

Department of Planning and Environment

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Snowy Rivers Increased Flows: Safety Management Plan 2023-2028

HIGH-FLOW RELEASES INTO THE SNOWY RIVER BELOW JINDABYNE DAM

May 2023 (Version 2)





1. Acknowledgement of Country

The Department of Planning and Environment acknowledges that it stands on Aboriginal land. We acknowledge the Traditional Custodians of the land and we show our respect for Elders past, present and emerging through thoughtful and collaborative approaches to our work, seeking to demonstrate our ongoing commitment to providing places in which Aboriginal people are included socially, culturally and economically.

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1. Introduction

The NSW Government has been working with the Victorian and Australian government agencies, Snowy Hydro Limited (SHL) and the community to implement a program of environmental water releases to improve the health of the Snowy River below Jindabyne Dam. The NSW Government is responsible for determining the volumes and annual release strategy of these environmental flows, which collectively are called the Snowy River Increased Flows (SRIF), as well as ensuring the safe management of these releases.

1.1. Purpose of environmental releases

The lack of high-flow events in the Snowy River since 1967 has made the river channel contract and sediment build up in the riverbed. Sediment is delivered to the Snowy River via many of the smaller tributaries in local storm events. This sediment deposits as a result of local velocity reducing as the tributary flows enter the larger channel of the Snowy River and the tributary sediment load is deposited in the main stem.

The build-up of sediment in the Snowy riverbed has been recognised as one of the key limitations for the recovery of the health of the river, as it reduces the quality of the river habitat and/or smothers plants and animals directly. To address the effects of river regulation, environmental water releases occur every day of the year, and events of greater magnitude are planned for the winter and spring periods to better reflect the natural hydrology of the mixed rainfall/snowmelt rivers of the Snowy Mountains and to encourage scour and lateral deposition of the sediment.

1.2. Purpose of this plan

The Safety Management Plan (the SMP) has been prepared by the Department of Planning and Environment (the department), including the Water (DPE-Water) and Environment and Heritage (DPE EHG) divisions.

This SMP details the anticipated risks associated with environmental releases, and outlines the actions and processes required to be undertaken by DPE-Water, DPE-EHG, Snowy Hydro and other key stakeholders to mitigate or manage these risks.

The SMP is a legislated requirement of the Snowy Water Licence and the *Snowy Water Inquiry Outcomes Implementation Deed* (SWIOID) 2002. The legislation requires that a Safety Management Plan be developed to address risks to public safety, third-party property and workplace health and safety in connection with the release of ‘flushing flows’, which are defined as a daily release greater than 5,000 megalitres (ML) per day.¹

The department takes a more conservative approach to safety and this SMP addresses not only the flushing flow, but all environmental releases over 2,500 ML/day², termed ‘high-flow events’. This has been increased from the previous threshold of 2,000ML/day, based on a review of evidence in March 2023.

The objectives of the SMP are to ensure that these risks are appropriately minimised by:

¹ This is the flow rate above which spillway releases are required. Releases less than 5000 ML/d can be made from the Jindabyne Dam cone valves.

² When this SMP is reviewed annually for currency, the department will consider whether this threshold remains appropriate, subject to any improved understanding of the impacts of various flow rates.

- Maintaining stakeholder relationships where there is an interest in public safety along the Snowy River.
- Promoting public awareness of the risks associated with environmental releases into the Snowy River catchment below Jindabyne Dam.
- Issuing of community information and warnings during flushing flow and high flow events
- Working with Snowy Hydro Limited and other relevant stakeholders (including the State Emergency Service, Councils, and Bureau of Meteorology) before and during high-flow events to mitigate, as far as possible, the effects of flooding.

1.3. Scope of this plan

Flows from Lake Jindabyne into the Snowy River may be a result of the following:

1. Planned Snowy River Increased Flow (SRIF) releases – These are the environmental releases as designed by DPE EHG and outlined in the annual SRIF Operations Plan.
2. Modified planned SRIF releases – These are modifications to the dates or volumes of the planned SRIF releases as a result of climatic, environmental or other unforeseen circumstances that may arise closer to the time of the planned SRIF release.
3. Snowy Hydro Jindabyne unplanned storage releases – These are releases such as those made by Snowy Hydro in order to manage the volume of water held in storage, including to avoid uncontrolled spills. These are not accounted as SRIF, but where possible may be released in consideration of environmental outcomes.
4. Uncontrolled spills – These are spills over the dam spillway when the volume of Jindabyne Dam exceeds the storage capacity of the dam.

This SMP covers the safe management of (1) planned and (2) modified planned SRIF releases, including public communications.

Snowy Hydro is responsible for the safe management of (3) unplanned storage releases and (4) uncontrolled spills including public communications, and as such these are not covered by this SMP.

The SMP covers a 5-year period from May 2023 to April 2028.

1.4. Structure of this plan

This Plan outlines the risks and mitigation measures associated with all planned high-flow environmental releases. It details the processes to be undertaken in managing safety. The planned release strategy for each water year is outlined in the SRIF Operations Plan (see **Appendix E**) and is available on the DPE-Water website. Daily environmental flow releases are published on Snowy Hydro Limited's (Snowy Hydro) website.

1.5. Policy and legislative context and responsibilities

The release of the SRIF is governed by the following key acts and agreements:

- Snowy Water Inquiry Outcomes Implementation Deed 2002 (SWIOID)
- *Snowy Hydro Corporatisation Act 1997*
- *Workplace Health and Safety Act 2011*

1.6. Overview of responsibilities

Multiple organisations are involved in the planning, design, implementation and safety management of environmental releases. In summary this includes:

- DPE-Water determine annual water allocations to the entitlement associated with SRIF.
- DPE-EHG, in consultation with the Snowy Advisory Committee (SAC), design the pattern of environmental flow releases to achieve environmental objectives listed in the SWIOID, taking into account operational constraints with Snowy Hydro.
- DPE-Water coordinate and implement the safety management process, including community engagement, noting that all organisations involved are responsible for ensuring safe management of releases.
- DPE-Water instruct Snowy Hydro to make the release.
- Snowy Hydro makes the physical release if safe to do so, and measure released volumes which subsequently are reported to DPE-Water.
- All organisations involved are responsible for ensuring safe management of releases.

Other stakeholders also have responsibilities and roles in identifying risks associated with environmental flows and implementing actions that will reduce the risks down to an acceptable level. Specific responsibilities for safety management are detailed further in **Section 3**.

1.7. Review of Safety Management Plan

This SMP is current for the 5-year period from May 2023 to April 2028. DPE-Water will review the SMP for currency prior to the commencement of planned environmental water releases annually. Any required amendments would be made as a revision to this document.

In the event of any adverse impacts resulting from a release, the SMP will be reviewed.

The annual Snowy Rivers Increased Flow Operations Plan is developed by DPE-EHG and published annually. See **Appendix E**.

2. Risk assessment

DPE-Water, in collaboration with stakeholders, has analysed the anticipated risks to public safety, property and work healthy and safety, associated with planned environmental flow releases. DPE – Water has also assessed the significance of the potential consequences for each associated risk, as well as the probability of that risk being realised. A detailed table of risks is provided in **Appendix A**.

The table also includes proposed control measures required to mitigate or reduce the risks. These measures have been developed into the safety management processes outlined in **Sections 3 and 4**.

2.1. Stakeholders

In assessing risks, DPE-Water has taken reasonable steps to identify stakeholders likely to be affected by the releases from Jindabyne Dam, or who may be able to assist in ensuring the safety of staff, the public and property during the releases. These include:

- landholders along the Snowy River
- local businesses within the Snowy region
- members of the general public
- recreational fishing and water user groups
- community interest groups
- Snowy River Alliance
- recreational campers and tourists
- Bureau of Meteorology
- Snowy Monaro Regional Council
- East Gippsland Shire Council
- NSW State Emergency Service
- Victorian State Emergency Service
- Local Land Services
- NSW National Parks and Wildlife Service
- NSW Roads and Maritime Services
- WaterNSW
- Snowy Hydro Limited
- Australian Government (Department of Environment and Energy)
- Victorian Government (Department of Land, Water, and Planning; Victorian Environmental Water Holder; and the East Gippsland Catchment Management Authority) and staff
- Snowy Advisory Committee

DPE-Water recognises that effective management of the risks that could arise from the releases requires the support and coordination of many stakeholders. Effective working relationships with stakeholders must be maintained to ensure the environmental flow events occur safely.

2.2. River levels at various flow release rates

In determining risks, DPE-Water considers the impact of different flow on river heights at key points along the length of the river. Table 2-1 provides water levels during the past environmental flow releases recorded at gauges downstream of the Jindabyne Dam wall. Water levels are strongly

influenced by catchment and climate conditions at the time of the event, and as such should be used as a guide only.

Table 2-1: Historic releases in excess of 2,500ML/d and recorded river heights

Gauge	Flow release (ML/d)	2,847 (2,832)*	3,715	4,504	4,755 (5,000)*	4,763 (2,143)*	4,979	5,000	5,000	5000 (4,189)*	9,562 (3,910)*	10,000	13,000
	Date	1/12/22	31/5/22	14/07/22	12/10/22	24/10/22	5/9/22	6/7/21	17/10/18	14/11/22	31/10/22	14/10/14	4/10/17
Dalgety Weir	Rain (mm)+	1.4	0	0	0	6.4	<0.5	0	0	<0.5	12.2	10	0
	Height (m)	1.31	1.18	1.47	1.61	1.68	1.5	1.55	1.55	1.64	1.73	2.04	2.28
	Flow (ML/d)	2,867	1,762	4,423	5,754	6,223	4,816	5,293	5,266	6,183	6,982	10,068	12,176
	Travel time Initial rise - peak (hrs)	n.a.	6 - 8	10 - 19	n.a.	n.a.	8 - 16	11 - 18	11 - 17	n.a.	n.a.	7 - 13	8 - 13
Burnt Hut	Rain (mm)+	0	0.8	0	0	47.2	0	0	0	3.0	20.4	0.5	0
	Height (m)	1.54	1.67	1.76	2.21	7.87	1.8	1.81	1.68	2.72	4.47	2.69	2.71
	Flow (ML/d)	3,816	1,413	4,929	7,669	133,767	5,141	5,186	4,469	11,985	40,881	11,552	11,765
	Travel time Initial rise - peak (hrs)	n.a.	30 - 38	32 - 37	n.a.	31 - 37	30 - 36	37 - 42	35 - 38	n.a.	30 - 45	26 - 30	26 - 29
McKillops Bridge	Rain (mm)+	0	<0.5	1.8	0	0	0	0	0	<0.5	<0.5	0	0
	Height (m)	1.94	1.90	1.93	2.41	4.2	2.04	1.95	1.86	2.72	3.56	2.54	2.28
	Flow (ML/d)	4,960	4,617	4,797	9,419	42,924	5,624	5,329	4,734	13,375	27,819	10,083	8,232

Gauge	Flow release (ML/d)	2,847 (2,832)*	3,715	4,504	4,755 (5,000)*	4,763 (2,143)*	4,979	5,000	5,000	5000 (4,189)*	9,562 (3,910)*	10,000	13,000
	Date	1/12/22	31/5/22	14/07/22	12/10/22	24/10/22	5/9/22	6/7/21	17/10/18	14/11/22	31/10/22	14/10/14	4/10/17
	Travel time Initial rise - peak (hrs)	n.a.	52 -58	56 - 61	n.a.	n.a.	48 -53	57 - 63	60 - 70	n.a.	n.a.	43 - 48	44 - 50
Basin Creek	Rain (mm) +	0	0	0	0	34	0	0	17	>0.5	1.8	<0.5	<0.5
	Height (m)	2.69	2.62	2.66	3.09	5.19	2.73	2.68	2.62	3.51	4.36	3.21	2.92
	Flow (ML/d)	5,515	4,699	5,177	10,540	55,839	5,908	5,379	4,537	17,068	33,748	12,013	7,972
	Travel time Initial rise - peak (hrs)	n.a.	63 - 70	64 -70	n.a.	n.a.	60 - 65	72 - 77	76 - 82	n.a.	n.a.	56 - 71	58 - 73
Jarrahmond	Height (m)	1.99	1.79	1.85	2.44	8.68	1.95	1.85	1.77	3.36	4.63	2.6	2.14
	Flow (ML/d)	6,522	4,917	5,375	10,466	148,939	6,158	5,322	4,294	19,943	34,850	12,244	7,400
	Travel time Initial rise - peak (hrs)	n.a.	73 - 92	86 -92	n.a.	57 - 62	73 - 84	92 - 99	85 - 92	n.a.	n.a.	72 - 79	77 - 84
Orbost	Height (m)	1.87	1.54	1.66	2.49	7.1	1.73	1.48	1.3	3.25	5.01	2.42	1.75
	Flow (ML/d)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	Travel time Initial rise - peak (hrs))	n.a.	92 - 97	93 - 100	n.a.	n.a.	81 - 93	96 - 107	96 - 111	n.a.	n.a.	80 - 96	81 - 92

* These events were superseded by flood mitigation releases by Snowy Hydro. Actual release is in bold figures and planned environmental release in brackets. Travel time is not determined for these releases. Because of large volumes of water levels of water in the system, the values for water levels and flows are based on the daily average, except 24 Oct 2022 with travel time and flows are determined at some gauging stations.

+ Rain is estimated at gauging station corresponding to the time at which the flow reaches the station.

2.2.1. Flood levels at major gauging stations

Three gauges are utilised by the Bureau of Meteorology (BoM) for the issuing of flood warnings. At these gauges, the BoM has determined river level heights that would cause impacts upstream and downstream in line with **minor, moderate and major flood classifications**. The levels these gauges are shown in **Table 2-2**. There are no other gauges with associated flood classifications on the Snowy River.

Table 2-2: Flood levels at major gauging stations in the Snowy River

Gauge	Classification	Flow release (ML/d)*	Flood level height (m)#
Dalgety Weir (Water NSW gauge)	Normal Flow	< 385	<0.91 (ave. height 0.8m)
McKillops Bridge (BoM gauge) (levels currently under review by BoM and VIC SES)	Minor	>9,930	2.5
	Moderate	>115,000	6.0
	Major	>209,000	8.0
Jarrahmond (BoM gauge)	Minor	>28,000	4.1
	Moderate	>57,100	6.2
	Major	>95,900	7.4
Orbost (BoM gauge)	Minor	Not available	4.0
	Moderate	Not available	6.0
	Major	Not available	7.0

Notes:

* Estimated flow release that may result in flood level height being reached.

#Source: www.bom.gov.au/vic/flood/floodclass_south.shtml

Flood classifications are as follows:

- **Minor**- Causes inconvenience. Low-lying areas next to water courses are inundated. Minor roads may be closed and low-level bridges submerged. In urban areas inundation may affect some backyards and buildings below the floor level as well as bicycle and pedestrian paths. In rural areas removal of stock and equipment may be required
- **Moderate** - In addition to the above, the area of inundation is more substantial. Main traffic routes may be affected. Some buildings may be affected above the floor level. Evacuation of flood affected areas may be required. In rural areas removal of stock is required.
- **Major** - In addition to the above, extensive rural areas and/or urban areas are inundated. Many buildings may be affected above the floor level. Properties and towns are likely to be isolated and major rail and traffic routes closed. Evacuation of flood affected areas may be required. Utility services may be impacted

2.3. Travel times

In determining risks, DPE-Water has also considered the time taken for a flow release to travel down the river. Travel times can vary significantly, influenced by rainfall, existing antecedent catchment

conditions, depth of flow and channel storage effects. If the ground is already wet, travel times are often reduced. Travel times also reduce as flow increases in the natural channel due to the declining influence of within-channel vegetation and obstructions.

In the event of floods, large volumes of water extending outside the main channel have a dampening effect on peak flows and slow the travel time

To determine risk, DPE-Water estimates travel times based on observed data from similar historical events. As an example, travel times for a 5,000 ML/d flow releases during dry condition in October 2018 between key locations along the Snowy River are provided in **Table 2-3**.

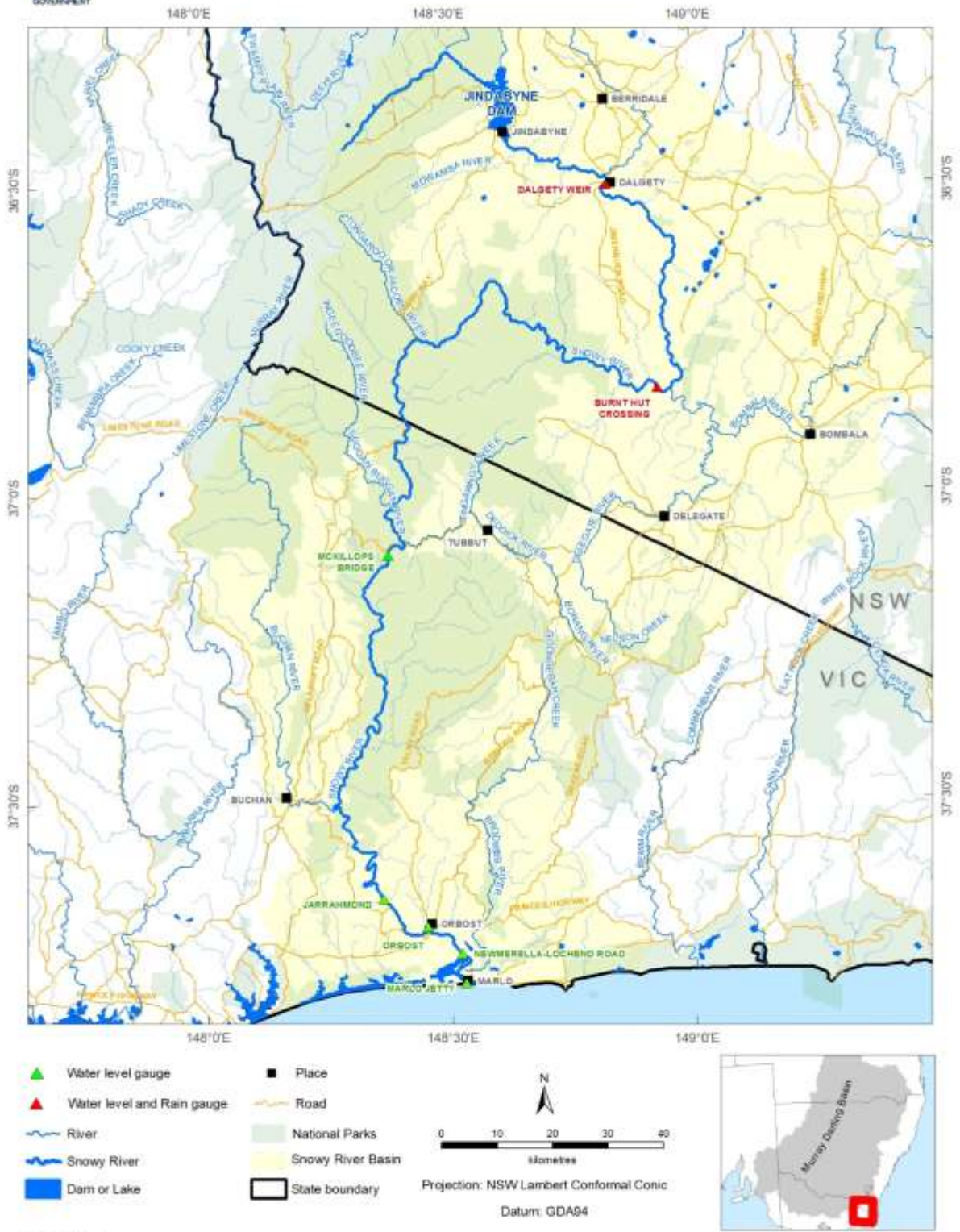
Table 2-3: Approximate travel times for a high flow event for the Snowy River

Reach	Distance (km)	Travel time (hours) for initial rise in flow rate	Travel time (hours) for peak of event
Lake Jindabyne to Dalgety	25	11	17
Lake Jindabyne to Burnt Hut	80	35	38
Lake Jindabyne to McKillops Bridge	203	60	70
Lake Jindabyne to Basin Creek	271	76	82
Lake Jindabyne to Orbost	321	96	111

Note: Flow times recorded for 5,000 ML/d release in October 2018 during dry conditions. Flows may differ from this example. Distances are approximation only based on GIS measurements from aerial photography.



SNOWY RIVER CATCHMENT



Data Sources:
© Spatial Services - NSW Department of Finance,
Services and Innovation 2016.
Murray Darling Basin Authority.
Geoscience Australia.
Australian Government, Department of Environment,
Department of Planning and Environment - Water.

Map produced by DPIE Water
15 December 2022 WAMS 14483

Figure 2-1: The Snowy River catchment and the location of hydrometric stations in NSW that are used to estimate water travel times. (Source: DPE – EHG: Annual plan for the Snowy and montane rivers increased flows 2023–24)

2.4. Impact of climatic and catchment conditions on risk

Climatic and catchment conditions can increase the risks associated with environmental flow releases by creating uncertainty around predicted flow rates and water levels.

In the Snowy River catchment, tributary inflows have a significant influence on flows and water levels in the main river. Inflows may result in the river rising before or during an environmental release, such that the release may contribute to increased flooding risk. Mitigation for this risk has been included in the safety procedures outlined in the next section.

High rainfall events that extend over the catchment area can lead to increases in the dam storage levels which could result in an uncontrolled spill although this is unlikely to occur from Jindabyne dam. Safety management of spills or unplanned releases to manage dam storage levels are the responsibility of Snowy Hydro and are not covered by this SMP. However, in some instances a planned environmental release may be brought forward to reduce the risk of uncontrolled spill.

3. Roles and responsibilities in managing risks

The following procedures have been developed to mitigate the risks tabled in **Appendix A**. This section defines the responsibilities of the participating organisations.

3.1. DPE-Water responsibilities for safety management

DPE-Water is responsible for coordinating the safe management of planned environmental releases.

3.1.1. Decision making delegations

DPE-Water's Chief Operating Officer (COO) has overarching responsibility for relevant decision making, including instructing Snowy Hydro to make, amend or cease environmental flow releases. (Note that Snowy Hydro can cease a release at any time if Snowy Hydro deems it to be unsafe). Should the COO be unavailable, decision making is delegated to the DPE-Water Director Asset Management and Performance. Responsibilities within DPE-Water are depicted in Figure 3-1.

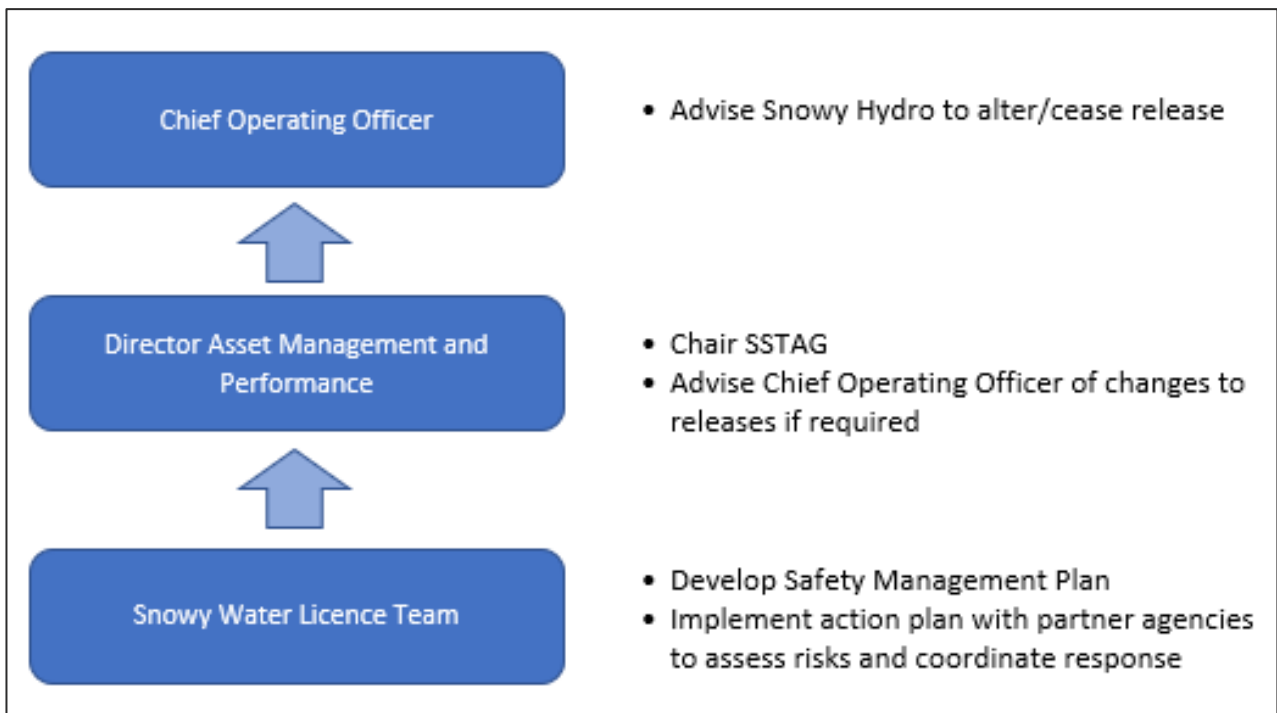


Figure 3-1: SRIF Safety management framework within Department of Planning and Environment

3.1.2. Coordination responsibilities

DPE-Water is responsible for coordination, including:

- Liaising between DPE-EHG and Snowy Hydro in relation to SRIF volumes and release patterns.
- Providing timely advice to Snowy Hydro to commence, amend or cease dam releases.
- Chairing, coordinating and secretariat support to the Snowy Safety Technical Advisory Group (SSTAG) (details of the SSTAG are provided later). DPE-Water's internal technical staff may also provide advice to the SSTAG as required.
- Through the SSTAG process, coordinating, informing and delegating to stakeholders and the responsible agencies, such as DPE-EHG, Snowy Hydro, the State Emergency Service (SES), the Bureau of Meteorology (BoM), National Parks and local councils, for the management of risks.
- Coordinating stakeholder and public communication (in coordination with DPE Corporate Communications).
- Alerting relevant emergency services during a flow release to activate emergency arrangements, if required.

3.1.3. Stakeholder communication responsibilities

DPE-Water recognises that effective management of the risks requires the support and coordination of many stakeholders. Effective working relationships with stakeholders must be maintained to ensure the high-flow events occur safely.

DPE-Water, in collaboration with the DPE Corporate Communications team and DPE-EHG, is responsible for coordinating communication to stakeholders and the public in relation to environmental releases. DPE Corporate Communications has developed a Stakeholder and Community Engagement Plan (**Appendix B**) to ensure proactive messaging to all stakeholders regarding environmental flow releases. DPE Corporate Communications ensures that community engagement and key messaging on the safety impacts of the releases and its related events is undertaken and continually improved.

DPE-Water currently provides information to stakeholders, downstream residents, and the community in a range of ways or channels in relation to environmental flow releases, including through:

- Direct communication via email, phone and meetings with agency members of the SSTAG.
- Publishing this SMP and SRIF Operations Plan on the DPE-Water website
- Publishing up to date web-based information and frequently asked questions regarding environmental flow release events on the DPE-Water website
- Direct communication with downstream landholders and stakeholders prior to a release (for example, via targeted mailing lists). The DPE-EHG website enables members of the public to opt-in to this distribution list.
- Advice and provision of information to emergency services, local councils, National Parks, and other partner agencies who are then expected to enact their own communication arrangements.
- Publishing media releases and rising river alerts, including via email, the DPE-Water website and tweets.
- Issuing rising river alert by SMS to downstream land holders and stakeholders to a distribution list held by DPE-Water's Snowy Water Licence Team.

In the event of an escalating flooding situation DPE-Water will assist relevant emergency service agencies i.e. contact SES STAG member or SES State Communication Centre as required.

In the event of major floods or an impending disaster, legislated NSW emergency management arrangements will be activated by emergency service authorities. At this time, emergency response agencies would take responsibility for provision of community safety and emergency messaging through established systems.

SSTAG detailed list of communication actions and responsibilities is provided in **Appendix B**.

3.2. Responsibilities of the Snowy Safety Technical Advisory Group (SSTAG)

The Snowy Safety Technical Advisory Group (SSTAG) is responsible for assessing and reviewing the adequacy of safety management arrangements for all planned environmental releases from Jindabyne dam.

The SSTAG consists of technical experts that provide DPE-Water with timely advice and information to make informed decisions regarding proceeding with, or the need to alter the timing, of environmental flow releases. The SSTAG has an advisory role, with final decision making, policy direction or delegating additional work to be carried out by DPE-Water.

The SSTAG Terms of Reference is included in **Appendix C**.

3.2.1. Composition of the SSTAG

The SSTAG includes organisations with knowledge and expertise relevant to management the safety of environmental flow releases. The composition is flexible and may change subject to the expertise required, however it generally comprises representatives from various Commonwealth, State and Local Government departments / authorities / corporations and Snowy Hydro. Current membership includes representatives from:

- DPE-Water
- DPE-EHG
- DPE Corporate Communications
- BoM
- Snowy Hydro
- NSW National Parks and Wildlife
- NSW State Emergency Service (SES) - Region / Local Controller or nominee
- Victoria State Emergency Service - Region / Local SES Controller or nominee
- East Gippsland Catchment Authority
- WaterNSW
- Snowy Monaro Council
- East Gippsland Shire Council

3.2.2. Roles of key SSTAG members

The roles of key SSTAG members in relation to managing safety risks of environmental releases are summarised in Table 3-1.

Table 3-1: SSTAG roles and responsibilities

Agency	Role
DPE-Water	<ul style="list-style-type: none"> • Develop the Safety Management Plan • Lead implementation of processes detailed in the Safety Management Plan • Chair SSTAG • Provide secretariat support to SSTAG • Coordinate all public and stakeholder communications prior to high flow releases • Reply to contentious issues and enquires
DPE Corporate Communications	<ul style="list-style-type: none"> • Develop and implement the Communications Plan • Undertake all public and stakeholder communications prior to high flow releases
DPE-EHG	<ul style="list-style-type: none"> • Development of Snowy Rivers Increased Flow (SRIF) release pattern • Provide technical advice as required • Work with Snowy Advisory Committee to ensure they consider risks in planning future SRIF release patterns • Contact impacted stakeholders
BoM	<ul style="list-style-type: none"> • Provide input to the SSTAG relating to weather conditions • Provide technical advice as required • Undertake modelling of rainfall events and impacts on river flows / planned releases • Issues flood watch and warnings
NSW SES	<ul style="list-style-type: none"> • Provide technical advice as required • NSW SES is the legislated Combat Agency for floods and is responsible for the control of flood operations. NSW SES work with the Bureau and Councils to develop warning systems. • Responsible for flood consequence management • Advise on flood risks • Assist with community engagement as required
VIC SES	<ul style="list-style-type: none"> • Provide technical advice as required • VIC SES is the legislated Combat Agency for floods and is responsible for the control of flood operations. VIC SES work with the Bureau and Councils to develop warning systems. • Responsible for flood consequence management • Advise on flood risks • Assist with community engagement
Snowy Hydro Limited	<ul style="list-style-type: none"> • Provide technical information to DPE's project team as required. • Ensure releases are able to be undertaken safely • Operate infrastructure to make releases to the Snowy River • Cease / alter releases (from this planned) when directed by DPE Water • Assist with community engagement as required

Agency	Role
Snowy Monaro Council	<ul style="list-style-type: none"> • Provide technical information to DPE's project team as required. • Assist in providing up to date contact details for downstream landholders • Advise on flood risks • Assist with community engagement as required
East Gippsland Shire Council	<ul style="list-style-type: none"> • Provide technical information to DPE's project team as required. • Assist in providing up to date contact details for downstream landholders • Advise on flood risks • Assist with community engagement as required
NSW National Parks and Wildlife Service	<ul style="list-style-type: none"> • Advise on flood risks within NPWS estate • Install signage to alert park users including campers in camping areas • Erect road closed signs as required • Assist with community engagement as required

4. Process of managing risks

The following sections out the process to be followed prior to and during environmental releases. The estimated timeframes are indicative only and may be subject to change as a result of factors such as unexpected climatic conditions, ongoing stakeholder consultation, ongoing licence review considerations, etc.

4.1. Start of the water year

4.1.1. SRIF planning

Prior to the start of the water year (1 May), the design of the SRIF release pattern is undertaken by DPE-EHG in consultation with the Snowy Advisory Committee (SAC) and Snowy Hydro. The design considers environmental, safety, available water allocation and operational requirements. The strategy is detailed in DPE-EHG's 'Annual Plan for the Snowy Rivers Increased Flows'.

It is important to note that the annual release plan may change throughout the year due to climatic and other environmental conditions.

4.1.2. Safety planning

Once the SRIF release has been determined the SSTAG may convene³ to:

- Discuss the planned releases for the upcoming water year and the Annual SRIF Operations plan.
- Review the Safety Management Plan.
- Review any new data on flow releases and water levels acquired from the previous water year.
- Determine any risks associated with the planned timing, duration, and size of planned SRIF releases.
- Determine any risk mitigation measures that may be required for the upcoming water year.

Determine which flow events would require the Safety Management Process to be enacted, as set out in the next sections. Based on current available evidence, the releases threshold has been

³ Meetings may be undertaken in person, virtually or as group emails.

revised from 2,000ML to 2,500ML/d during dry conditions. However, this threshold would be reviewed annually and upon receipt of any evidence that may suggest a more appropriate value. Flow events that exceed the determined threshold are labelled as ‘high-flow events’.

The process of SSTAG involvement is detailed in the SSTAG terms of reference in **Appendix C**.

4.1.3. Public Communications

A key strategy for mitigating many of the risks identified in **Appendix A**, which is ensuring effective and timely stakeholder communication. At the start of the water year, the following communications activities are undertaken:

- The Stakeholder and Community Engagement Plan is reviewed for currency by DPE Corporate Communications team.
- The SMP, as published on the DPE-Water website, will be replaced at any time that amendments are made by DPE-Water.
- The contact list for downstream landholders and key stakeholders is reviewed for currency by DPE Corporate Communications team as per the process set out in the Communications and Stakeholder Engagement Plan.
- The Annual SRIF Operations Plan is published on the DPE-Water website.
- An overview list of the dates of planned environmental flows is published on DPE-Water website.
- A media release providing an overview of the environmental flow releases is issued to all relevant media outlets and published on the DPE-Water website by DPE Corporate Communications.
- DPE Corporate Communications publishes FAQs on the SRIF release plan on the DPE-Water website; emailed them directly to downstream landholders and interested parties on the DPE contact list and shared them directly with relevant stakeholder agencies as required.

Details of communications task and responsibilities are summarised in **Appendix B**.

4.2. Approximately 4 to 6 weeks before first planned high-flow release commences

Approximately 4 to 6 weeks prior to the commencement of the first planned high-flow environmental release event, DPE Corporate Communications team contact (via email or similar) downstream landholders and key stakeholders (as identified on the DPE-Water contact list), coinciding with the issuing of the ‘overview’ media release and updates to the DPE-Water website with information on the planned environmental water releases for the upcoming water year. In some cases, this timeframe may be reduced, however; DPE-Water intends to provide the maximum notice period possible for the circumstances.

4.3. Approximately 1 week before planned high-flow release

4.3.1. Notify BoM and review weather

During the week leading up to a release, the Bureau of Meteorology (BoM) - Hazard Preparedness and Response (HPR) section addresses the SSTAG with details of any climate risks and expected rainfall during the release period. Together the SSTAG makes recommendations on the release considering the information available.

If the BoM advises of a climatic risk then additional action is required, as detailed in Table 4-1.

Table 4-1: Potential climatic risk triggers and actions required by DPE-Water

Climatic risk	DPE Water action required
Flood Watch issued for any part of the catchment	<ul style="list-style-type: none"> discuss probability of flooding with the BoM and possible impacts advise stakeholders and SSTAG that the release may be reviewed
Severe weather warning	<ul style="list-style-type: none"> discuss probability of flooding with the BoM and possible impacts if there is a risk of flooding, advise stakeholders and SSTAG that the release may be reviewed
Flood warning	<ul style="list-style-type: none"> discuss extent of predicted flooding with the BoM and probable impacts discuss risk with SSTAG members make recommendation regarding release
Weather event without warning	<ul style="list-style-type: none"> discuss probability of flooding with the BoM and possible impacts if there is a risk of flooding then take action as required

A climate risk trigger will not always result in a change to the release flows but will be discussed with the SSTAG to ensure that the release would not create an unacceptable level of risk.

Triggers that will result in high risk to public safety or disruption to services, such as major transport routes, will be assessed by the SSTAG prior to continuing the release. The SSTAG members will provide this level of technical advice, within their area of expertise, and DPE-Water will take mitigating actions if necessary.

4.3.2. BoM flood forecasting

The BoM also uses a rainfall runoff model (URBS) for flood forecasting in the Snowy River catchment. The BoM undertakes this modelling, using the inputs of the planned release flow rates and observed or forecast rainfall to calculate likely flood levels at key downstream locations.

4.3.3. Review by SSTAG

The SSTAG convenes to reviews the planned releases, along with the BoM’s rainfall predictions and notification of any climatic risks. The SSTAG considers risks by:

- Reviewing estimated travel times listed in Table 2-3.
- Reviewing forecasted flood levels to the documented levels in Table 2-1 to estimate the potential water levels at key locations.
- Reviewing the risk and mitigation measures table in **Appendix A**.
- Using local knowledge or agency intelligence records to relate the estimated water levels to local impacts, such as inundation to property, access routes, roads, etc.
- Using local knowledge of upcoming events that may be impacted.
- Or any other appropriate means.

As a principle, flows will generally be managed to maintain water levels below the moderate flood level at McKillops Bridge gauge and below minor flood levels at Jarrahmond and Orbost BoM gauges (see Table 2-2).

If a potential risk is identified, the SSTAG will provide advice on both the risk and relevant mitigation measures.

For example, relevant advice on professional emergency management could be sought from the State Emergency Service to inform decision making on whether to proceed with the planned release.

The SSTAG provides advice/recommendation as requested by DPE-Water to assist the safety management process. The SSTAG makes recommendations to DPE-Water as to whether the release should proceed, be modified or cancelled. Final decision making, policy direction or delegating additional is carried out by DPE-Water. The decision-making process to be undertaken is outlined in the flow chart in Figure 4-1.

It is important to note that decisions to proceed with the release is based on the recommendations from all members of the SSTAG being comfortable that risks are known and mitigated against or reduced to an acceptable level.

The Term of Reference of SSTAG involvement is summarised in **Appendix C**.

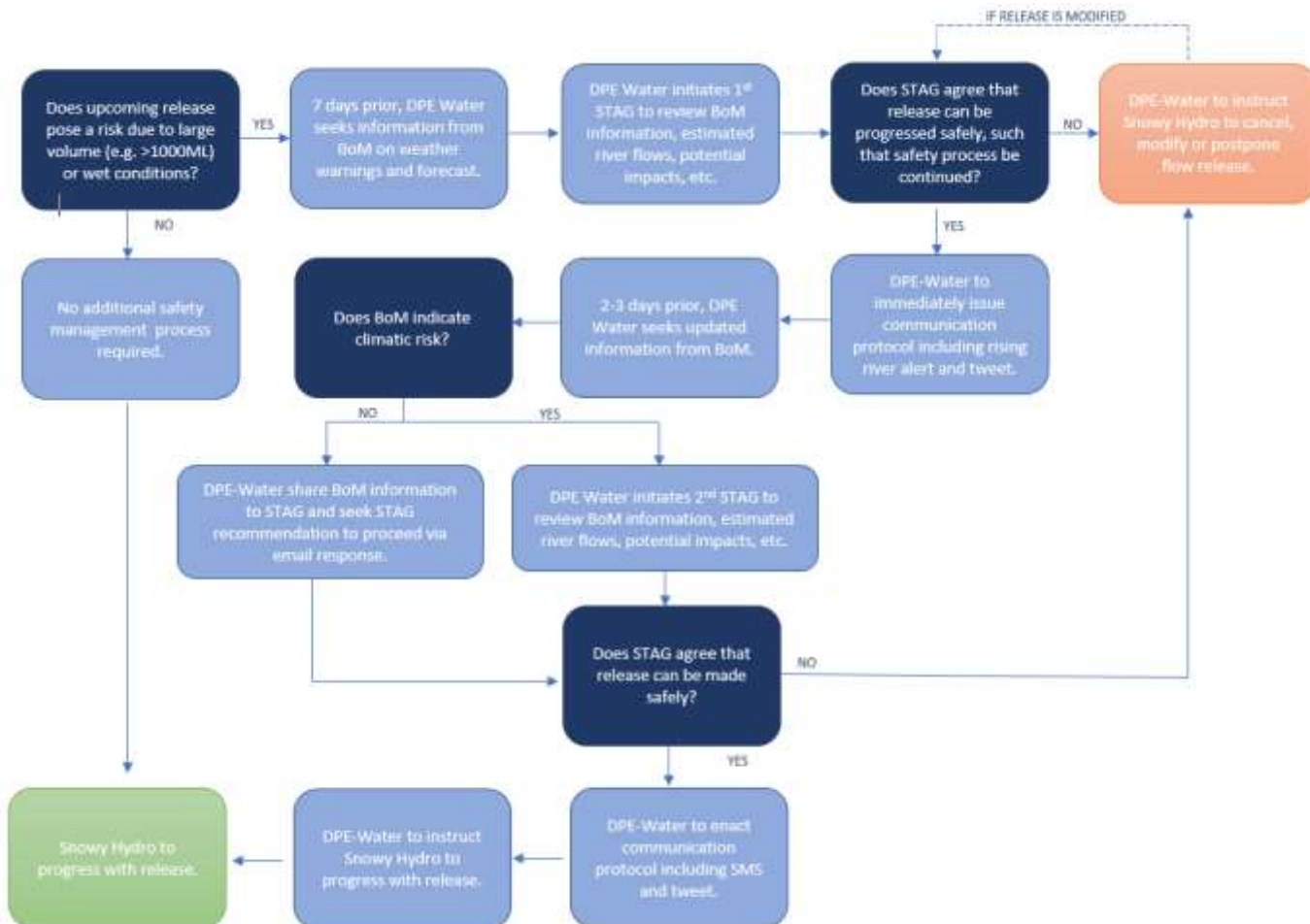


Figure 4-1: SSTAG process flow chart

4.3.4. Public Communications

A 'Rising river alert' media release is issued by DPE Corporate Communications approximately seven days before each planned high-flow environmental release to inform affected communities/general public of the upcoming event. The alert is published on DPE-Water website and a tweet is also issued on the same day (**see Appendix B**).

4.4. Approximately 3 days before releases

4.4.1. Review weather

In the days leading up to the high flow environmental release, DPE-Water and Snowy Hydro closely monitor weather forecasts and flows in the Snowy River and the tributaries downstream of Jindabyne Dam.

4.4.2. Final BoM advice

DPE-Water continues to liaise with the BoM and undertake a final assessment of weather events based on the most recent weather data.

Approximate river flows can be forecast by the BoM up to several days in advance. If natural flows, combined with Jindabyne Dam releases, are likely to cause downstream flooding the department will consult with the SSTAG, prior to discussions with SHL to modify or cease releases from the dam.

4.4.3. Final review by SSTAG

DPE-Water consults with the SSTAG to undertake a final review, virtually or by email, dependant on the level of risk observed in the BoM rainfall forecast. The review includes:

- the planned release flow rate,
- updated BoM rainfall predictions,
- updated estimates of water levels,
- and any final safety issues or actions required.

This information is used to confirm that the SSTAG is comfortable that the risks of the impending flow event are known and have been mitigated to an acceptable level.

The SSTAG again undertakes recommendations in line with the previous flow chart in Figure 4-1 and the department instructs Snowy Hydro based on the outcome.

Where there is a level of uncertainty with the forecasts the SSTAG may determine to reconvene 1 day prior to the environmental release and reconsider available data.

SSTAG involvement is summarised in **Appendix C**.

4.4.4. Public communications

If the release is determined safe to proceed, approximately 1 to 3 days prior to release an SMS is sent by DPE-Water to the list of SRIF stakeholders in the DPE distribution list. DPE-Water and DPE Corporate Communications will work together to regularly review and update the list of stakeholders.

DPE Corporate Communications will also issue a Tweet the day before each respective environmental release event (**see Appendix B**).

4.5. During release

During the release, DPE-Water monitors information as required through liaison with the DPE-EHG, BoM, Snowy Hydro and the SSTAG, particularly if forecasts indicate that rain is likely or a Flood Watch is issued for any part of the Snowy River or surrounding catchments.

Where any rainfall risks are forecast during the duration of the event, DPE-Water will request BoM to review rainfall predictions. Where risks are determined, DPE-Water advises the SSTAG and the SSTAG provides recommendations on continuing, ceasing or modifying the release to DPE-Water.

In addition to a flood mitigation directive from DPE -Water, Snowy Hydro will cease releases if:

- Directed to by NSW Police or the State Emergency Service.
- Deemed necessary to manage public safety or environmental health risks.

4.6. Modified SRIF releases

Modifications to the planned SRIFs may occur throughout the year as a result of climatic, environmental or other unforeseen circumstances that may arise closer to the time of the planned SRIF release.

For example, prolonged climatic conditions in wet years may result in Jindabyne Dam approaching or realising spill level, such as occurred with Lake Jindabyne in December 2021 to March 2022. At these times, modifications to the volume, timing or flow rate of SRIF releases may be required to prevent uncontrolled spills and ensure that water levels can be reduced in a safe manner. Changes to the planned SRIF regime may be made rapidly.

As another example, where SRIF accounting is not finalised at the commencement of the water year, DPE-EHG will design an interim SRIF regime which may be modified once accounting arrangements are resolved.

In these rare occurrences, a condensed approach to that described in Section 3 would be undertaken within the available timeframe. Warnings would be provided to stakeholders with as much time as practically available. The timeframes may be less than outlined Section 3, and in some extreme instances may be limited to less than 24-hour notice.

During unplanned storages releases or uncontrolled spills (see Section 3), Snowy Hydro is responsible for safety management, stakeholder coordination and public communication. DPE-Water would assist Snowy Hydro as requested.

4.7. Workplace health & safety

All agencies, corporations and stakeholders are responsible for their actions with regards to Workplace Health and Safety (WHS) legislation and must follow their organisation's WHS policies and procedures.

Departmental employees must follow the DPE Work Health and Safety Policy (DOC21/38032) and related procedures, accessed through the internal DPE intranet. Prior to any field work, departmental employees must consider relevant risks and follow all relevant departmental procedures. This may include, but is not limited to, DPE WHS procedures and critical risk controls in place for:

- Driving (WHS CRC 007)
- Remote or isolated work (WHS CRC 014)
- Working on or near water (WHS CRC 017)

- Dealing with aggressive stakeholders (WHS CRC 020)

These documents should be accessed by DPE employees through the internal DPE intranet. These documents have not been included herein as they are updated frequently, and it is important to access the most recent version. Further information is below.

5. Further information

Further information on the Snowy Water Initiative and Snowy Montane Rivers Increased Flows is available on the DPE-Water website:

- Snowy Water Initiative: www.industry.nsw.gov.au/water/basins-catchments/snowy-river/initiative
- Snowy Rivers Increased Flows: www.industry.nsw.gov.au/water/basins-catchments/snowy-river/initiative/increased-flows

Further information on the environmental management of Snowy and Montane Rivers is available on the DPE -EHG website: www.environment.nsw.gov.au/topics/water/water-for-the-environment/snowy-and-montane

Register for Rising River Alert notifications or to receive information about the Upper Murrumbidgee or Snowy Water for the Environment programs at:

www.environment.nsw.gov.au/topics/water/water-for-the-environment/snowy-and-montane/snowy-and-upper-murrumbidgee-landholder-survey-and-contact-information

Appendix A

Risk analysis and mitigation measures

Table A-1: Risks and mitigation measures associated with environmental releases of SRIF

Ref	Hazard description (A hazard is a situation or thing that has the potential to cause harm.)	Risk description (A risk is the possibility a hazard can cause harm.)	Likelihood	Consequence	Initial risk rating	Proposed risk controls	Type of risk control	Likelihood	Consequence	Residual risk rating
E.g.	(i.e. wet floor)	(i.e. slip on floor)				(i.e. mop the floor and place wet floor hazard signage)	-	-	-	
1	Rapid rise in water level (typically up to nine occasions per year)	The community being 'caught out' by the higher degree of flow variability. Potential damage to owner's assets and injuries to individuals accessing the river during the event	Possible	Major	High	Communications and Engagement Plan developed. Regular and targeted communication provided to community.	Reduce exposure to the hazard using administrative actions	Unlikely	Major	Medium
2	Flooded public roads or causeways	Rising water may inundate public roads and causeways restricting safe transportation movements	Possible	Moderate	Medium	Potential roads / causeways impacted will be identified through local knowledge of SSTAG members. Identified road closures will be included in messaging to the community. Where public roadways are cut by flood water, Councils or other relevant authority will erect road closure signage Victorian SES are reviewing extent of flood impacts on traffic infrastructure through development of GIS mapping	Reduce exposure to the hazard using administrative actions Isolate hazard from people	Unlikely	Moderate	Medium
3	Management of releases up to 10,362 ML/day in 2023-24 and during peak flow period	Increases in tributary inflows downstream of Jindabyne Dam combining with dam releases to cause/ exacerbate flooding dependent on magnitude of increases in downstream tributary inflows	Possible	Extreme	High	Regular monitoring of flows and close liaison between the Department of Planning and Environment (DPE), the BoM and Snowy Hydro Limited (SHL). SHL will cease releases if requested to do so by DPE, the State Emergency Service (SES) or NSW Police. The BoM to undertake forecast modelling. Releases will be cut back if required to minimise the risk of targeted flows being exceeded.	Reduce exposure to the hazard using administrative actions Isolate hazard from people	Unlikely	Extreme	High

Ref	Hazard description (A hazard is a situation or thing that has the potential to cause harm.)	Risk description (A risk is the possibility a hazard can cause harm.)	Likelihood	Consequence	Initial risk rating	Proposed risk controls	Type of risk control	Likelihood	Consequence	Residual risk rating
4	Rising water levels at campsites and picnic areas, including The Barry Way, Scotchies Yard, Willis, Halfway Flat, Pinch River, Running Waters	Risks to holiday makers/travellers, campers and the general public using these areas. Potential damage to owner's assets (camping gear, vehicles, etc.) and injuries to individuals accessing the sites during the event	Possible	Extreme	High	Working collaboratively to address flooding issues with the National Parks and Wildlife Service by updating high event release alerts on their website and install temporary and/or permanent signage at vulnerable locations identified.	Reduce exposure to the hazard using administrative actions	Unlikely	Extreme	High
5	Climatic conditions coinciding with release	Risk of high-flow exceeding flood levels and impacting properties adjacent to the river	Possible	Major	High	Climatic conditions are reviewed by the BoM prior to a release and discussed by the SSTAG to determine any mitigation necessary to maintain river heights below minor flood levels and at an acceptable level of risk	Reduce exposure to the hazard using administrative actions	Unlikely	Major	Medium
6	Property access	River crossings will be inundated and will be inoperable during the event(s). Loss of vehicular access	Possible	Moderate	Medium	Communications and Engagement Plan developed. Information materials, such as FAQs and 'Rising River Alerts' will be made publicly available via the web and emailed directly to downstream landholders. Property owners were previously identified and contacted individually. These owners will be emailed and contacted through phone/SMS to prepare for potential risks. Additionally, the public will be informed via 'Rising River Alerts' issued to all relevant local media and Tweets will be issued for each alert.	Reduce exposure to the hazard using administrative actions	Unlikely	Moderate	Medium
7	People on Jindabyne Dam Wall	Someone going over spillway or someone going into plunge pool	Unlikely	Extreme	High	The area around the dam wall is fenced off by SHL. Buoy line around spillway in the storage; SHL will cease releases if notified of a person or watercraft in the plunge pool or if a person or watercraft enters the area of Lake Jindabyne between the buoy line and the spillway.	Isolate hazard from people Reduce the risk through engineering controls	Rare	Extreme	High
8	Personnel on Jindabyne Dam Wall	Injury to Snowy Hydro Limited employees in making the releases	Unlikely	Extreme	High	Snowy Hydro Limited is required to have work health and safety procedures in place for its employees and worksites and is required to comply with them.	Reduce exposure to the hazard using administrative actions	Rare	Extreme	High
9	Kosciuszko Road at Jindabyne Dam wall	Accidents if care is not taken.	Unlikely	Extreme	High	Snowy Hydro Ltd has developed a Lake and Dam Site Safety Plan that addresses work, health and safety issues within the immediate area of Lake Jindabyne. The area around the dam wall will be fenced off by SHL.	Reduce exposure to the hazard using administrative actions Isolate hazard from people	Rare	Extreme	High
10	People at sites below Jindabyne Dam wall	Injury to DPE staff monitoring releases.	Unlikely	Extreme	High	DPE is required to have work, health and safety procedures in place for its staff and worksites and is required to comply with them.	Reduce exposure to the hazard using administrative actions	Rare	Extreme	High

Ref	Hazard description (A hazard is a situation or thing that has the potential to cause harm.)	Risk description (A risk is the possibility a hazard can cause harm.)	Likelihood	Consequence	Initial risk rating	Proposed risk controls	Type of risk control	Likelihood	Consequence	Residual risk rating
11	Bridges, including Buckley's Crossing, Dalgety	Bridge subject to gathering of debris, such as tree branches/logs. This issue has significantly reduced since much of the instream woody debris (that is, dead willows) are no longer apparent in the river above Dalgety. As the bridge existed before the construction of Jindabyne Dam and there have subsequently been larger flows during this time, it is expected that the bridge will cope with the flow.	Unlikely	Minor	Low	The Dalgety Bridge is the main bridge near the release point at Jindabyne Dam. It is an older bridge, made of a combination of steel and timber, and is inspected every two years by the NSW Roads and Maritime Services (RMS). RMS are notified of releases as part of the stakeholder engagement process.	Reduce the risk through RMS standard maintenance inspection	Rare	Minor	Low
12	McKillops Bridge	Water levels may exceed minor flood level at this site	Possible	Insignificant	Low	Suitability of flood rating currently being access by BoM. Communications and Engagement Plan addresses community safety notifications.	Reduce exposure to the hazard using administrative actions	Rare	Insignificant	Low
13	Buildings	Various infrastructure located within 50 metres of the inundation zone has the potential to be impacted. Potential damage to property, stock and equipment. Although the infrastructure is close to the river, most items are located on the high bank and are unlikely to be inundated.	Possible	Moderate	Medium	Communications and Engagement Plan developed. Building owners were previously identified and contacted individually. These land owners will receive notification via email and be advised to prepare for potential risks. Additionally, the public will be informed via 'Rising River Alerts' issued to all relevant local media and Tweets will be issued for each alert. Regular monitoring of the flows to ensure that operational limits are not exceeded.	Reduce exposure to the hazard using administrative actions	Unlikely	Moderate	Medium
14	Damage to pumps	Various, including Snowy Monaro Regional Council	Possible	Moderate	Medium	Communications and Engagement Plan developed. Pump owners were previously identified and contacted individually. These owners will receive notification via email/SMS and direct contact and be advised to prepare for potential risks by either securing pumps or removing associated motors, pipes, etc. Additionally, the public will be informed via 'Rising River Alerts' issued to all relevant local media and Tweets will be issued for each alert.	Reduce exposure to the hazard using administrative actions	Unlikely	Moderate	Medium
15	Landholders - All properties located along the Snowy River.	Risks to landholders' property, equipment and own wellbeing. Potential damage to property, stock and equipment if located within 50 metres of the expected inundation zone.	Unlikely	Minor	Low	Communication and Engagement Plan developed. Provision of timely email and/or SMS notification of intended flow release and updates of any significant flow revision to previously identified landholders. Additionally, the public will be informed via 'Rising River Alerts' issued to all relevant local media and Tweets will be issued for each alert.	Reduce exposure to the hazard using administrative actions	Rare	Minor	Low

Ref	Hazard description (A hazard is a situation or thing that has the potential to cause harm.)	Risk description (A risk is the possibility a hazard can cause harm.)	Likelihood	Consequence	Initial risk rating	Proposed risk controls	Type of risk control	Likelihood	Consequence	Residual risk rating
16	Agricultural land – Jarrahmond Area	Inundation of farming land when water level approaches 6m on Jarrahmond Gauge. At this height water breaches rock wall and flows over local spillway.	Possible	Insignificant	Low	Release flows and impacts reviewed by SSTAG prior to every release. Releases to be managed to below 4.1m at this site.	Reduce exposure to the hazard using administrative actions	Rare	Insignificant	Low
17	Poor cross border communication	Risk to safety of Victorian public if adequate notice provide of upcoming releases	Possible	Moderate	Medium	Include Victorian representatives on SSTAG and in stakeholder communication process.	Reduce exposure to the hazard using administrative actions	Unlikely	Moderate	Medium
18	Modified planned SRIF releases	Risk to river uses and landholders with limited time to prepare	Possible	Minor	Medium	Coordinated stakeholder communication between DPE and SHL prior to release. Advisory messaging. Communications and Engagement Plan developed. Provision of timely email and/or SMS notification of intended flow release and updates of any significant flow revision to previously identified landholders. Additionally, the public will be informed via ‘Rising River Alerts’ issued to all relevant local media and Tweets will be issued for each alert.	Reduce exposure to the hazard using administrative actions	Unlikely	Minor	Low

Appendix B

Stakeholder and Community Engagement Plan

Introduction

The 2023-24 annual Snowy River increased flow strategy has been developed for the Snowy River below Jindabyne in consultation with the Snowy Advisory Committee. This strategy is very different from other environmental water programs in Australia, in that it focusses on reconstructing river processes rather than focussing on rare taxa.

This year's increased flow strategy will see environmental water released to the Snowy River via Jindabyne Dam only and not tributary releases from the Mowamba River as in past years.

The annual increased flows strategy focuses on two key aspects, these being:

- increased daily flow variability - as the flow rates will reflect the natural pre-Snowy Scheme hydrology of a Snowy River
- a series of high-flow releases to rework the river bed and improve in instream habitat

Background

The New South Wales, Victorian and Commonwealth governments, along with Snowy Hydro Limited, have invested over \$1.2 Billion to:

- recover 212,000 megalitres of water in the Murray-Darling Basin
- upgrade infrastructure
- develop water release strategies
- undertake scientific analysis
- release water to Snowy montane rivers as part of Snowy montane rivers increased flows initiative

The NSW Department of Planning and Environment is responsible for regulating water release arrangements for the Snowy River below Jindabyne Dam and has been working with the Victorian and Commonwealth governments, as well as Snowy Hydro Limited, to optimise the use of the available water to improve the river condition.

In 2013, a new flow regime that better mimics the daily flow variability of a Snowy Montane rivers was implemented to improve the environmental outcomes with the available water. This revised flow regime included a higher degree of daily flow variability, a stronger seasonal signal and a series of five 'flood events' in spring 2013, rather than a single flushing event. Regular hydrological disturbance was required to improve the condition of the river.

This 'hydro scaling' method of water releases was again adopted in 2014-15 and has been utilised each year since, with eight high-flow events planned throughout 2023.

Key issues/considerations

The Snowy River is an Australian icon. There is strong community interest in rehabilitating the Snowy River, as well as widespread agreement across all stakeholders that the delivery of additional flows is greatly needed.

The department’s predecessors have previously consulted widely with the local community to identify stakeholders likely to be affected by the planned 2023 high-flow water releases, or who may be able to assist in ensuring the safety of staff, the public and property during the releases.

The department recognises that effective management of the risks that could arise from the releases requires the support and coordination of many stakeholders.

This year’s annual targeted volume of 220,500 megalitres (ML) reflects the wet conditions seen over the past year. The yearly flow sequences are designed to differ from previous years in order to introduce variability between years, especially around the timing and magnitude of flood events.

As in past years a key component of the strategy is to include events large enough to scour the bed of the Snowy River in order to improve the habitat and resulting in secondary ecological responses to the improved habitat condition. As a result of unprecedented wet conditions over two successive water years, DPE Environment and Heritage Group have this year not incorporated a large flushing flow in the strategy, instead incorporating multiple high-flow events.

Key water release dates

Date	Volume
Thursday 18 May 2023	Daily peak flow of 5,000 megalitres per day (ML/d) over 24 hours, with equivalent peak flow 8,864 ML/d for eight hours if Jindabyne Dam levels are high enough to enable delivery
Wednesday 21 June 2023	Daily peak flow of 2,931 ML/d over 24 hours, with equivalent peak flow 4,507 ML/d for eight hours
Thursday 6 July 2023	Daily peak flow of 4,099 ML/d over 24 hours
Tuesday 22 August 2023	Daily peak flow of 3,919 ML/d over 24 hours, with equivalent peak flow 5,000 ML/d for eight hours
Wednesday 20 September 2023	Daily peak flow of 3,827 ML/d over 24 hours, with equivalent peak flow 4,699 ML/d for eight hours
Friday 6 October 2023	Daily peak flow of 2,743 ML/d over 24 hours
Wednesday 18 October 2023	Daily peak flow of 5,000 ML/d over 24 hours, with equivalent peak flow 10,362 ML/d for eight hours (largest flow) if Jindabyne Dam levels are high enough to enable delivery
Friday 10 November 2023	Daily peak flow of 2,832 ML/d over 24 hours, with equivalent peak flow 4,236 ML/d for eight hours

Note: The peak flow releases will occur during daytime hours from 8am to 4pm Australian Eastern Standard Time. Note that dates and volumes may change subject to environmental, climatic or operation conditions.

The releases to the Snowy River will be above 2,500 megalitres per day (ML/d) for 8 days across the eight high-flow events. For the mid-October high-flow event there will be days leading up to and/or following that will have flows larger than 2,500 ML/d to maximise the ecological benefits for the river.

The 18 October high-flow event – the largest planned for this year - will attain a peak discharge equivalent to 10,362 ML/day for eight hours. This event is double the size of last year’s high-flow event. This flow, together with the other eight high-flow events during the remainder of 2023, will be contained within the historical bed and banks of the river.

Water will be released from Jindabyne Dam and will primarily affect the river reach between Jindabyne Gorge and the junction with the Delegate River.

As the high-flows travel down the Snowy River, peak flows will naturally reduce and, subject to any further tributary inflows along the Snowy River, downstream increases in river levels will occur more slowly and to a lesser extent.

As the Snowy River joins with its various tributaries further downstream, the effect of the high-flow releases is more likely to be within the bounds of normal flow conditions.

A primary objective of this plan is to inform down-stream landholders and the general community of anticipated risks associated with the planned high-flow events.

The department has prepared a *Snowy River Increased Flows: Safety Management Plan* to identify and manage public and staff risks associated with the planned environmental water releases.

About this stakeholder and community engagement plan

The stakeholder and community engagement activities outlined in this plan have been developed in line with the department’s Stakeholder and Community Engagement Policy (IND-I-245) to ensure effective and genuine engagement with stakeholders and the broader community to achieve better public policy outcomes, improved service delivery and enhanced customer service.

The methodologies and actions listed in this plan demonstrate a transparent and consistent approach in relation to stakeholder and community engagement and have been developed using the principles of the International Association for Public Participation (IAP2) model.

These principles include:

- **Purposeful** – deliver on NSW Government priorities, corporate goals with a clear understanding of what we want to achieve.
- **Inclusive** – the identification of all stakeholders and enabling participation.
- **Timely** – clear identification of timeframes and allow sufficient time for meaningful consultation.
- **Transparent** – clearly explain the engagement, consultation and implementation processes and provide the information necessary to enable meaningful and purposeful participation.
- **Respectful** – ensure engagement activities acknowledge and cater for the differing needs, perspective and levels of understanding of participants.

Objectives

The aim of this Stakeholder and Community Engagement Plan is to outline the key activities to be undertaken during the 2023-24 water year, but predominantly focusing on the 2023 high-flow releases. The plan will identify agency responsibilities and actions to be undertaken within specified

timelines and methods to ensure the principles of the department's engagement policy are achieved.

This plan will:

- Identify and define the approach, methods and collateral material to engage stakeholders to inform them of and assist them prepare for the winter/spring/summer releases.
- Ensure appropriate action is undertaken in a timely manner to inform stakeholders and the community, with particular emphasis on down-stream landholders, of the planned 'high-flow' water releases, the anticipated dates of each release, the associated volumes of each release and the potential impacts to landholders down-stream of Jindabyne Dam.

Engagement purpose

To effectively engage with relevant stakeholders regarding the Snowy River environmental high-flows by:

- Informing all interested parties of the planned series of nine 'high-flow' events during 2023.
- Providing interested stakeholders and the broader community with access to relevant materials regarding the high-flow events.
- Ensuring interested people, particularly landholders immediately down-stream of Jindabyne Dam are aware of the planned high-flow events, their timing and magnitude as well as the daily flow releases from Jindabyne Dam.

Stakeholders targeted under this plan

- Minister for Water - NSW
- Minister for the Environment – NSW
- Minister for Energy, Environment and Climate Change – Victoria
- Minister for the Environment - Federal
- Commonwealth, NSW and Victorian Government agencies
- Snowy Hydro Limited
- Snowy Advisory Committee
- Snowy River Alliance
- Landholders along the Snowy River
- Snowy Monaro Regional Council
- East Gippsland Shire Council
- NSW National Parks and Wildlife Service
- NSW Roads and Maritime Services
- State Emergency Service
- Other Emergency Service Agencies
- Bureau of Meteorology
- Local Land Services
- East Gippsland CMA

- State/Regional/Local media organisations
- Local businesses within the Snowy region
- Recreational fishing industry
- Recreational campers and tourists
- Community interest groups
- Members of the general public
- Department of Planning and Environment – staff

Key messages (2023 high-flow releases)

- There are eight scheduled ‘high-flow’ environmental water releases to the Snowy River planned for the 2023 water year- the first commencing Thursday 18 May and the last finishing Friday 10 November.
- The ‘high-flow’ releases to the Snowy River will all be above 2,500 megalitres per day (ML/d) for 8 separate days across the eight high-flow events.
- The largest release for 2023 is equivalent to 10,362 ML/d for eight hours from 8am to 4pm and will occur on Wednesday 18 October, dam level and weather permitting.
- For the May and October high-flow events there will be days leading up to and/or following that will also have large flows larger to maximise the ecological benefits for the river.
- There are two flushing flow (daily release above 5,000 megalitres) in the current 2023 schedule, subject to water levels being sufficiently high at Jindabyne Dam to enable delivery over the spillway.
- This year there will be one autumn, three winter and four spring water releases, reflecting the natural timing of expected high-flow events.
- Smaller flow releases, below 2,500 ML/d are also made throughout the year.
- It may be necessary to modify or cancel flows in the lead up to the event as a result of environmental, climatic or operational conditions.
- The timing and duration of high-flow events varies from year to year, based on inflow sequences to the Snowy catchment.
- These high-flow water releases are designed to better mimic the natural flow characteristics that are seen in Snowy Mountain rivers, with the aim of improving the long-term health of the iconic Snowy River.
- The release of environmental water into the Snowy River over a series of high-flow events has been successfully trialled since 2011.
- The Snowy Advisory Committee supports the approach of delivering a series of high-flow environmental water releases to improve the health of the Snowy River.
- Downstream landholders are encouraged to make appropriate plans ahead of the water releases, including securing water craft and moving stock, pumps and infrastructure to higher ground.
- This flow pattern includes a higher degree of daily and seasonal flow variability, but still maintaining the need to ensure high-flow events occur in the Snowy, allowing the river to be reworked to improve the in-stream habitat.

- Results from previous studies show the Snowy River is responding well to the seasonal high-flow events.
- The move to several smaller flow release pattern has been demonstrated to make better use of the available water to establish a new smaller channel within the former channel of the Snowy River, wet the riparian zone and promote the establishment of aquatic and riparian vegetation.
- Environmental water releases to the Snowy River are mandated under the *Snowy Water Inquiry Outcomes Implementation Deed 2002*, a tri-government agreement between the Australian, New South Wales and Victorian Governments, to achieve significant improvements in river health.

Key messages (annual release strategy)

- Significant improvement in the condition of the Snowy River has occurred since the introduction of a more variable daily flow regime, including the introduction of a high-flow release strategy.
- The 2023-24 annual strategy will provide:
 - About 220,500 megalitres of environmental water released to the Snowy River.
 - High degree of daily flow variability throughout the year. River levels will be more variable, with water levels changing on a daily basis. Residents need to be aware of this increased flow variability.
 - A pronounced spring flow signal with four spring high-flow events released.
 - The additional flow variability has greatly aided in the establishment of riparian and aquatic vegetation.
 - The move to a ‘hydro scaling’ release pattern makes better use of the available water by regular flow disturbance to help re-establish the natural channel and remove the build-up of silt and sediment over many years.
 - This release pattern, which has been successfully implemented since the 2011-2012 water year, is designed to better mimic the natural flow characteristics of Snowy Montane rivers.
 - It may be necessary to modify or cancel flows in the lead up to the event as a result of environmental, climatic or operational conditions.

Supporting materials

- **Fact sheet: Frequently Asked Questions** – provides overview of the high-flow water release events with details on anticipated river level rises at key locations down-stream of Jindabyne Dam.
- **Snowy River Increased Flows: Safety Management Plan** – identifies risks associated with the high-flow water release events and outlines the management of these risks for both the general public and staff.
- **Snowy River Increased Flows: Operations Plan 2023-24** – details the SRIF release strategy including dates, volumes and flow rates.
- **Rising River Alerts** – provides specific details for each of the eight high-flow events in relation to timing, volume and anticipated river level heights down-stream of Jindabyne Dam for the duration of each of the water releases.

Agency safety responsibilities for high-flow events

Agency	Responsibility
NSW Department of Planning and Environment	<ul style="list-style-type: none"> • Development of the environmental water management strategy. • Lead implementation of the Stakeholder and Community Engagement Plan and Safety Management Plan. • Ensure down-stream landholders and stakeholders are aware of the nine planned high-flow events. • Media engagement / contentious issues / enquiries. • Provide technical information to the team as required. • Approve relevant communication material and media releases / responses.
Snowy Hydro Limited (SHL)	<ul style="list-style-type: none"> • Provide technical information to the department’s project team as required. • Operate infrastructure to make releases to the Snowy River. • Provide advice and feedback on communication materials as necessary.
Snowy Monaro Regional Council	<ul style="list-style-type: none"> • Provide technical information to the department’s project team as required. • Provide advice and feedback on communication materials as necessary.
NSW Roads and Maritime Services	<ul style="list-style-type: none"> • Provide technical information to the department’s project team as required. • Provide advice and feedback on communication materials as necessary.
National Parks and Wildlife Service	<ul style="list-style-type: none"> • Provide technical information to the department’s project team as required. • Provide advice and feedback on communication materials as necessary.
State Emergency Service (SES)	<ul style="list-style-type: none"> • Provide technical information to the department’s project team as required. • Provide advice and feedback on communication materials as necessary. • Undertake on-ground assistance in public notification in the event of high-flow events posing any impact/danger down-stream.

Agency	Responsibility
NSW Police – Jindabyne and Cooma	<ul style="list-style-type: none"> • Provide technical information to the department’s project team as required. • Provide advice and feedback on communication materials as necessary. • Undertake on-ground assistance in public notification/management in the event of high-flow events posing any impact/danger downstream.
Victorian Police	<ul style="list-style-type: none"> • Provide technical information to the department’s project team as required. • Provide advice and feedback on communication materials as necessary. • Undertake on-ground assistance in public notification/management in the event of high-flow events posing any impact/danger downstream.
Local Land Services	<ul style="list-style-type: none"> • Provide technical information to the department’s project team as required. • Provide advice and feedback on communication materials as necessary.

Direct actions for high-flow events

Action item	Responsibility	Comment ⁴
Provide FAQ's factsheet	NSW Department of Planning and Environment	The factsheet will be made publicly available via the department's website, emailed directly to downstream landholders (those with listed contact details) and via the working group.
Provide updates on the down-stream landholder and key stakeholders contact list to DPE	NSW Department of Planning and Environment Individual Agencies	<p>Opt-in list data is collected by DPE-EHG, via website.</p> <p>This information is input directly into a contact list held by the Snowy Licence Team.</p> <p>SMS contacts added to Borealis by Snowy Licence Team and Email contacts forwarded to Comms Team for inclusion on their list.</p> <p>Media contacts maintained by Media Team, including interstate.</p> <p>Amendments made following requests from individuals, or following bump back on emails.</p> <p>Other agencies submit direct request to DPE-EHG or the departments, for removal or inclusion of representatives.</p>
Advise Local Police and SES of the planned high-flows and seek comment on any issues they perceive	NSW Department of Planning and Environment	Act on any issues identified.
Email landholders below Jindabyne Dam along the Snowy River (those with listed contact details) and key stakeholders advising of the timing and magnitude of the flows	NSW Department of Planning and Environment	The department to make direct contact with downstream landholders (those with listed contact details) and key stakeholders approximately 4 to 6 weeks prior to first high-flow event – then ongoing as required.
Distribute 2023 Snowy River high-flows FAQs to Jindabyne Visitors Information Centre and relevant SES offices for display	NSW Department of Planning and Environment	The department to prepare FAQs in PDF format and distribute to working group members and appropriate stakeholders – further copies will be emailed to external contacts as required.

⁴ Note that dates may change if planned SRIF release dates are modified.

Action item	Responsibility	Comment ⁴
<p>Issue a total of eight separate media releases/notices including seven rising river alerts approximately seven days prior to the respective flow release to inform the affected communities</p> <p>Media outlets to be targeted: Snowy Shire Council – e-news ShireWire Snowy Magazine Jindabyne Summit Sun Monaro Post XL FM Snow FM ABC Radio South East ABC Radio Gippsland R.E.G FM: Radio East Gippsland</p>	NSW Department of Planning and Environment	Media release providing ‘overview’ of the high-flow water releases issued late May 2023 - and then ‘Rising river alerts’ to be issued 7 days before the planned releases.
Advise Minister for Water of planned flows.	NSW Department of Planning and Environment	Minister’s Office to be advised of the timing of the flows prior to issuing of ‘overview’ media release – late May 2023 when BN is approved.
Advise Victorian and Commonwealth governments of the planned flows – timing and magnitude and seek interest regarding involvement.	NSW Department of Planning and Environment	<p>Victorian Government advised of the timing of the flows – April/May 2023.</p> <p>Commonwealth Government advised of the timing of the flows – May 2023.</p>
Provide Department of Industry ‘Customer Experience’ staff with all up-to-date information to answer any requests received.	NSW Department of Planning and Environment	‘Customer Experience’ staff to be provided with all relevant information – May 2023.
Release the ‘SRIF Safety Management Plan and the SRIF Operations Plan 2023-24’ – to be placed on the department’s website and sent to members of the inter-agency working group.	NSW Department of Planning and Environment	<p>Updated ‘SRIF Safety Management Plan and SRIF Operations Plan 2022-23’ provided to interagency working group members – May 2023.</p> <p>Updated documents uploaded to DPE website – May 2023.</p>
Update the department’s website to ensure it contains the latest information on the environmental releases – ‘Snowy River Increased Flows’ website page.	NSW Department of Planning and Environment	<p>‘Snowy River Increased Flows website page updated to coincide with the issuing of the ‘overview’ media release.</p> <p>Overview media release to be issued on late May 2023.</p>

Evaluation

The following qualitative data will be used to indicate if this plan has successfully achieved its objectives.

Objective	Key indicators of success
Identify and define the best approach to engage key target groups to better inform them of planned high-flow water releases.	<ul style="list-style-type: none">▪ media coverage resulting from the 'overview' media release issued announcing the planned high-flow water releases▪ the number of media requests for interviews received▪ the amount of positive/negative/incorrect media coverage (through media monitors)▪ stakeholder and landholder comments in both traditional and social media▪ direct feedback from down-stream landholders as a result of the outlined notification process for planned high-flow water releases visits to the department's website for information on the Snowy River environmental water releases▪ feedback from inter-agency members

Appendix C

Term of Reference – Snowy River and Tantangara Safety Technical Advisory Group

Endorsed May 2022 – Amended July 2022

The Snowy River and Tantangara Safety Technical Advisory Group (SSTAG) “Terms of Reference” are the guiding principles and functions for assisting the NSW Department of Planning and Environment (DPE) - Water in the implementation of the Snowy River and Upper Murrumbidgee Safety Management Plans.

Background

The Snowy and Tantangara Safety Technical Advisory Groups are an advisory committees established to assist DPE-Water to:

- Implement the safety management processes for the waterways below the Jindabyne and Tantangara Dam.
- Creates the opportunity for the views of key stakeholders to be identified and captured through the implementation of the safety management plan.
- Acts as a consultative forum for the development and implementation of the safety management plan.

Purpose

The SSTAG is established to review safety matters associated with high-flow releases. It provides advice as requested by DPE-Water to assist the safety management process. The SSTAG has an advisory role and will not have a formal role in decision making, policy direction or delegating additional work to be carried out by DPE-Water.

The purpose of the SSTAG is to provide specific advice in relation to how to:

- reduce the probable impact of flooding and flood liability on the community from high flow releases
- reduce and prevent private and public losses resulting from high flow releases

Establishment and membership

The Committee

The Committee comprises representatives from various Federal, State and Local Government departments / authorities / corporations and Snowy Hydro Ltd.

Membership of the advisory committee shall comprise of one representative from:

Departments / Authorities / Corporations	Jindabyne Release	Tantangara Release
Department of Planning and Environment (DPE-Water)	x	x
Department of Planning and Environment (DPE-EHG)	x	x
NSW National Parks and Wildlife	x	x
WaterNSW	x	x
East Gippsland Catchment Authority	x	
NSW State Emergency Service	x	x
Victoria State Emergency Service	x	
ACT State Emergency Service		x
Bureau of Meteorology (BoM) - Hazard Prediction and Response (HPR) South	x	
Bureau of Meteorology (BoM) - Hazard Prediction and Response (HPR) East		x
Snowy Hydro Limited (Snowy Hydro)	x	x
Snowy Monaro Regional Council	x	x
East Gippsland Shire Council	x	

From time to time, other people who have clearly defined interest in topics being pursued by the Committee, may be invited.

Chairperson

The committee shall be chaired by the DPE-Water, Director Asset Management and Performance. If the nominated staff is not available the replacement Chair shall be the alternate from DPE-Water, or if unavailable, a committee member agreed upon by the majority of members.

Acting members

Each of the Agencies can nominate an alternative person to act as their Committee member representative, including the Chair.

Secretariat support

To enable the committee to operate effectively DPE-Water shall provide:

- any relevant and available data, technical/management studies and mapping
- expert advice from DPE-Water staff as required
- as agenda items relevant draft documents, and the opportunity to discuss open and transparent communication

- secretariat services and venues for meetings

Tenure

This Terms of Reference is effective from the establishment of the SSTAG and will be ongoing as required.

Other meeting participants

- Relevant technical and policy staff may attend meetings and provide advice as appropriate. Committee members should notify the Chair of additional attendees in advance of the meeting.
- Committee members may invite representatives of Snowy Hydro Limited and other agencies to attend and participate in meetings as required.
- Invited staff and other representatives will not be authorised to vote on matters to be decided by the Committee.

Amendment modification or variation

This Term of Reference may be amended, modified, or varied in writing after consultation and agreement by the Committee.

Responsibilities and scope

The SSTAG shall provide:

- Technical support to DPE-Water in the decision-making concerning the safe planning and implementation of environmental releases (SRIF) from Jindabyne Dam and (SMRIF) from Tantangara Dam, particularly where it is possible that they could contribute to flooding impacts.
- The scope of the SSTAG covers planned and modified planned SRIF releases only, as described in the Safety Management Plan.
- Contribute to and provide expertise and guidance regarding risks due to river rises and methods for mitigation risks.
- Provide a forum for discussion of issues related to flood risks.
- To provide input into known flood behaviour.

Bureau of Meteorology (BoM)

The Bureau of Meteorology (BoM) provides input to the Snowy River and Tantangara Safety Technical Advisory Group, relating to weather conditions. The level of input is determined by the availability of information, for Tantangara Dam releases this is limited to rainfall forecasts only. However, for Jindabyne Dam releases, hydrological modelling and rainfall forecasts can be provided.

Note: The BoM are not involved in the making of recommendations regarding dam management or releases, they only provide information to allow informed decisions.

Operating protocols

Convening meetings

- The Committee will meet as required to satisfy its responsibilities and will have at least one meeting in each calendar year.
- Meetings may be called at short notice, due to deteriorating conditions.
- Meetings may be arranged at the request of one or more Committee members, through the Chairperson.
- Meeting locations will be agreed upon by Committee members and can be face-to-face or by video/teleconference.
- All attendees will meet the costs of their own travel and accommodation.
- The Chair is responsible for deciding to reschedule meetings should the need arise.

Table C-1: Process for the SSTAG input

Timing	Process
<p>When Snowy River Increased Flows (SRIF) flow plan for the coming year is released</p>	<p>Snowy River and Tantangara Safety Technical Advisory Group (SSTAG/Snowy River) may meet to:</p> <ol style="list-style-type: none"> 1. discuss the coming years planned releases 2. Review the Safety Management Plan, including any triggers that would cause SRIF to be ceased 3. Review the SSTAG ToR 4. Determine any safety issues with the planned timing, duration, and size of planned SRIF releases
<p>Approximately 5-7 days prior to commencement of SRIF release</p>	<ol style="list-style-type: none"> 1. DPE-Water notifies BoM flood desk of upcoming release. BoM and DPE-Water review any likely weather event or triggers during the planned release 2. BoM / DPE-Water undertake rainfall and flood forecasting¹ to determine impact 3. DPE-Water informs SSTAG of upcoming planned release and makes any required meeting arrangements 4. SSTAG reviews planned releases along with the BoM’s weather predictions, climatic risks and/or flood forecasting. SSTAG² reviews risks and mitigation measures and determines whether the release will be recommended to proceed. 5. Decision-making process in flow chart followed

Timing	Process
<p>Approximately 2-3 days prior to commencement of each SRIF release</p>	<ol style="list-style-type: none"> 1. BoM and DPE Water undertake final assessment of weather events 2. Decision made if SSTAG requires face to face meeting 3. SSTAG considers updated rainfall and flood forecasting¹ and any final safety issues/actions required 4. Review planned releases, risk and proposed mitigation / communication 5. SSTAG² members confirm that they are comfortable that the risks of the impending flow event are known and have been mitigated to an acceptable level 6. Where there is determined to be a high risk the SSTAG may reconvene 1 day prior to release and review
<p>During release</p>	<ol style="list-style-type: none"> 1. DPE-Water maintains contact with BoM. BoM monitors weather and advises DPE-Water of any likely event that coincides with the full duration of the current release (takes approx. 4 days for flows to move down the Snowy catchment) 2. If necessary, BoM / DPE-Water undertake flood forecasting to determine any potential impacts from any forecasted weather events 3. If a risk arises, DPE-Water advises the SSTAG, and may call a SSTAG meeting 4. Flow chart decision making process followed

Quorum

The quorum for a meeting of the Committee will be 50% of the current membership.

Delegation

- The Committee is advisory in nature providing recommendations to DPE-Water.
- The Committee has not been delegated authority by DPE-Water.
- Any recommendations of the Committee must be ratified by resolution of DPE-Water and implemented by department staff with an appropriate delegation.
- The Committee does not have any power to incur expenditure or to bind the DPE-Water to any decision upheld by the Committee.
- Delegation on decision making rests with Level 3 Manager from within DPE-Water.

Dissolution

The Committee may at any time be dissolved and disbanded by DPE-Water, after endorsement by the committee.

Changing of the Terms of Reference

The Terms of Reference may only be amended by DPE-Water.

Conflicts of Interest

Panel members must declare any conflicts of interest at the start of each meeting or before discussion of a relevant agenda item or topic. Details of any conflicts of interest should be appropriately minute.

Committee member conduct

To enable the Committee to perform effectively, members will:

- disclose interests on all matters brought before the Committee that could conflict with the proper performance of their functions
- respect the views and interests of other Committee members and their respective governments when considering matters brought before the Committee
- take all reasonable steps to gain a thorough understanding of the matters brought before the Committee
- participate to the full extent of their knowledge and expertise in deliberations of the Committee to ensure those deliberations are fully informed
- inform their respective Ministers of issues that may warrant ministerial level attention as these issues arise for discussion or decision by the Committee
- consult with other agencies and portfolios of their respective governments as required to ensure that the positions brought to the Committee have whole of government support

Contact officers

Each Agency shall appoint a contact officer to ensure a central point of contact for all Committee business and to coordinate responses from their respective governments on Committee matters. Contact officers should be copied into any correspondence sent directly to Committee members.

Committee Members – confidentiality

From time to time, members may be required to review and comment on draft documentation that has not been formally considered by the DPE-Water's decision-making body. In these circumstances, it is crucial members understand the status of any documentation and the importance of maintaining confidentiality if they wish to have input at such a preliminary time. Similarly, discussion may take place on matters subject to state government protocols that need to be adhered to. Each member is required to agree to the confidentiality requirements of membership.

Confidentiality of Snowy Hydro Limited related information and data

- All material dealt with by the Committee shall be treated as confidential unless otherwise identified by the Chair, after consulting with the NSW Department of Planning and Environment - Water member, or if tabled by a Committee member of the other Agencies.
- Where confidential information is provided to a Committee member or contact officer, care must be taken to ensure the information is kept secure, and that numbers of copies are kept to the minimum necessary. If such information is to be disposed of, it must be destroyed.

- The Department may, on behalf of and on terms acceptable to Snowy Hydro Limited, require Committee members or contact officers to sign a confidentiality agreement or deed in regard to the use of Snowy Hydro Limited data or information it deems to be commercially sensitive.

Table C-2: SSTAG Agency representatives and alternatives, roles and contacts

Agency	Jindabyne Release	Tantangara Release	Role on SSTAG
DPE-Water	x	x	<ul style="list-style-type: none"> Lead implementation of the Safety Management Plan Chair SSTAG
DPE-Water	x	x	<ul style="list-style-type: none"> All Public and Stakeholder communications prior to SRIF/SMRIF Contentious issues Enquires
DPE-Water	x	x	<ul style="list-style-type: none"> Provide Technical advice to team as required Provide secretariat support to SSTAG
DPE-EHG	x	x	<ul style="list-style-type: none"> Development of SRIF/SMRIF Provide Technical advice as required
NSW National Parks and Wildlife Service – Jindabyne Office	x		<ul style="list-style-type: none"> Provide technical information to the department's project team as required.
NSW National Parks and Wildlife Service – Tumut Office		x	<ul style="list-style-type: none"> Provide technical information to the department's project team as required.
East Gippsland Catchment Authority	x		<ul style="list-style-type: none"> Provide Technical advice as required
Water NSW	x	x	<ul style="list-style-type: none"> Provide support and technical advice
Snowy Hydro Limited	x	x	<ul style="list-style-type: none"> Provide technical information to the department's project team as required. Operate infrastructure to make releases to the Snowy River.
Bureau of Meteorology (BoM) - Hazard Prediction and Response (HPR) South	x		<ul style="list-style-type: none"> Provide weather forecasts Provide technical advice as required
Bureau of Meteorology (BoM) - Hazard Prediction and Response (HPR) East		x	<ul style="list-style-type: none"> Provide weather and rainfall forecasts
NSW SES	x	x	<ul style="list-style-type: none"> Provide technical advice as required Response agency in the event high-flow events pose any impact/ danger downstream
VIC SES	x		<ul style="list-style-type: none"> Provide technical advice as required Response agency in the event high-flow events pose any impact/ danger downstream
ACT SES		x	<ul style="list-style-type: none"> Provide technical advice as required Response agency in the event high-flow events pose any impact/ danger downstream

Appendix D

Enquiries and emergency contacts

Table D-1: Contacts (current as of March 2023)

Contact	Telephone Number
DPE-Water	1300 081 047
Police/Ambulance	000
State Emergency Service	132 500
RMS Transport Management Centre Incident Reporting Line	131 700
Snowy Monaro Regional Council	1300 345 345
Snowy Hydro Limited	www.snowyhydro.com.au/contact/

Appendix E

SRIF Operations Plan

The annual Snowy Rivers Increased Flows Operations Plan details the release strategy for each water year, and is published on the DPE-Water website: www.industry.nsw.gov.au/water/basins-catchments/snowy-river/initiative/increased-flows