



Murray 2 Dam

Snowy Hydro Limited

Annual Dams Safety Standards Report

March 2022

Snowy Hydro Limited (**Snowy Hydro**) as a declared dam owner is required under the Dams Safety Regulation 2019 to publish an Annual Dam Safety Standards Report demonstrating Snowy Hydro Limited's compliance with the dam safety standards for the calendar year ending 31 December 2021.

Snowy Hydro attests to the accuracy of the report.

A separate report for each declared dam must be lodged with Dams Safety NSW by 31 March 2022.

Section 1 – Declared dam identification details

Dam Name	Murray 2 Dam
Dam Owner	Snowy Hydro Limited

Section 2 – Dams safety standards

Consequence category of dam – Regulation, Part 3

The dam consequence category is a rating of the impact that could potentially be caused if the dam failed. It must be assessed:

- within 6 months of the dam being declared
- at least once every 15 years
- after any significant change in the number of people likely to be affected by a dam failure
- or if required by Dams Safety NSW.

[Regulation, subclause 7\(2\)](#)

Dam consequence category	Sunny Day: Low Flood: Significant
Date of the last consequence category assessment by a competent person	1st August 2019
Has the number of people likely to be affected by a dam failure changed since the last consequence category review?	No
Competent Person:	Chriselyn Kavanagh (Senior Hydrologist, Hydrology & Risk Consulting or HARC)
How was this checked?	Reclamation Consequence Estimating Methodology

	(RCEM)* was used for PLL estimates
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*Note: RCEM is empirical method for estimating potential loss of life (PLL)

For extreme and high consequence dams only:

If the consequence category is Extreme, High A, High B, or High C, the consequence category assessment must be reviewed by an independent competent person

[Regulation, subclause 7\(4\)](#)

Date of last independent review of the consequence category assessment	1st August 2019
Name of independent reviewer	Peter Hill (Principal, HARC)

Dams safety standard – Dam safety management system - Part 5

The dam safety management system provides a comprehensive and integrated system to manage all aspects of foreseeable risks relating to dam failure. It is designed to be used by the dam owner to ensure, as far as reasonably practicable, the safety of people and property is not put at risk from the dam.

[Regulation Part 5](#)

Documenting the dam safety management system

Is the dam safety management system fully documented?	Yes
If not, what percentage of the dam safety management system documentation is complete?	N/A
How did you confirm this percentage?	N/A
Does the dam safety management system apply to more than one dam?	Yes

Documenting the dam safety management system

Is the dam safety management	Yes
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system fully implemented for this dam?	
If not, what percentage of the dam safety management system is implemented?	N/A
How did you confirm this percentage?	N/A

Dam safety management system review

The declared dam owner must ensure the dam safety management system is reviewed each year to ensure it remains effective.

[Regulation, clause 17](#)

Date of last safety management system review	6 October 2021
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Assessment of societal and individual risk rating

The owner of a declared dam (other than a proposed dam) must use the risk management framework to produce a written report on all foreseeable risks to the dam:

- at least once every 5 years
- when a major change to the dam is proposed, and
- when required by Dams Safety NSW.

[Regulation, subclause 15 \(1\)](#)

Date of last risk report	1st March 2019
Individual risk rating of the dam	9.2×10^{-9}
Societal risk rating of the dam	4.6×10^{-8}
Date of next planned risk report	by 1st February 2023

Other safety requirements – Part 6

Incident reporting

The declared dam owner must report incidents that happen at or in relation to the dam to Dams Safety NSW.

[Regulation, clause 19](#)

Number of incidents during the 2021 calendar year	0
Topic/subject of each incident(s)	N/A

Safety review

The declared dam owner must ensure a competent person conducts a safety review at least once every 15 years, and as soon as practicable after:

- a deficiency or weakness in the dam is identified
- there is a change in the accepted technology or methods used in one of the relevant specialties or design criteria for dams
- the dam consequence category changes, or
- it is required by Dams Safety NSW.

[Regulation, clause 20](#)

Date of last safety review (Regulation, subclause 20(2))	1st June 1992 (SMEC) As the dam was previously categorised as low in consequence and there were no legislative requirements to undertake a safety review, a safety review was not undertaken in 2007. However, it was subject to our standard routine surveillance practices.
Planned date for next safety review	1st February 2023 (In progress)

For extreme and high consequence dams only

If the consequence category is Extreme, High A, High B, or High C, the safety review must be reviewed by an independent competent person

[Regulation, subclause 20\(6\)](#)

Name of independent reviewer	Murray DSR Peer Reviewers: Peter Darling (Chief Technical Principal - Dams, Snowy Mountains Engineering Consultants or SMEC) Mark Eggers (Principal, Pells Sullivan Meynink)
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Notification of significant changes to the dam

Before making any significant change to the configuration of the declared dam that may affect the safety of the dam, the dam owner must inform Dams Safety NSW of the proposed change in writing.

[Regulation, clause 21](#)

Has any significant change to the configuration of the dam been made during the 2021 calendar year?	No
If yes, describe the change	N/A
Is any significant change to the configuration of the dam planned?	No
If yes, describe the change and when is it planned to happen?	N/A

Emergency exercises

The declared dam owner must ensure that staff who are involved in the operation of the dam undertake emergency exercises at least once every 3 years.

[Regulation, clause 22](#)

Date of last 'theoretical classroom' emergency exercise (Regulation, subclause 22(1))	28th October 2021 (Murray Region)
Planned date of next 'theoretical classroom' emergency exercise	by 28th October 2024 (Murray Region)

For extreme or high consequence dams only

The declared dam owner must ensure that staff who are involved in operating the dam undertake practical emergency exercises at least once every 5 years, where possible including relevant agencies identified in the emergency plan.

[Regulation, subclauses 22 \(3\) and 22 \(4\)](#)

Date of last practical emergency exercise	N/A. There was no regulatory requirement to perform a 'practical' exercise before regulations came into effect on 1st November 2021. However, a routine testing regime has now been established including practical emergency exercises.
Planned date of next practical emergency exercise	by 23rd October 2023 (Murray Region)

Attestation

Refer to Snowy Hydro's Statement of Attestation for Annual Dams Safety Standards Report.