

Damwatch Engineering Newsletter, September 2015

Welcome to Damwatch News

We are delighted to bring you this update of interesting projects that Damwatch has been helping our clients with in the last few months. We also have a number of fresh faces, joining us as we grow and prepare ourselves for the future.

Highlights of this newsletter include:

- Official opening of Carew Ponds for the Mayfield Hinds Irrigation in Canterbury NZ.
- Completion of Maturity Matrices for Dam Safety as a benchmarking tool for dam owners.
- Completion of Phase 1 of an important dam safety initiative in Vietnam.
- Contributions to the new release of the Dam Safety Guidelines by the New Zealand Society of Large Dams.
- Announcement of the 2015 Damwatch semi-annual Dam Safety Course.

Announcement by Government that the Dam Safety Scheme is being Revoked

The Government announced that the regulations that would govern the Dam Safety Scheme have been revoked before they could be launched on 1 July 2015. We have worked with a number of NZ dam owners in the last two years to update and align their Dam Safety Assurance Programmes (DSAP) with current practice anticipating the Dam Safety Scheme. However we believe this work has all been worthwhile, as the industry continues to operate in an unregulated space where alignment with the NZSOLD Dam Safety Guidelines will be an important demonstration of accepted dam safety practice. For more information contact Peter Amos at peter.amos@damwatch.co.nz.

Carew Ponds Opening



On the 1st of May, Mayfield Hinds Irrigation Limited celebrated the official opening of the Carew Storage Ponds, Canterbury, New Zealand. Damwatch have been involved in the design and construction of the irrigation ponds since 2010, as the designer for Rooney Earthmoving Limited. The artificially lined Carew Storage Ponds comprises 3 irrigation ponds with a capacity of 6.2 million cubic meters and cover an area of 175 hectares. For more information contact Steve McInerney at steve.mcinerney@damwatch.co.nz.

Dam Safety Reviews in Canada

Damwatch recently completed comprehensive Dam Safety Reviews for three hydro-power dams owned by BC Hydro in Canada. La Joie, Terzaghi and Seton Dams are Extreme hazard dam structures forming the Bridge River Hydropower scheme. La Joie Dam is an 87m high rockfill dam with a shotcrete facing which has suffered enormous precedent leakage discharge. Terzaghi Dam is the last major dam structure design by Karl Terzaghi. It is a geotechnical engineering marvel including a deep upstream alluvial cut-off, the main embankment built to accommodate consolidation on compressible clay, and a PVC geomembrane cover on the upstream face. Seton Dam is a complex combination of embankment, concrete canal and gate structures with an extreme hazard landslide risk. For more information contact Murray Gillon at murray.gillon@damwatch.co.nz

Damwatch Instrumentation at Lai Châu Dam Construction



Damwatch instrumentation expert Alan Sutherland has recently been on site to inspect progress of the instrumentation system at Lai Châu Dam in Vietnam during reservoir impounding. Alan is the instrumentation specialist on the design team for the 137m high Roller Compacted Concrete hydro power dam, which will generate 1200MW. For more information contact Tony Harker at tony.harker@damwatch.co.nz.

CEATI Dam Safety Programme Maturity Matrices

Damwatch completed Dam Safety Programme Maturity Matrices for the international organisation, Centre of Energy Advancement through Technological Innovation (CEATI). The Maturity Matrices are a self-assessment tool for dam owners to assess their Dam Safety Programme against an international benchmark and to identify priorities for improvement. CEATI's membership includes some of the world's biggest owners/operators of hydro generation facilities, including several New Zealand companies. For more information contact Dan Forster at dan.forster@damwatch.co.nz.

Vietnam Dam Safety Initiative

Vietnam has one of the largest populations of dams in the world, however many dam related incidents and disasters have raised dam safety to be a national priority. In partnership with GNS Science and the Water Resources University of Vietnam, we have prepared a Guideline for a whole river catchment dam safety assessment process

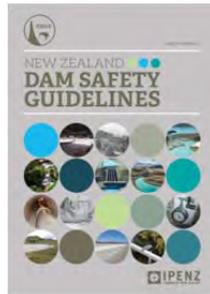
to reduce loss of life and economic damages from dam failures. The project funded by New Zealand's Ministry of Foreign Affairs and Trade is recognised as being one of the most important initiatives currently underway to improve dam safety decision making. For more information contact Rebecca Knott at rebecca.knott@damwatch.co.nz

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In June Rebecca Knott and Peter Amos attended the 25th Congress of the International Commission on Large Dams. Peter represents NZ on the Environment Committee and Rebecca represents NZ on the Multi-purpose Reservoirs Committee. Murray Gillon has recently been appointed to the new Technical Committee on The Selection of Dam Type. These committees are in the process of developing Bulletins setting out agreed international practice. There were nearly 1,000 participants from over 65 countries. Rebecca presented a paper to the country representatives on Multi-Purpose Reservoirs.

NZSOLD Dam Safety Guidelines

A number of NZ's leading dam practitioners have invested huge effort preparing the revision of the NZSOLD Dam Safety Guidelines released in May 2015. The 2015 Guidelines are a complete re-write and embody current best national and international dam safety practice. Damwatch people who were involved in this release are delighted to see the Guidelines available for industry use. With the recent Government announcement that the previously proposed Dam Safety Regulations have been revoked, the NZSOLD Guidelines continue to be the standard setter for dam safety in New Zealand.



Dam Safety Course 14-15 October, Wellington

We are holding our Damwatch Dam Safety Course in Wellington on the 14th & 15th of October. The course is aimed at everyone involved in Dam Safety from inspectors and caretakers to managers and executives. Registrations are open so head to our website www.damwatch.co.nz for registration and [more information](#). We run customised courses on demand, if you are interested, contact Rebecca Knott on +64 4 381 1300.



If you have any general enquiries about any of your projects or services we offer please contact Malcolm Young on +64 4 381 1300 or malcolm.young@damwatch.co.nz

This year we have had a number of new staff join us, we'd like to welcome and introduce you to:



Alex Duwell – Alex joined our **Dam Safety and Surveillance** team in January from Queensland, Australia. Alex has 5 years' experience working as a Civil Engineer at SunWater.



Malcolm Dow – Malcolm joins our **Instrumentation** team from Coffey Mining and Geotechnics in Australia. Malcolm brings with him over 25 years' experience in geotechnical and structural instrumentation.



Rick Scott – Rick was at the USBR (United States Bureau of Reclamation) for 33 years before joining Damwatch. Rick is a **Principal Dam Safety Engineer**, in our Dam Safety and Surveillance team.



Erin Poirot – Erin joined Damwatch on the 1st of July from SunWater in Queensland, Australia. Erin has a geotechnical background and joined our **Dam Safety and Surveillance Team**.

Ian and Ruth Davison have embarked on a one year expedition through Asia. During their trip they will be carrying out some voluntary work at a school in Ladakh. Ruth is an English as a Second Language (ESOL) teacher and will be teaching the children whilst Ian has been asked to try and divert the River Indus so that the school can improve the irrigation of their gardens. We wish them well on their journey and look forward to Ian returning to Damwatch in July 2016.

Tom Zadorsky has recently left Damwatch after working with us for one year as a Graduate Engineer, in our Surveillance Team. Tom will be returning home to Canada for a quick visit with friends and family, and then plans to volunteer overseas. We wish Tom well and have enjoyed having him in the office.

Dam Anniversaries

Earlier this year two of our New Zealand clients' dams celebrated 50 year anniversaries. Upper Mangatawhiri Dam in March, owned by Watercare Services Ltd, and Benmore Dam in May, owned by Meridian Energy Ltd.



Does one of your assets have a significant anniversary coming up? Let us know!

Thank you for your on-going support this year

Kind regards,

Peter Amos, Managing Director.