963, our tour bus was escorted across the core of the Benmore Dam while it was under construction. Earth moving machines of the time, tractor drawn scrapers and Euclid dump trucks, technicians testing for compaction and sampling materials...it was a super sized sandpit.. Enthusiastic Ministry of Works engineers talked about the project and the innovations of that time. I was captured. I subsequently became a Ministry of Works cadet and, after engineering school, went to work at the Tongariro Power Project where I was assigned to the construction team for the Moawhango Dam, a 100 m high concrete gravity-arch dam.

### What are one or two of your career highlights?

Leading the investigation of the Clyde Dam reservoir slope stability in the Cromwell Gorge and the design of stabilisation measures in the early 1990s was a challenging time. Unexpectedly coming at a late stage in the project it was an unwelcome delay and cost. Under the scrutiny of a prestigious International Review Panel, the final stabilisation works on about 11 large rockslides required approximately 20 km of drainage tunnels, 140 km of drainage drilling and 60 km of investigation and downhole instrumentation drilling. Over 6000 instrumented points were monitored in the staged lake filling. It was the largest reservoir stabilisation project ever undertaken at that time and also attracted international attention.

After returning to consulting in 1999, I enjoyed a steady stream of dam remediation and dam safety review work. I particularly enjoyed leading dam safety reviews on some very large dams and reservoirs in Australia’s Snowy Mountains and in British Columbia. The two largest dams were BC Hydro’s Bennett and Mica Dams at 186 m and 240 m respectively. Both dams were located in magnificent mountain scenery.

### Do you have any advice for others starting out in the industry?

Seek employment in firms with a good pedigree in dam engineering and where you will receive good mentoring. Be prepared to work offshore to broaden your experience at this time where fewer dams are being built.

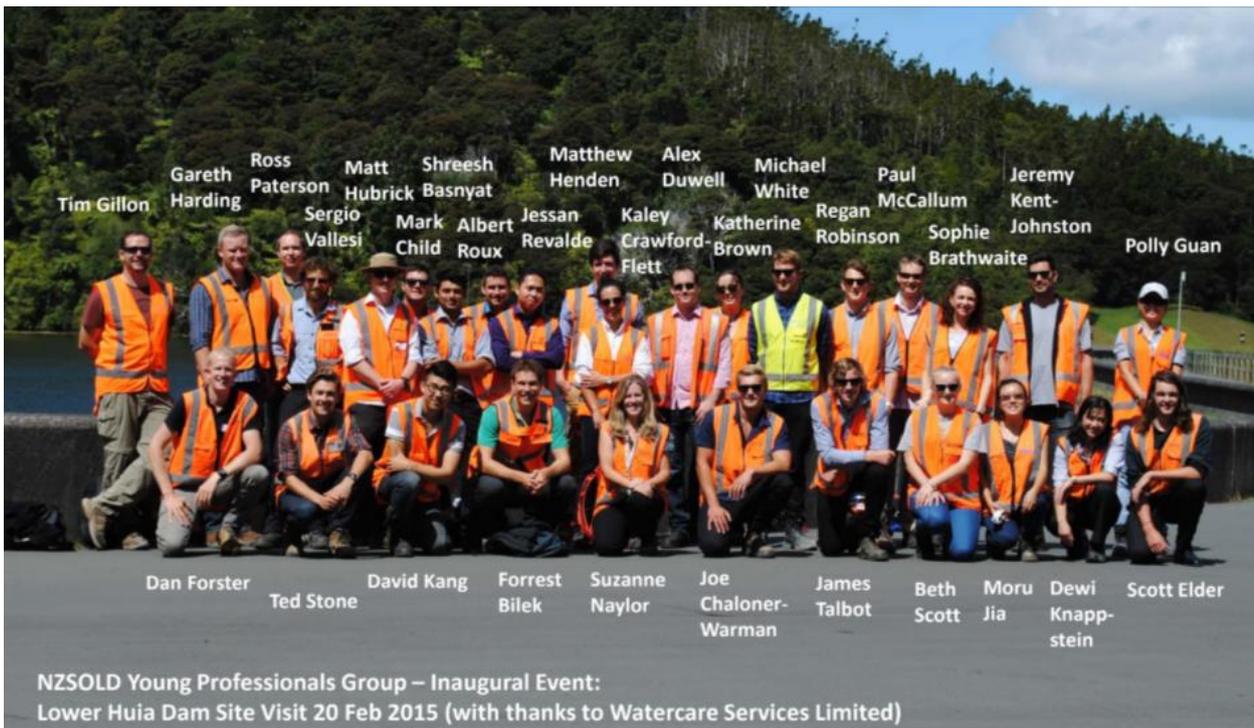
## What is your favourite NZ dam/hydro scheme/canal/stopbank/appurtenant structure, and why?

Matahina Dam in the eastern Bay of Plenty is a favourite and provided several career highlights. Involvement in the first SEED (Safety Evaluation of Existing Dams) examination of a NZ dam, mitigation of high pressures in the dam foundation, investigating internal erosion related damage after the Edgecumbe Earthquake in 1987, emergency drawdown of the reservoir on Christmas Day of that year and repair of both dam abutments in 1988. That was followed in the 1990s by a major upgrade to mitigate against potential fault movement in the dam foundation. There was wide international interest in both the internal erosion damage and repairs and the foundation fault upgrade. The latter was a world first for an existing embankment dam. I still like visiting it.

# Young Professional Group Update

## YP Turns Ten!

Ten years ago (February 2015) the NZSOLD Young Professionals group held their inaugural event. The event was a site visit to the Watercare Lower Huia Dam. Zoom in on the photo below to see some familiar (but possibly more youthful looking) faces. Were you part of the first cohort? Where are you now - we'd love to hear from you: [nzsoldpg@gmail.com](mailto:nzsoldpg@gmail.com)



## The Young Professional Group is Evolving!

The NZSOLD Young Professionals Group (YPG) has helped foster the growth and development of young professionals within the New Zealand dam industry for the past 10 years. As the industry evolves, so too must our approach to inclusivity and representation within this group. Two changes are being made:

### 1. Update the Criteria to Focus on Industry Experience, Not Age

Currently, the group criteria specify members must be under 40 years of age. However, this can unintentionally exclude individuals who enter the dam industry later in life or through other industries. The eligibility criteria will now change to those with less than 10 years of total experience in the dam industry, helping to make the group more equitable.

### 2. Rename the Young Professionals Group (YPG) to the Emerging Professionals Group (EPG)

To align with the above criteria, the YPG will be renamed to the "Emerging Professionals Group". This change aligns with other professional organizations (ENZ, ANCOLD) and will help the group attract and support a broader spectrum of members.

Rationale for the Changes:

- More inclusive: the new name and criteria will better reflect the diversity of NZSOLD members who may not align with the "young" label but are still early in their dam industry careers.
- Alignment with ANCOLD and EngNZ: with ANCOLD operating under the same criteria, and EngNZ having a shorter criteria of less than 5 years' experience.
- Limited Impact on Attendance to Other Events for Existing YPG Members: events without number restrictions, such as webinars, are open to all NZSOLD and NZSOLD YPG members. Currently YPG members are given registration preference to limited events, such as field trips, before opening to the wider NZSOLD membership. This will continue but using the new criterion for EPG members.

#### Implementation Plan and Timeline:

- Transition Period: there will be a one-year transition period starting now until June 2026. We encourage existing NZSOLD members to self-assess their dam industry experience during this time.
- Combined Conference: although there is a one-year transition period, the new criterion will be used for reduced conference registration fees at the 2025 Combined Conference. This is to align with the ANCOLD EP criterion.

#### How to Update Your Details:

- Emails will be sent out periodically with a link for members to update their details.
- Members will also be able to update their details at the EP booth at the combined conference.

## Connect

If you haven't already, connect with the NZSOLD YPG on the following platforms:

LinkedIn: <https://www.linkedin.com/groups/6945089/>

Facebook: <https://www.facebook.com/groups/1932340566784496/>

Also check out our friends at Engineering NZ Young Engineers: <https://www.facebook.com/YoEngNZ/>

## Field Trip Report - Wellington Regional Dam

On May 5, after some last-minute rescheduling to avoid the worst of the weather, the NZSOLD EPG delivered a regional dam field trip in the Wellington region with 9 attendees. The group visited Macaskill Lakes, Wellington's main water supply reservoirs, and Birchville Dam, a historic concrete arch dam that once supplied water to Upper Hutt.

The day started with an induction and presentation at the Marua Water Treatment Plant, hosted by Wellington Water. At Macaskill Lakes, attendees explored the access gallery and intake tower, learning about the infrastructure that supports Wellington's water supply. The trip wrapped up at Birchville Dam, where the group took in the historic dam's charming setting.

The EPG would like to thank Wellington Water for hosting, NZSOLD for sponsoring, and EP Wellington regional rep Tung Hoang for organising the trip.



*Figure 1: Visit at Macaskill Lakes*



*Figure 2: Visit at Birchville Dam*

## ICOLD Technical Committee Representation

Historically, NZSOLD's involvement in ICOLD TCs has been managed in an ad-hoc manner, which has led to inconsistencies in expectations, succession planning, and financial support. The decision-making framework for NZSOLD representation on ICOLD Technical Committees is needed to bring clarity, consistency, and transparency to how representatives are selected, endorsed, and supported.

The framework ensures that all appointments are aligned with NZSOLD's strategic objectives, that members understand their responsibilities, and that there is a fair and structured process for evaluating candidates and providing support. It also helps safeguard NZSOLD's reputation by setting clear behavioural expectations and review mechanisms for representatives, ensuring that New Zealand's contributions to ICOLD are both meaningful and well-managed.

Read it here: [NZSOLD representation on ICOLD Technical Committees - Decision Making Framework](#)



NZSOLD  
representation on IC

## Dam Safety Regulations

MBIE regularly updates material on their website: [MBIE Dam Safety Resources](#). Recent updates include:

- Version 6 of "[Guide to Complying with the Dam Safety Regulations](#)" Effective July 2025
- Release of "[Classification Screening Tools for Dams and Canals](#)"

## Meet Your Management Committee

With a few new faces on the Management Committee, we are bringing back our Q&A-style profiles. If you have any questions you'd like to see answered in these profiles, please let us know.

### Introducing Committee Member - James Smith

#### Where do you work and what is your role?

I work as a Senior Civil Engineer for Damwatch Engineering from our Nelson office. At the moment, I'm mainly working in the dam safety space, after a long stint in construction supervision and reporting.



#### How did you get started in the dam industry, and what led you to your position today?

I first started out in the flood risk sector in England, working on the York Flood Alleviation Scheme. I was seconded into a consultant's design team to complete the outline and detailed design of a flood detention dam. After getting a taste for design work (and a bit of wanderlust), I decided to start applying for international jobs. New Zealand ticked all the right boxes and, after a couple of meetings, including a quick jaunt to Dublin (and a pint of Guinness), I landed a job at Damwatch. I initially worked in Wellington in the water resources team before moving into site supervision for the Waimea Community Dam in the Nelson/Tasman region. More recently, I've been working in the dam safety space in both New Zealand and Vietnam.

#### What is your favourite NZ dam/hydro scheme/canal/stopbank/appurtenant structure, and why?

I think it has to be the Waimea Dam. It's probably not the most original choice, but I can't put more than three years of blood, sweat, and tears into that project and then pick the RDR! I would, however, like to give an honourable mention to dams I've stumbled across by accident while running or cycling along trails, such as Birchville Dam in Wellington (recently visited by the EPGs) and a dam upstream of Easby Park in Richmond. There's a certain charm in discovering a dam or hydraulic structure unexpectedly when you're out on the trails.

## ICOLD Bulletins

NZSOLD Members are reminded that you can access and download for free ICOLD Bulletins from the ICOLD website. You need to create a user account on the ICOLD website and use the NZSOLD National Committee Code to be given access. Please contact a member of the NZSOLD management committee for the code. This is one of the useful benefits of your annual membership.

## News and Links

### Local news:

Public have their say on controversial Hawke's Bay dam

<https://www.rnz.co.nz/news/national/564441/public-have-their-say-on-controversial-hawke-s-bay-dam>

Auckland's dams expected to reach full capacity for first time in almost two years

<https://www.watercare.co.nz/home/about-us/latest-news-and-media/auckland-s-dams-expected-to-reach-full-capacity-for-first-time-in-almost-two-years>

Ruataniwha dam developer faces fast-track stigma

<https://newsroom.co.nz/2025/05/15/ruataniwha-dam-developer-faces-fast-track-stigma/>

### International Dam News:

BC Hydro says Site C dam near Fort St. John now fully operational

<https://www.moosejawtoday.com/national-business/bc-hydro-says-site-c-dam-near-fort-st-john-now-fully-operational-11055729>

'No land, no home, no future': Himalayan Lepchas fear new dam

<https://www.aljazeera.com/amp/features/2025/7/31/no-land-no-home-no-future-himalayan-lepchas-fear-new-dam>

China starts building world's biggest hydropower dam

<https://www.theguardian.com/world/2025/jul/21/china-starts-building-world-biggest-hydropower-dam-yarlung-tsangpo-river-tibet>

Dams around the world hold so much water they've shifted Earth's poles, new research shows

<https://www.livescience.com/planet-earth/dams-around-the-world-hold-so-much-water-theyve-shifted-earths-poles-new-research-shows>

Young indigenous kayakers about to complete historic river journey, after 'largest dam removal in US history

<https://amp.cnn.com/cnn/travel/klamath-river-indigenous-paddle-c2e-spc>

Warragamba Dam spill imminent as NSW floods cause power outages

<https://www.nzherald.co.nz/world/warragamba-dam-spill-imminent-as-nsw-floods-cause-power-outages/J4ZRTOXFYFNUNJOGVA5B2W3Y5E/>

### Interesting Links

The following links may be useful or interesting to members. Please let us know of any other links that you think may be useful to other members ([nzsoldcommittee@gmail.com](mailto:nzsoldcommittee@gmail.com))

ICOLD: <http://www.icold-cigb.net/GB/icold/icold.asp>

British Dam Society: <http://britishdams.org/default.asp>

ANCOLD: <https://www.ancold.org.au/>

Canadian Dam Association: <https://www.cda.ca>

US Society on Dams: <https://www.ussdams.org/>

Hydroreview: <http://www.hydroworld.com/index.html>

Waterpower Magazine: <http://www.waterpowermagazine.com/>

US Army Corps of Engineers

National Levee Safety Program: <https://www.leveesafety.org/>

National Levee Safety Guidelines: <https://www.leveesafety.org/pages/nlsg>

National Levee Database: <https://levees.sec.usace.army.mil/>

Dam & Levee Safety Training: <https://www.rmc.usace.army.mil/>