

Guideline Working Groups (Active) status reports

Guideline	Status	Convenor
Dam break modelling and Consequence Assessment	New guideline in preparation.	David Stephens
Dam Safety Emergency Plans and Emergency Management	New guideline in preparation.	Angus Paton
Dam Safety Management	Updated guideline in preparation. 2003 version is still available for purchase.	David Stewart
Design, Construction, Operation of Retarding Basins-Wetlands and Large Ornamental Lakes	New guideline in final stages of preparation.	Richard Rodd
Design Criteria for Concrete Arch Dams	New guideline in preparation.	Marius Jonker
Outlet Works for Dams	New guideline in preparation.	Marius Jonker
Selection of Acceptable Flood Capacity for Dams	Updated guideline in final stages of preparation. 2000 version is still available. For purchase.	Peter Hill
Tailings Dams – Planning, Design, Construction, Operation and Closure – REVISION 1	Revision 1 published in 2019. Major review underway in light of global tailings standard. Revision 1 (2019) is still available for purchase.	Brett Stephens

Dam break modelling and Consequence Assessment

Significant progress has been made on first drafts of a number of sections of the dambreak modelling and consequence assessment guidelines. Initial drafting of the first section of the document (focused on dambreak modelling) is largely complete. Progress has been slow on the subsequent sections relating to consequence assessment however it is hoped to accelerate this over late 2023 and early 2024.

David Stephens

Convenor

Membership of the Working Group	Company
David Stephens	HARC
Michel Raymond	HARC
Michael Smith	Watercorp
Andrew Northfield	HARC
Kevin Bartlett	Seqwater
Rob Fowden	DRDMW
Tim Rhodes	SMEC

Dam Safety Emergency Plans and Emergency Management (New Guideline)

A half-day workshop before the 2022 ANOLD Conference provided the Working Group with excellent feedback on questions and concerns with the draft guidelines. This feedback and comments from the Reference Group and the workshop have been incorporated into the second draft of the guidelines. The Reference Group are reviewing this draft and providing feedback.

Angus Paton

Convenor

Membership of the Working Group	Company
Angus Paton	Murray-Darling Basin Authority
John Tibaldi	Seqwater
Siraj Perera	Department of Energy, Environment and Climate Action
Jonathon Reid	GHD
Neil Smith	Hydro Tasmania
Paul Sureda	Murray-Darling Basin Authority
Tansy Huang	HARC
Reference Group	
Michel Raymond	HARC
Chris Nielsen	Department of Regional Development Manufacturing and Water Queensland
Michael Smith	Water Corporation
Laurie Dwyer	Department of Natural Resources and Environment
Damien Bryan	Water NSW
Craig Ronan	NSW State Emergency Services
Russell Dippy	South Australia Police
Michael Hughes	Sunwater
David Jeffery	Goulburn-Murray Water
International Expert Review	
To be decided	

Dam Safety Management (2003)

The Working Group that includes representatives from dam owners, consultants and regulators has continued progressively reviewing the DSM Guidelines.

Shane McGrath has continued to provide valuable independent strategic advice to the Working Group and Barton Maher has also agreed to help to build on the work from his role as a co-opted member of the ICOLD Committee on Dam Safety on dam safety systems, corporate governance and assurance.

Over the past year our focus has been on overall structure and content of the Guideline and the key areas of:

- Alignment of the structure and terminology of the Guideline with ISO 55000 Asset Management Systems.
- Strengthening the focus on governance and management arrangements for dams including changes in regulatory environments.
- A structured approach to the development and implementation of an integrated Dam Safety Management System for dam owners.
- The use and acceptance of risk-based approaches to dam safety surveillance and monitoring activities, and also the use of new technologies.

- A more structured and systematic approach on the use of technical review of specific projects and for audit of overall dam safety programs.
- Recognition of the use of electronic based systems for data and record storage including the use of integrated asset management systems by many dam owners.
- Developments in risk assessment, safety reviews and safety cases for dams.
- Ensuring compatibility with issues being considered by the Working Group on Tailings Dam Guidelines.
- Relationships with other existing and planned ANCOLD Guidelines.
- General updates and modernisation of terminology and language throughout the document.

The Working Group notes that the current 2003 document remains very relevant and continues to outline the basis for good dam safety management practice.

The Working Group have been working with Convenor of the Working Group on Tailings Dams, Brett Stephens and the 2023 Conference Organising Committee to develop and prepare a session on Dam Safety Governance which will be presented to the 2023 Workshop in Cairns, for engaging with ANCOLD members to receive feedback to assist further progress.

David Stewart

Convenor

Working Group		Company
David Stewart		Australian Dams & Water Consultants Pty Ltd
Mark Arnold		Melbourne Water Corporation
Josh Clark		Tasmanian Irrigation Pty Ltd
Jarrad Coffey		Rio Tinto
Oliver Giudici		Hydro Tasmania
Gayantha (Guy) Jayasekara		WaterNSW
Chris Nielsen		Queensland Department of Regional Development, Manufacturing and Water
Louise Thomas*		GHD
Cass Turner*		Hydro Tasmania
ICOLD Dam Safety Committee Liaison		
Barton Maher		Queensland Department of Regional Development, Manufacturing and Water
Special Advisor to the Working Group		
Shane McGrath		SGM Consulting (Aus) Pty Ltd
Reference Group		
To be determined		
Independent Reviewers		
To be determined		

*Parental leave until 2024

Design, Construction, Operation of Retarding Basins-Wetlands and Large Ornamental Lakes (New Guideline)

In response to the industry consultation comments, a Commentary Section is being prepared to provide additional Guidance and interpretation for designers.

Richard Rodd

Convenor

Working Group	Company
Richard Rodd (Convenor)	Richard Rodd & Associates Pty. Ltd.
Norm Himsley	Independent Consultant
Mark Arnold	Melbourne Water Corporation
Reference Group	
Development Industry Consultants	
ANCOLD Membership	
Independent Reviewers	
Phil Cummins (<i>dec.</i>)	

Design Criteria for Concrete Arch Dams (New Guideline)

In addition to the current guidelines on Design Criteria for Concrete Gravity Dams (2013), new guidelines are being prepared to formalise the design criteria that are unique to arch dams and their foundations.

The preparation of these guidelines has been put on hold until it is decided whether to move forward with them as stand-alone guidelines or whether to incorporate them into the next update of the Design Criteria for Concrete Gravity Dams. Work is currently underway to assess the practicality of combining the guidelines or keeping them separately.

Marius Jonker

Convenor

Working Group	Company
Marius Jonker (Convenor)	Aurecon Australasia
Francisco Lopez	SMEC
Dr Radin Espandar	Mott McDonald
Independent Reviewer	
Vacant	
International Reviewer	
Vacant	

Outlet Works for Dams (New Guideline)

New guidelines are being developed on the planning, design, construction and operation life cycle phases of outlet works for dams. The guidelines are being developed into ten separate practice guidelines, which are organized according to the mentioned phases.

Over the past year, considerable progress has been made on both the practice guidelines regarding inspections and testing, as well as those regarding rehabilitation and upgrading. A review of the sections of the guidelines is being undertaken prior to their release to the reference group. The purpose of these chapters is to assist dam owners in managing their operational priorities of operational excellence, sustaining capital, and understanding the business and life risks related to outlet structures.

The development of practice guidelines for the design and construction of civil, structural, mechanical, electrical, and control elements, as well as the procurement, construction, installation, and commissioning of outlet works, will be carried out in the near future.

Marius Jonker

Convenor

Working Group		Company
Marius Jonker (Civil)		Aurecon Australasia
Glen Hobbs (Mechanical)		Glen Hobbs & Associates
Frank Nitzsche (Mechanical)		GHD Pty Ltd
David Law (Mechanical)		Entura
Constantine Papas (Electrical)		GHD Pty Ltd
Reference Group		
Brian Simmons		WaterNSW
Charlie Curro		Department of Public Works
David Ryan		Stantec
Rod Mauger		Australian Asset Engineering
Alex Gower		Water Corporation
Additional Members		
Pieter van Breda		Project Manager
Independent Reviewers		
To be reviewed		

Selection of Acceptable Flood Capacity for Dams

The ANCOLD Guidelines on Selection of Acceptable Flood Capacity (AFC) were published in 2000 and provide guidance on the selection of design flood capacities for dams. A Working Group was established in early 2014 and is supported by a Reference Group representing owners, consultants and regulators from around Australia.

Development of the guidelines has slowed over the last few years; however, the draft guidelines are largely complete. Since the draft guidelines were first prepared there has been increasing awareness of the potential changes in flood estimates due to climate change and the need to incorporate these changes in decision making. The pending outcomes of the University of Melbourne and UNSW Research Project funded by organisations in the dam industry and the revision of the ARR guidance on climate change are likely to significantly influence industry practice on these matters. The Working Group is meeting in September 2023 to consider how to incorporate climate change into the guideline..

Peter Hill

Convenor

Working Group		Company
Peter Hill		HARC
Fiona Ling		WMAwater
Michel Raymond		HARC, formerly Seqwater
Andrew Reynolds		Murray-Darling Basin Authority
Michael Somerford		Water Corporation WA
Reference Group		
Peter Allen (<i>dec.</i>)		
Mark Arnold		Melbourne Water
Malcolm Barker		GHD
Peter Cloke		NSW Urban Water Services
Janice Green		Bureau of Meteorology
Norm Himsley		Consultant, formerly NSW Dams Safety Committee
Barton Maher		Queensland Department of Regional Development Manufacturing and Water, formerly Seqwater
Joe Matthews		AECOM, formerly Southern Rural Water
Shane McGrath		SGM Consulting
Nanda Nandakumar (<i>dec.</i>)		
Angus Paton		Murray-Darling Basin Authority, formerly SA Water
Siraj Perera		Victorian Department of Energy, Environment and Climate Action
Michael Thornton		Snowy Hydro Limited
Independent Reviewers		
Rory Nathan		University of Melbourne
Phil Cummins (<i>dec.</i>)		

Tailings Dam –Planning, Design, Construction, Operation and Closure – REVISION 1

The Tailings Working Group (TWG) continues to work towards reframing the Guidelines on Tailings. The update will focus on including reference to recent guidance from ICOLD on tailings dams, and aligning the document more closely to the following the principles contained in the Dam Safety Management guidelines which are also being updated, with specific information provided for tailings structures where they differ, or require more specific guidance. Initial feedback received from members identified areas where updates or clarification is suggested. The aim is to have the updated document available to reference groups in 2024.

Brett Stephens

Convenor

Membership of the Working Group	Company
Michael Ashley	HATS Consulting
Jarrad Coffey	Rio Tinto
Jiri Herza	HATS Consulting
Wade Ludlow	Red Earth Engineering
Genevieve New	ATC Williams
Jay Ranasooriya	DMIRS WA
David Reid	UWA
James Robinson	Alcoa
Brett Stephens (Convenor)	Archadia Consulting
David Williams	UQ
Justin Willis	BHP
Technical Review Panel	
David Brett	GHD
Bruce Brown	Bruce Brown Consulting
Andy Fourie	AWU
Norman Himsley	Independent Consultant
Stephen Newman	MMG
John Philips (<i>dec.</i>)	
Keith Seddon	ATC Williams

Guideline Working Groups (Watching Brief) status reports

Guideline	Status	Convenor
Strengthening and Raising Concrete Gravity Dams (1992)	1992 version available for purchase.	Richard Rodd
Design of Dams and Appurtenant Structures for Earthquake (2019)	2019 version available for purchase	Steven O'Brien
Guidelines on Risk Assessment (2022)	2022 version available for purchase	Mark Foster
Consequence Categories for Dams (2012)	2012 version available for purchase.	David Ryan
Dam Instrumentation & Monitoring Systems (1983)	1983 version available for purchase.	Cassandra Turner
Design Criteria for Concrete Gravity Dams (2013)	2013 version available for purchase	David Ryan
Geotechnical Investigations of Dams, their Foundations, and Appurtenant Structures (2020)	2020 version available for purchase.	Robin Fell
Environmental Management of Dams (2001)	2001 version available for purchase.	Vacant
Regulation and Practice for the Environmental Management of Dams in Australia (2014)	2014 version available for purchase.	Vacant

Strengthening and Raising Concrete Gravity Dams (1992)

There have not been any matters raised. A draft practice note is being considered for anchoring in dams for matters such as active and passive anchor design, foundation interactions, installation, monitoring and maintenance for dams and appurtenant structures.

Richard Rodd

Convenor

Design of Dams and Appurtenant Structures for Earthquake (2019)

The revised Guideline was published in June 2019 and is available for purchase from the ANCOLD website. A watching brief is being maintained. A session was held at the 2022 ANCOLD Conference as part of the Technical Workshop on Navigating the ANCOLD Earthquake Guidelines and Implications of NSHA18. Following the workshop, a memo was developed by Mark Foster and Steven O'Brien and submitted to the ANCOLD Executive on the proposed way forward to address some of the concerns raised as part of the workshop. It is likely that a small working group will be formed to provide some additional guidance to the ANCOLD Members, potentially as an addendum note to the Guideline.

Steve O'Brien

Convenor

Guidelines on Risk Assessment (2022)

Immediately prior to the 2015 Annual Conference a workshop was held to seek feedback from Members on proposed content for an updated Guidelines on Risk Assessment.

Submissions were subsequently received from Members and the Reference Group. The Working Group considered these and provided an update to members for comment at the risk workshop held as part of the 2020 virtual conference. A first draft of the updated guideline was then sent for review by the Reference Group in late November 2020. The draft was again updated, and the revised draft issued in August 2021.

The updated Guidelines were published in July 2022.

Mark Foster has taken up the role of Watching Brief for the new Guidelines.

Shane McGrath

Convenor

Membership of the Working Group		Company
Shane McGrath (Convenor)		SGM Consulting
Malcolm Barker		GHD
Emeritus Professor Robin Fell		UNSW Global Consulting
Mark Foster (incoming Convenor)		Dam Consulting Services
Peter Hill		HARC
Len McDonald		Retired
Reference Group		
Gamini Adikari		SMEC
Peter Allen (<i>dec.</i>)		
Mark Arnold		Melbourne Water
Graeme Bell		Retired
Brian Cooper (<i>dec.</i>)		
Phillip Cummins (<i>dec.</i>)		
Bruce Duncan		Retired
Ian Landon-Jones		Retired
Barton Maher		Dept. of Regional Development, Manufacturing and Water
Kelly Maslin		Jacobs
Angus Paton		Murray Darling Basin Authority
Siraj Perera		Dept. of Energy, Environment and Climate Action
Andrew Reynolds		Murray Darling Basin Authority
Michael Somerford		Watercorporation of WA
Paul Southcott		Entura
Chris Topham		GHD
International Expert Review		
The Executive determined that international review was not required for the update of this guideline.		

In addition to the Guidelines described above, the following ANCOLD Guidelines are still available for purchase on the ANCOLD website, and a watching brief is being maintained by the convenor (as listed in the table at the start of this section).

- Consequence Categories for Dams (2012)
- Dam Instrumentation & Monitoring Systems (1983)
- Design Criteria for Concrete Gravity Dams (2013)
- Geotechnical Investigations of Dams, their Foundations, and Appurtenant Structures (2020)
- Environmental Management of Dams (2001)
- Regulation and Practice for the Environmental Management of Dams in Australia (2014)