

INTERGOVERNMENTAL AGREEMENT ON THE PROVISION OF BUREAU OF METEOROLOGY HAZARD SERVICES TO THE STATES AND TERRITORIES

Council of
Australian
Governments

An agreement between

- ◆ the Commonwealth of Australia and
- ◆ the States and Territories, being:
 - ◇ the State of New South Wales;
 - ◇ the State of Victoria;
 - ◇ the State of Queensland;
 - ◇ the State of Western Australia;
 - ◇ the State of South Australia;
 - ◇ the State of Tasmania;
 - ◇ the Australian Capital Territory; and
 - ◇ the Northern Territory of Australia.

This Agreement formalises and standardises services provided by the Bureau of Meteorology to state and territory emergency services agencies and allocates responsibilities of the Australian Government, states, territories and local governments for flood, fire weather, extreme weather and hazard impact event management.

Signed for and on behalf of each of the parties by

The Hon Michael Keenan MP
Minister for Justice of
the Commonwealth of Australia



The Hon Josh Frydenberg MP
Minister for the Environment and Energy of
the Commonwealth of Australia



The Hon David Elliott MP
Minister for Emergency
Services
of New South Wales



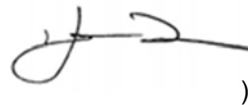
The Hon James Merlino MP
Minister for Emergency
Services
of Victoria



The Hon William Byrne MP
Minister for Police, Fire and Emergency Services
of Queensland



The Hon Joe M. Francis MLA
Minister for Emergency
Services
of Western Australia



The Hon Peter Malinauskas MLC
Minister for Emergency Services
of South Australia



The Hon Rene Hidding MP
Minister for Police and Emergency Management
of Tasmania



Mr Simon Corbell MLA
Attorney-General of the Australian Capital Territory
Minister for Police and Emergency Services



The Hon Adam Giles MLA
Chief Minister of the Northern Territory
Minister for Police, Fire and Emergency Services



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Background

- A** Economic activity and public safety are heavily impacted by severe weather. The forecasting and warning services of the Bureau of Meteorology (**Bureau**) are relied upon heavily whenever there are heatwaves, fires, cyclones, gales, floods, thunderstorms, fog, frost and other extreme weather events. The high impact of extreme weather events in Australia, combined with a growing population and infrastructure and assets, has seen increased demand on the services of the Bureau.
- B** The Bureau's mission is to provide Australians with the information they need to manage and live within their natural environment, encompassing the atmosphere, oceans, water, and land. In undertaking this mission, the Bureau has formed partnerships with State and Territory emergency services agencies (**Emergency Services Agencies**) to assist in the delivery of services that help to ensure the safety and resilience of Australians.
- C** For hazard warning systems to be fully effective, they must be multi-faceted and responsive in nature, and be developed and operated collaboratively through a number of agencies, and across different levels of government and jurisdictional boundaries. Emergency Services Agencies use the Bureau's information, warnings and advice to plan for, and manage, the impact of natural hazards on the Australian community.
- D** In July 2011, a review of the Bureau's capacity to respond to future extreme weather and natural disaster events and to provide seasonal forecasting services (**Review**) was undertaken. The Review identified 13 'Priority Actions' to mitigate risks requiring early attention and 16 'Options' that could provide savings, enhance efficiency or increase revenue for the Bureau.
- E** In response to the Review, the Australian Government, in partnership with the States and Territories, progressed the matters raised under Priority Action 3 ("formalise and standardise service levels provided to emergency services"), Priority Action 4 ("agree clear allocation of responsibilities to state and local government for flood management, with defined boundaries on the Bureau's role") and Option 21 ("apply a consistent cost-recovery model to all services delivered to state/territory fire agencies") through the establishment of the Standardisation of Bureau of Meteorology Services Taskforce (**Taskforce**) under the Australia-New Zealand Emergency Management Committee on 4 October 2013 and reporting to the Law, Crime and Community Safety Council of the Council of Australian Governments.

1 Purpose and objective

- 1.1 This Agreement is intended to formalise and standardise services provided to State and Territory Emergency Services Agencies, agree on clear allocation of responsibilities of the Australian Government, the States, Territories and local governments for Flood management, Fire Weather management and management of Extreme Weather and Hazard Impact Events.
- 1.2 This Agreement is entered into to implement the agreed approach for the delivery of the Bureau's Services to Emergency Services Agencies and includes the development of governance arrangements, Standard Services and Supplementary Services for Fire Weather, Flood, and Extreme Weather and Hazard Impact Events. The Agreement also outlines the agreed responsibilities for forecasting and warning services for Riverine Flooding and Flash Flood.
- 1.3 This Agreement, through clear articulation of roles and responsibilities, will further strengthen the existing collaborative relationship between the Bureau and Emergency Services Agencies, and help to plan for and manage the impact of Hazard Events for improved community safety outcomes.
- 1.4 This Agreement does not cover, and does not limit, the provision of services by the Bureau to organisations other than Emergency Services Agencies.

2 Roles and responsibilities

2.1 General

Each party, having regard to available resources and operational limitations, will;

- (1) continue to be accountable to the community for achieving outcomes in its area of responsibility;
- (2) use its best endeavours to strive for effective management of Hazard Events within their area of responsibility;
- (3) work towards consistent interpretation and public communication of threats; and
- (4) work together to raise the awareness of State and Territory Emergency Services Agencies in respect of the Services provided by the Bureau.

2.2 Responsible Ministers

- (1) The responsible Ministers for this Agreement are the Commonwealth Ministers responsible for Emergency Services and the Bureau of Meteorology and a Minister from each State and Territory, nominated by their respective Premier or Chief Minister.
- (2) The responsible Ministers will:
 - (a) oversee the coordination and implementation of this Agreement within their jurisdiction;
 - (b) endeavour to support a nationally consistent approach to the provision of Services to Emergency Services Agencies across the jurisdictions; and
 - (c) support the establishment of the Hazards Services Forum.

2.3 Commonwealth

The Commonwealth Government will:

- (1) establish and co-chair the Hazards Services Forum,
- (2) work with State and Territory governments and the Bureau to develop the Services to be provided by the Bureau to Emergency Services Agencies; and
- (3) consult with the Hazards Services Forum on proposed variation to the Services Schedules.

2.4 States and Territories

In accordance with clause 2.1, the State and Territory Governments will, having regard to available resources and operational limitations:

- (1) provide representatives to participate in meetings of the Hazards Services Forum as required;
- (2) work with the Commonwealth Government and the Bureau to develop the Services to be provided by the Bureau to Emergency Services Agencies; and
- (3) monitor the effectiveness of the Services within each of their jurisdictions and, where necessary, submit proposed variations to the Services Schedule to the Hazards Services Forum.

2.5 Bureau of Meteorology Hazards Services Forum

- (1) The parties will establish the Bureau of Meteorology Hazards Services Forum (Hazards Services Forum) to enable the States and Territories to request and prioritise changes to the Standard Services and to refer services that could possibly be categorised as Supplementary Services to the Bureau for its consideration.
- (2) The parties will ensure that the Hazards Services Forum operates in accordance with the Hazards Services Forum Terms of Reference.
- (3) The parties agree that while the Bureau will consult with the Hazards Services Forum, and the Hazards Services Forum will provide advice to the Bureau, the recommendations and decisions of the Hazards Services Forum will not be binding on the Bureau.
- (4) In addition to the responsibilities set out in the Hazards Services Forum Terms of Reference, the Hazards Services Forum will assist the Bureau with the process of consulting the States and Territories on modifications to Services Schedules.

2.6 The Bureau

- (1) The Bureau will aim to provide consistent Services across the nation. However, the parties acknowledge and accept that there may be circumstances based on hazard risk, population, climatological and other scientific factors that require the Bureau to vary the provision of Services for certain States or Territories, or to redirect its resources to address one or more particular Hazard Events.
- (2) The parties also acknowledge and agree that the ability of the Bureau to provide the Services is subject to:

- (a) the Bureau's available resources, operational limitations and any applicable policy considerations; and
- (b) the Emergency Services Agencies and relevant third parties discharging their responsibilities,

and that the Bureau may need to vary the scope of, suspend or withdraw a Service if there are excessive demands on the Bureau's services or resources, or if an Emergency Services Agency does not or cannot discharge its responsibilities. It is acknowledged that the Bureau will act reasonably in making such decisions, and will use reasonable endeavours to consult with any affected Emergency Services Agencies before varying the scope of, suspending or withdrawing a Service.

3 Services and Services Schedule

3.1 Standard Services and Supplementary Services

- (1) Services to be delivered by the Bureau to Emergency Services Agencies will be categorised as "Standard Services" and "Supplementary Services".
- (2) Standard Services are core Services that the Bureau will provide in the public interest in accordance with section 6(2) of the Meteorology Act 1955 (Cth). As at the date of this Agreement, it is intended that the Bureau will not charge any fees for the provision of Standard Services to Emergency Services Agencies.
- (3) Supplementary Services are Services that are additional to Standard Services, and may be requested by an Emergency Services Agency from time to time.
- (4) As at the date of this Agreement, the Bureau will continue to charge Emergency Services Agencies to recover the cost of providing Supplementary Services.
 - (a) The Bureau intends that the charges for Supplementary Services will continue to be set in accordance with the Commonwealth's Cost Recovery Guidelines if the relevant Supplementary Service is not subject to competition (potential or actual).
 - (b) The charges for other Supplementary Services will continue to be competitively neutral and recognise the users' public interest functions.
 - (c) The Bureau may require Emergency Services Agencies to enter into an agreement with the Bureau for the provision of Supplementary Services.

3.2 Service exclusions

The Services do not include:

- (1) services provided by other Commonwealth Government agencies;
- (2) services provided by the Bureau to other Commonwealth Government agencies;
- (3) other services provided by the Bureau which are not Services in respect of the relevant Hazard Events; or

- (4) any natural hazard initiatives owned or implemented by a State or Territory within their jurisdiction.

3.3 Services Schedule

- (1) The Services Schedules describes the set of Standard Services in respect of Fire Weather, Flood and Extreme Weather and Hazard Impact Events that the Bureau will provide. Where applicable, the Services Schedules also describe further details on the definition of the Services.
- (2) The Services Schedules may also set out one or more Supplementary Services which are not considered Standard Services.
- (3) The Services Schedules do not contain an exhaustive list of all Supplementary Services that the Bureau may offer.
- (4) The parties agree and accept that the Services Schedules (as varied from time to time) exhaustively describe the set of Standard Services that the Bureau will provide to Emergency Services Agencies.

3.4 Variation to Services Schedule

- (1) The parties acknowledge that the Services that the Bureau will provide to Emergency Services Agencies will evolve over time and that certain Services may be introduced and withdrawn by the Bureau from time to time. The Bureau does not warrant that any particular Service will always be available, or will be available at a particular time.
- (2) To further the objectives of this Agreement, the parties agree that the Bureau may vary the Services that it provides to Emergency Services Agencies by varying the Services Schedule in accordance with this clause 3.4, without the need for formal variation to this Agreement, or further agreement between the Bureau and the Emergency Services Agencies.
- (3) If the Bureau wishes to vary a Services Schedule, the Bureau will submit the proposed variation to the Hazards Services Forum, and will consult the Hazards Services Forum and the States and Territories, at all times acting reasonably and consistent with the purpose and objectives of this Agreement.
- (4) The Hazards Services Forum may also, from time to time, after consulting with the States and Territories and the Bureau, submit proposed variations to the Services Schedules to the Bureau.
- (5) The Bureau will have full regard to the recommendation and advice of the Hazards Services Forum and act reasonably in determining any proposed variation to the Services Schedules. The parties acknowledge that the Bureau may also have regard to other factors such as available resources, operational limitations and any applicable policy considerations.
- (6) If the Bureau varies a Services Schedule, the Bureau will notify the Hazards Services Forum of the variation, and the variation will take effect on the Hazards Services Forum's receipt of such notice.
- (7) The Hazards Services Forum will agree on and establish a formal process through which variations to the Services Schedules will be proposed, considered and implemented in that Forum.

4 Fire Weather Services

4.1. The parties acknowledge the following, which provides context to this clause 4:

- (1) The Bureau has historical and statutory responsibility for the issue of warnings of weather conditions likely to endanger life or property, including weather conditions likely to give rise to bush fires.
- (2) The responsibility for bush fire preparation, response and warnings of bush fires lies with State and Territory governments and local governments. This includes the determination of Fire Danger Ratings using a range of criteria incorporating forecast weather provided by the Bureau.

4.2. Having regard to the context set out in clause 4.1, the parties agree:

- (1) that the Bureau has the responsibility for provision of forecasting and warning services for weather conditions likely to give rise to bush fires in all jurisdictions in Australia;
- (2) that to support the Bureau, the States and Territories will provide the Bureau with relevant information that is in their possession or control and required by the Bureau in order to discharge the Bureau's responsibilities; and
- (3) to work together to mutually develop and maintain national standards for warnings of bush fires and Fire Danger Ratings subject to clause 4.1(2).

4.3. Specialised Services are provided by the Bureau to Emergency Service Agencies. These Services generally provide detailed technical information to assist these organisations in planning disaster mitigation strategies. The Standard Services and Supplementary Services relating to Fire Weather are delineated Schedule 2 of this Agreement.

5 Extreme Weather and Hazard Impact Events

5.1 The parties acknowledge the following, which provides context to this clause 5:

- (1) The Bureau has historical and statutory responsibility for the issue of warnings of gales, storms and other weather conditions likely to endanger life or property.
- (2) In practice, the Bureau of Meteorology issues these warnings whenever severe weather is occurring in an area or is expected to develop or move into an area.
- (3) Warnings services may be more limited in some areas, particularly remote and unpopulated areas, as data may not be available for effective monitoring and prediction.

5.2 Having regard to the context set out in clause 5.1, the parties agree:

- (1) that the Bureau has the responsibility for provision of forecasting and warning services for Extreme Weather and Hazard Impact Events in all jurisdictions in Australia;
- (2) that to support the Bureau, the States and Territories will provide the Bureau with relevant information that is in their possession or control and required by the Bureau in order to discharge the Bureau's responsibilities;

- (3) to work together to mutually develop and maintain national standards for warnings for Extreme Weather and Hazard Impact Events, subject to clauses 5.1(2) and 5.1(3).
- 5.3 Tailored Supplementary Services are provided by the Bureau to Emergency Services Agencies. These Services generally provide detailed technical information to assist these organisations in planning disaster mitigation strategies. The Standard Services and Supplementary Services relating to Extreme Weather and Hazard Impact Events are delineated in Schedule 4 of this Agreement.

6 Flood arrangements

- 6.1 The parties acknowledge the following, which provides context to this clause 6:
 - (1) The Bureau has historical and statutory responsibility for the issue of warnings of weather conditions likely to give rise to Floods.
 - (2) In practice, the responsibility for Flood preparation, Flood monitoring, developing forecasts and warnings and the dissemination of these warnings are shared between all levels of government.
 - (3) Priority Action 3 of the Review recommends formalising and standardising service levels provided to emergency services.
 - (4) Priority Action 4 of the Review recommends agreement on the clear allocation of responsibilities to State and local government for Flood management, with defined boundaries on the Bureau's role.
 - (5) In its response to the Review (available at <http://www.bom.gov.au/governmentresponse/doc/munro-review.pdf>), the Commonwealth Government:
 - (a) recognised that an important first step to improving flood preparation, monitoring and warning arrangements is establishing clear and consistent roles and responsibilities for agencies involved in flood management at all levels of government;
 - (b) noted that these issues cannot be resolved by the Bureau alone, and will require whole-of-government consultation and cooperation, with State and local governments;
 - (c) agreed that it will be important to develop national standards for investment in, and operation of, flood monitoring networks and infrastructure; and
 - (d) noted that prime responsibility for flash flood warnings lies with States and Territories through local councils, and that the Bureau does not have the capacity to directly communicate with all councils during a major wide- spread disaster event on every occasion.
- 6.2 In relation to Priority Action 3 of the Review, the parties acknowledge that the Bureau has partially addressed this through the development of service level specifications for Flood forecasting and warning services in respect of all jurisdictions, and through the entry into data sharing agreements with a number of water data providers.
- 6.3 Without limiting clause 3.4, in respect of Riverine Flood Services, the parties acknowledge that the Bureau, in consultation with all Flood Warning Consultative Committees, has developed service level specifications applicable in each jurisdiction

and those service level specifications have been accepted by (and in the case of Australian Capital Territory, on behalf of) the relevant States and Territories as at the date of this Agreement.

- 6.4 Having regard to the context set out in clause 6.1, the parties agree that:
- (1) the Bureau has the responsibility for provision of forecasting and warning services for Riverine Flooding in all States and Territories, except where otherwise outlined in Schedule 3 and
 - (2) to support the Bureau, the States and Territories will provide the Bureau with relevant flood information that is in their possession or control and required by the Bureau in order to discharge the Bureau's responsibilities.
- 6.5 In relation to Flash Floods, the parties agree that:
- (1) all levels of government will collaborate in preparing the community for the potential of Flash Flooding, which by its nature may not allow sufficient lead time for site specific warnings and forecasts;
 - (2) responsibility for Flash Flood warnings and systems lies with the States and Territories in partnership with local government (where appropriate) within their jurisdictions. States and Territories generally determine localities at risk of Flash Flooding from flood studies as part of a formal risk assessment process. The Bureau will support this role by:
 - (a) continuing to work actively with local governments to support the development of such systems and procedures;
 - (b) communicating supplementary information (to its standard warning products), such as radar and rainfall forecasts, directly through the emergency services mechanism established in each State and Territory; and
 - (c) republishing any State, Territory or local government generated flash flooding information on its website if a mechanism for doing so is agreed and arranged prior to the operational event; and
 - (3) the Commonwealth's responsibility in relation to Flash Floods is for the Bureau to provide forecasts and warnings for severe weather conditions and potential heavy rainfall conducive to Flash Flooding and to carry out applied research and development to improve the provision of severe weather information (e.g. areal, intensity and timing).

7 Financial arrangements

- 7.1 The parties agree that unless otherwise mutually agreed by the relevant parties (and having regard to available resources and operational limitations referred to in clause 2.1):
- (1) the Commonwealth will meet the cost of its activities associated with the implementation of the provisions of this Agreement; and
 - (2) each of the States and Territories will meet the cost of its activities associated with the implementation of the provisions of this Agreement.
- 7.2 This clause 7 does not limit the Bureau's ability to charge Emergency Services Agencies to recover the cost of providing Supplementary Services, as outlined in clause 3.1(3).

8 Commencement, review, variation and termination

- 8.1 This Agreement commences immediately upon its execution by all the parties.
- 8.2 This Agreement will be reviewed five years after its commencement. This review will be conducted by a body agreed by the parties. If agreement cannot be reached by all parties, Clause 9 regarding dispute resolution shall take effect.
- 8.3 This Agreement may be varied only by the unanimous agreement, in writing, of the parties.
- 8.4 Unless otherwise agreed by the parties, this Agreement will automatically expire on the 10th anniversary of its commencement date. However, if a Hazard Event exists as at the date of termination that requires the Services of the Bureau, the parties agree that this Agreement will survive during the period of the Hazard Event.
- 8.5 This Agreement may also be terminated by the unanimous agreement, in writing, of the parties.

9 Dispute Resolution

- 9.1 If a dispute about this Agreement arises between the parties, it must be resolved expeditiously:
 - (1) by the Hazards Services Forum if it remains in operation;
 - (2) if the Hazards Services Forum does not exist, or if the dispute remains unresolved, then the dispute may be referred to the Minister with responsibility for the Bureau of Meteorology to resolve with the relevant state and territory responsible minister/s; and
 - (3) if the dispute continues to remain unresolved, it may be referred to the LCCSC for resolution as soon as practicable.
- 9.2 In this clause 9, Responsible Minister means the Minister responsible for emergency services in their respective jurisdiction.

10 Interpretation

In this Agreement, unless expressed to the contrary words importing the singular include the plural and vice versa.

11 Definitions

- 11.1 In this Agreement, unless the contrary intention appears:
 - (1) **Bureau** means the Bureau of Meteorology of the Commonwealth of Australia.
 - (2) **Emergency Services Agency** means an emergency services agency or organisation in a State or Territory (including local government, where applicable) that is responsible for the management of or response to emergency events in its respective State or Territory.
 - (3) **Extreme Weather** and **Hazard Impact Event** has the meaning given in Schedule 4.
 - (4) **Fire Weather** has the meaning given in Schedule 2.
 - (5) **Flash Flood** or **Flash Flooding** has the meaning given in Schedule 3.

- (6) **Flood or Flooding** has the meaning given in Schedule 3.
- (7) **Flood Warning Consultative Committees** means the committees established in each State and the Northern Territory and chaired by the Bureau. Membership of the committees is drawn from key stakeholder agencies with an interest in flood forecasting and warning services. The New South Wales Flood Warning Consultative Committee acts on behalf of New South Wales and the Australian Capital Territory.
- (8) **Hazard Event** means an event giving rise to the need for emergency management by one or more Emergency Services Agencies, being:
- (a) Fire Weather;
 - (b) Flood; or
 - (c) Extreme Weather and Hazard Impact Event.
- (9) **Hazards Services Forum** means the Bureau of Meteorology Hazards Services Forum established pursuant to the Hazards Services Forum Terms of Reference, and referred to in clause 2.5.
- (10) **Hazards Services Forum Terms of Reference** means the terms of reference set out in Schedule 1.
- (11) **LCCSC** means the Law, Crime and Community Safety Council of the Council of Australian Governments, and its successor or replacement council.
- (12) **Review** means the “Review of the Bureau of Meteorology’s capacity to respond to future extreme weather and natural disaster events and to provide seasonal forecasting services” commissioned by the Department of Sustainability, Environment, Water, Population and Communities, dated December 2011, available at <http://www.environment.gov.au/system/files/resources/bc0cc118-a6f2-496c-82fd-0b092c4cc7a5/files/bom-review.pdf>.
- (13) **Riverine Flooding** means any Flooding where the rain-to-flood delay time is relatively high and typically more than six hours, but excludes Flooding caused by:
- (a) elevated sea levels;
 - (b) Storm Surge;
 - (c) Flash Floods;
 - (d) failure of any man-made infrastructure, for example failure of dams or levees; or
 - (e) urban overland flow.
- (14) **Services** means the services provided by the Bureau to Emergency Services Agencies in respect of one or more Hazard Events, as categorised further into Standard Services and Supplementary Services, but excludes those services referred to in clause 3.2.
- (15) **Services Schedule** means each of Schedule 2 Schedule 1 Schedule 4 (as amended from time to time by the Bureau pursuant to clause 3.4).
- (16) **Standard Service** has the meaning given in clause 3.1(2).

- (17) **Storm Surge** means the rise in water level due to a tropical storm or cyclone or a middle latitude storm. The storm surge height is the difference between the observed tide level and the level that would have occurred in the absence of the cyclone or storm (i.e. the astronomical tide).
- (18) **Supplementary Service** has the meaning given in clause 3.1(3).
- (19) **Taskforce** means the taskforce referred to in paragraph E of the Background.

Schedule 1 - Terms of Reference - Bureau of Meteorology Hazards Services Forum

Name: Bureau of Meteorology Hazards Services Forum (HSF)

Co-Chairs: Group Executive, Community Services - Bureau of Meteorology
Deputy Coordinator General - National Emergency Management Agency

Schedule: Meets bi-annually (March/April and September each year) or as required

Introduction

In 2015, the *Standardisation of Bureau of Meteorology (Hazards) Services Taskforce*, delivered detailed recommendations to standardise the Bureau's hazard services to emergency services organisations across Australia and to agree upon clear allocation of responsibilities to Commonwealth, State, Territory and Local Government for flood management. Two of the Taskforce's key outcomes were an intergovernmental agreement (IGA) on a set of nationally consistent standard and supplementary services covering the Bureau's hazard-related services, and the establishment of the Hazards Services Forum (HSF) to oversee the implementation and ongoing development of this approach.

A mid-term review of the IGA was conducted in 2022-2023 and highlighted the ongoing value of the HSF in the emergency services sector. The review identified the opportunity for the HSF to update its focus and strengthen governance practices to align to shifts in the EM sector since the most recent signing of the IGA in January 2018. These revised terms of reference support those reforms by clarifying roles, responsibilities and processes.

Purpose

The Hazards Services Forum facilitates consultation with state and territory operational emergency services agencies to guide current and future strategic development of the Bureau of Meteorology's hazard services. The Hazards Services Forum provides advice on the appropriateness and relative priority of requested changes to the Bureau's hazards services.

Scope

The Hazards Services Forum may consider all hazard related services provided to state and territory operational emergency services agencies by the Bureau.

Operational emergency service agencies are defined as agencies legislatively responsible for fire, flood, storm, heatwave, tropical cyclone, and tsunami preparedness and response activities and are direct users of the products and services listed in Service Schedules 2, 3, 4, 5, and 6 of the IGA. These services are provided by the Bureau under s.6.1(c) of the *Meteorology Act 1955*.

The following items are considered out-of-scope:

- Services provided by other Commonwealth Government agencies.
- Services provided by the Bureau to Commonwealth Government agencies.
- Other Bureau services not related to natural hazards.

- Natural hazard initiatives owned by and being implemented by the state and territory emergency services agencies within their own State/Territory responsibilities

The Hazards Services Forum will:

1. Oversee the implementation of the roles and responsibilities of the parties as outlined in the “Intergovernmental Agreement on the Provision of Bureau of Meteorology Hazard Services to the States and Territories” for the term of the Agreement.
2. Facilitate linkages and relationships between the Hazards Services Forum’s work and Commonwealth, State, Territory and Local Government activities to maximise future funding opportunities;
3. Inform emergency services agencies of current and future Bureau capabilities that could enhance strategic and tactical decision making;
4. Take technical advice on matters that impact upon the provision of existing or future Bureau hazard services, and provide advice to the Bureau on the appropriateness and relative priority of proposed changes to standard and supplementary services; and;
5. Provide advice on the alignment of the strategic directions of State, Territory and Local Government emergency services agencies and the Bureau's hazards services.

Operation

The authority for, membership and functioning of the Hazards Services Forum are set out below.

Authority

The Hazards Services Forum has been established under the IGA as a consultation mechanism to provide advice from operational emergency services agencies to the Bureau and ensure that the Bureau’s current and future hazard services meet the prioritised needs of the national emergency management sector.

Giving due consideration to the advice of the Hazards Services Forum, the Director of Meteorology remains responsible for any decisions that impact on the management of the Bureau under the relevant legislation.

Membership

The Group Executive Community Services, Bureau of Meteorology and the Deputy Coordinator General, National Emergency Management Agency, are the Co-Chairs of the Hazards Services Forum.

The members of the Hazards Services Forum are:

- In addition to the Co-Chairs, no more than one representative from each of the Bureau of Meteorology and the National Emergency Management Agency;
- Up to two senior strategic operational officers at the deputy commissioner/assistant commissioner level or other appropriate senior officials nominated by the operational emergency service agencies in each state and territory.
- Up to two representatives from the Australasian Fire and Emergency Services Authorities Council.
- Up to two representatives of the Australian Local Government Association.

Except for the Co-Chairs, members of the Hazards Services Forum are required to nominate an appropriate proxy who will take their place if they are unable to attend a meeting.

Requests for changes to the membership composition of the Hazards Services Forum may be made to the Co-chairs, who will consider requests and advise their views to the Forum for discussion and resolution. Agreed changes will be reflected in updated Terms of Reference and distributed to members. Advisers and observers may attend meetings with prior approval from the Co-Chairs.

Membership and Secretariat

The Bureau will provide and fund a Secretariat for the Hazards Services Forum. The Secretariat will review and confirm the member and nominated proxy(ies) with each member organisation on an annual basis. Alternate contacts for members (such as executive assistants) should also be provided to facilitate communication.

Functioning

The HSF will operate on consensus, save for matters considered out of session, where an online poll will be taken to ascertain member's views. (However, if consensus is not achieved on out of session matters, a meeting will be convened.) Members are asked to contribute views that are representative of their agency and jurisdiction, and to coordinate any consultation required within their agency on services and project proposals considered by the HSF.

The HSF may, at its discretion, seek and receive advice to assist it in the performance of its duties from:

- Members within emergency services agencies
- Other Government officers at a Commonwealth or State and Territory level;
- Technical and peak bodies; and
- Other external parties and/or private providers.

At its discretion, the Hazards Services Forum may establish time limited working groups to provide advice on specific matters. Alternatively, advice may be sought from standing hazards working groups and established groups with appropriate expertise.

Biennial review of service schedules

Schedules Two (Fire), Three (Flood), Four (Extreme Weather), Five (Climate) and Six (All Hazards) to the Agreement will be subject to biennial review, to be concluded no later than 30 August in the year of review, to ensure their currency and continued appropriateness.

The format and content of the schedules may be revised to reflect administrative or service changes, and to ensure alignment of jurisdictional service level schedules.

Annual updates will be provided to the Forum for endorsement prior to publication on the federation.gov.au website (where intergovernmental agreements are held), to occur no later than 31 October in the year of review.

Management of service change requests

The Hazards Services Forum will establish and maintain a process to propose and evaluate changes to the Bureau's hazard services against agreed criteria, including the level of national or state/territory priority, resource requirements (initial and ongoing), community

benefits and delivery timeframes. The process will be documented and provided to the Forum for review and endorsement.

Conflict of Interest

The Co-Chairs and Members of the Hazards Services Forum must declare any interests, whether personal, financial or commercial, which might conflict or restrict provision of fair and independent involvement in Hazards Services Forum matters. In these circumstances members are encouraged to recuse themselves from discussions where they have declared an interest.

The Co-Chairs must be advised of any such conflicts, whether established, potential or apparent, and take the necessary steps to resolve or otherwise deal with the conflict including the option of deciding that the member should leave the meeting while the matter of interest is under consideration.

Confidentiality

The discussions and papers of the Hazards Services Forum will normally remain confidential unless otherwise communicated through the decisions and minutes of the meetings.

The Secretariat for the Hazards Services Forum is responsible for providing advice on security and appropriate marking of papers in line with the Australian Government's standard protective security markings for official information.

The meeting minutes and papers are ordinarily classified 'Official'. They should not be distributed to any person outside the member organisations without prior written approval of the Co-Chairs.

The distribution of Hazards Services Forum materials classified as 'Official' within member organisations should be managed with discretion by Hazards Services Forum members, on a needs basis to facilitate consultation on matters under consideration and to inform others of advice provided on behalf of an organisation to the Bureau.

Timing and Structure of Meetings

The Hazards Services Forum may meet twice per year with members attending via video/teleconference or, where able, in person. Meeting dates will be set in December each year for the following year by the Secretariat in consultation with Co-Chairs and members as required. The meeting schedule should seek to facilitate the flow of information between standing hazards groups and the HSF.

Additional meetings may be called or out-of-session feedback and/or votes may be taken as required at the discretion of the Co-Chairs in consultation with members.

Where face to face meetings are held, the venue, catering and equipment will be arranged, and costs will be met by the Bureau. Travel expenses of members attending the meeting will be met by jurisdictions.

Quorum for meetings of the Forum requires a minimum of five jurisdictions to be represented and attendance to form a simple majority (50% plus one) of members (including proxies).

Meeting Papers

Completed papers prepared by members that are to be considered by the Hazards Services Forum at meetings must be provided to the Secretariat at least 4 working weeks prior to a set meeting date, unless otherwise agreed.

Papers received after this time will be subject to consideration by the Co-Chairs for late inclusion on a meeting agenda.

Following a call for agenda items from Members, the Secretariat will prepare an agenda in consultation with the Co-Chairs. Members will be invited to contribute items to the agenda. The Secretariat will ensure both the agenda and papers are forwarded to Hazards Services Forum members at least 2 working weeks prior to the set meeting date.

Ordinarily, meeting papers will be circulated to members and their nominated contacts (e.g. executive assistants).

Member agencies should make internal arrangements to ensure that papers are forwarded to their nominated proxy where members are not available to attend a meeting or participate in an out of session vote.

Recording of recommendations and actions

Recommendations should be proposed and resolved by the Forum to formalise advice to the Bureau. Recommendations should reflect the agreed position of the member agencies and record any members who were not in a position to support a recommendation.

Actions should be recorded and clearly stipulate the responsibility and timeframe for their implementation. A register of actions should be maintained and actions only removed from the register once they have been reported to the Forum and recorded in the minutes as complete.

Minutes of Meetings

The minutes should provide a sufficiently detailed record to ensure that persons not in attendance at the meeting are able to ascertain the diversity of views expressed and readily interpret the agreed advice recommended and intent of actions recorded.

If significant disagreements arise regarding the contents of the minutes, the Secretariat will consult with the Co-Chairs before amendments are made.

Minutes will be distributed to members once signed off by the Co-Chairs and may be ratified out of session or at the next scheduled meeting of the Forum.

Out of session protocol

Items may be considered out of session by the Forum. A briefing paper providing an outline of the item and the advice sought must be provided to members for consideration for a minimum of 7 working days, and 10 working days wherever possible. Where a recommendation is under consideration, advice should be provided to members at the time the briefing paper is circulated that an online poll will be open for a 48 hour period following the conclusion of the 7 (or 10) working days. Where feedback is sought on an item, a longer period of time may be allocated.

Where consensus is not reached, co-chairs may convene a meeting of the Forum to discuss the matter, or the matter should be held over for a scheduled meeting.

Following an out of session item being considered, a record of the outcome of the matter should be prepared and signed by at least one Co-Chair, and then circulated to members. This outcome record should also be included on the agenda of the next scheduled meeting for confirmation.

Review of Terms of Reference

These Terms of Reference may be reviewed at the discretion of the Hazards Services Forum. Changes to these Terms of Reference require the endorsement of the Co-Chairs and the members.

Schedule 2 – Fire

Schedule of Current Fire Weather Services

1. Definitions

1.1. **Fire Weather** means the threat of weather conditions conducive to supporting or accelerating the burning of areas of natural vegetation.

2. Nationally agreed services

2.1. Table 2 A below outlines current Fire Weather Services based on those nationally agreed by the ANZEMC Standardisation of Bureau of Meteorology Hazards Services taskforce. A short description of these services as well as whether it is a standard or supplementary service is also included.

Table 2 A: Fire Weather Service Schedule

Number	Title	Description	Standard/ Supplementary
2.1	Satellite Grass Curing	Provision of satellite-derived curing information by the Bureau to emergency services agencies. <i>Emergency Services Only</i>	Standard
2.2	Fuel State Grids	Fuel State Grids (grass curing, grass condition, grass fuel load and time since fire) are provided by emergency service agencies via Fuel State Editor (FSE) as inputs into the AFDRS module. These grids are republished and distributed as part of the AFDRS gridded product set. <i>Emergency Services Only</i>	Standard
2.3	Soil Dryness	Variations exist in the type of forest soil dryness indicator (known as KBDI or SDI index) used in the calculation of drought factor. Neither measure provides a satisfactory solution, especially in areas of increased rainfall variability. AFDRS also incorporates soil moisture data (SMI [upper layer 0-0.1m]) from the Australian Water Outlook (AWO) (into the spinifex model). <i>Emergency Services Only</i>	Standard
2.4	Fuel Type Information	Fuel Type Information is provided by emergency services agencies. This consists of a national grid of fuel type and a table of fuel type parameters. <i>Emergency Services Only</i>	Standard
2.5	Fire Season Dates	The season of peak fire danger varies across the country due to different climatic zones. Because of this, in some jurisdictions fire weather products are only issued during fire season. The commencement and cessation of the service will be agreed between the Bureau and local fire agencies on a season-by-season basis. For the Bureau, fire season dates define when fire weather products are provided. These are documented in the Fire Weather Service Level Specification. <i>Emergency Services Only</i>	Standard
2.6	Fire Weather Observations Bulletin	The Fire Weather Observations Bulletin displays real time weather observations and associated FDR/FBI calculations along with the details of the maximum FBI observed since local midnight. It is provided to Fire Agencies to assist with situational awareness and monitoring actual weather conditions. The bulletin is available through a Registered User Web Page with the option of selecting a state or territory. The bulletin is also available in JSON format (with additional fields). Detail of variables is captured in the Fire Weather Service Level Specification. <i>Emergency Services Only (supplementary for other subscribers)</i>	Standard
2.7	Fire Weather Warning	The Bureau issues fire weather warnings to alert the community that weather conditions are likely to make the suppression or control of fires difficult. Fire Weather Warnings for a Fire Weather District are issued when the Fire Danger Rating is Extreme or greater. It is provided to fire agencies and the public. Community Action Statements are included in the Fire Weather Warning. Wording of Community Action Statements is determined by jurisdictional fire agencies.	Standard

Number	Title	Description	Standard/ Supplementary
2.8	Wind Change Forecast Charts	A Wind Change Chart (WCC) is provided to fire agencies in New South Wales, South Australia, and Victoria to advise of the forecast time of a significant wind change to assist operations. The WCC also contains details of conditions ahead of and behind the change. A WCC service is issued on days when a significant, trackable synoptic wind change is expected to impact at least one district in the relevant state which has a forecast District Fire Behaviour Index (FBI) reaching the District FBI threshold of 24. The Bureau has standardised the production of wind change charts for greater consistency. Details of this service can be found in the Fire Weather Service Level Specification. <i>Emergency Services Only</i>	Standard (not national)
2.9	Fire Weather Forecast	The Fire Weather Forecast provides fire agencies information about forecast weather parameters that are of greatest consequence to fire ignition, suppression and behaviour at a fire weather district and sub-area level. This is used by jurisdictions for bushfire preparedness and planning. When more than 1% of the grid cells in a fire weather district exceed 50 Fire Behaviour Index (FBI), or at the request of the fire agency, a preliminary issue for the following day will be provided to agencies in the relevant state or territory. This product is intended to provide agencies with greater time to determine the final district rating that will be issued at the routine issue time, as well as giving greater time to prepare for potential elevated fire activity more generally. Details of elements included in the forecast are provided in the Fire Weather Service Level Specification. <i>Emergency Services Only</i>	Standard
2.10	Grid information – Australian Digital Forecast Database (ADFD)	The Australian Digital Forecast Database (ADFD) provides gridded weather information on a 3 km or 6 km grid for 7 days. These grids are provided all year, noting that the fire weather elements can be impacted if fuel information provided by jurisdictions are not up to date. <i>Emergency Services Only (Supplementary for other subscribers)</i>	Standard (bulk data requests requiring processing may be considered a Supplementary Service)
2.11	Grid Information - Australian Fire Danger Rating System (AFDRS)	Specific fire weather, fuel state and fire behaviour grids are available through daily FTP. These grids are provided all year, noting that the information can be impacted if fuel information provided by jurisdictions is not up to date. <i>Emergency Services Only (supplementary for other subscribers)</i>	Standard
2.12	Fire Danger Ratings (Display)	A 4-day summary of Fire Danger Ratings for each Fire Weather District is provided to the public to increase awareness of the extent to which weather conditions will enhance fire related risks for this period, to allow for forward planning of activities sensitive to fire risk and to assist with agency tactical planning. The Fire Danger Ratings are issued in consultation with the fire agency. A 7-day Detailed Fire Danger Ratings product is made available to Emergency Services Agencies. This contains ratings along with the Fire Behaviour Index on a sub-area level for the next seven days. Agency personnel use this product to assess the fire weather risk at a state, district and sub-area level which will assist them in making operational planning and preparedness decisions in relation to the fire risk. The Bureau calculates the Fire Danger Ratings and produces products for fire agency and public use. When required, those ratings can be changed by jurisdictions through agreed processes. Details, including local arrangements for review of ratings, are provided in the Fire Weather Service Level Specification.	Standard
2.13	Incident Weather Forecasts (up to 30 hours)	Incident Weather Forecasts (IWF) are issued upon request from a designated fire agency. Incident Weather Forecasts (IWF) are site-specific forecasts issued to assist with tactical decision making in operations. IWF are only provided to designated fire agencies and are only provided for fire (uncontrolled fires/bushfires or prescribed/hazard reduction burns), structural fires, HAZMAT operations or training purposes. <i>Emergency Services Only</i>	Standard
2.14	Incident Weather Forecasts (4-day outlook forecasts)	Incident Weather Forecasts (4-day outlook) are issued upon request from a designated fire agency. Incident Weather Forecasts (IWF) are site-specific forecasts issued to assist with tactical decision making in operations. IWFs are only provided to designated fire agencies and are only provided for fire (uncontrolled fires/bushfires or prescribed/hazard reduction burns), structural fires, HAZMAT operations or training purposes. <i>Emergency Services Only</i>	Supplementary

Number	Title	Description	Standard/ Supplementary
2.15	Australian Smoke Dispersion System (ASDS)	The Australian Smoke Dispersion System (ASDS) combines bushfire, fuel reduction burns and atmospheric data with weather, fire spread and chemical transport models to estimate the likely concentration and distribution of smoke at ground level from a range of sources. This service is provided through a registered user website for emergency services agencies and relies on data on planned and going fires from agencies to be provided. Note: As of September 2023, this is a national service. An upgraded service, with high resolution modelling across much of Australia and a new web user interface will be released in the 2025/26 financial year. <i>Emergency Services Only</i>	Supplementary
2.16	Prescribed Burning Support	The Bureau considers the provision of Incident Weather Forecasts (refer 2.14 and 2.15) and other support for prescribed burning programs a cost-recovery activity. After discussion of the role of the service in supporting natural hazard reduction, the Hazard Services Forum agreed in April 2017 that Prescribed Burning Support be listed as a supplementary service. These services are often provided by embedded meteorologists or other Decision Support meteorologists from Bureau state and territory offices to emergency services agencies. <i>Emergency Services Only</i>	Supplementary
2.17	National Fire Weather Page	A Fire Weather Knowledge Centre has been developed as a portal for fire weather information. In addition to this public domain page, agencies have access to an AFDRS registered user page which displays fire danger ratings, fire weather forecasts, fire weather observations, incident weather forecasts and fire danger outlooks.	Standard
2.18	Portable Automatic Weather Station Deployment	Emergency service agencies may deploy Portable Automatic Weather Stations (PAWS) to provide accurate observation data at incident locations to support forecasting. The Bureau will ensure that PAWS locations are linked to forecasting systems when they are deployed. <i>Emergency Services Only</i>	Standard

Table 2 B: Data/Information provided by emergency services agencies

Number	Title	Description	Standard/ Supplementary
2.19	Fire Danger Rating (Determination)	The Bureau calculates the Fire Danger Ratings and produces products for fire agency and public use. When required, those ratings can be changed by jurisdictions through agreed processes. Details, including local arrangements for review of ratings, are provided in the Fire Weather Service Level Specification. Fire Danger Ratings (FDRs) were standardised with the implementation of the Australian Fire Danger Rating System (AFDRS) project.	NA
2.20	Data/Information provided by emergency services agencies	- Satellite Grass Curing, Grass fuel load, grass condition, time since fire - Vegetation fuel types, fuel type parameters - Planned/prescribed burn, wildfire, hazmat weather observations - Incident Weather Forecast fuel state inputs	NA

Schedule 3 – Flood

Schedule of Current Flood Services

1. Definitions:

- 1.1. **Flash Flooding** means any Flooding of short duration with a relatively high peak discharge in which the time interval between the observable causative event and the Flood is less than six hours.
- 1.2. **Flood or Flooding** means the covering of normally dry land by water that has escaped or been released from the normal confines of:

- (1) any lake, or any river, creek or other natural watercourse, whether altered or modified; or
- (2) any reservoir, canal or dam,

The standard classifications used to describe three severity levels for Flooding, and which are set out in service level specifications applicable in each jurisdiction and accepted by all the Flood Warning Consultative Committees as at the date of this Agreement, are:

- i. **Minor Flooding** – Causes inconvenience. Low-lying areas next to watercourses 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.
- ii. **Moderate Flooding** – 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.
- iii. **Major Flooding** – 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. Riverine Flooding

The Bureau has the responsibility for provision of forecasting and warning services for Riverine Flooding in all jurisdictions in Australia, except that for:

- (1) the Port Phillip and Western Port catchments, Melbourne Water Corporation is currently responsible for flood forecasting and warning. The Bureau and Melbourne Water Corporation are currently transitioning the riverine flood warning service to the Bureau.

3. Nationally agreed services

Table 3 A below outlines those current Flood Services based on those nationally agreed by the ANZEMC Standardisation of Bureau of Meteorology (Hazards) Services Taskforce. A short description of these services, as well as whether it is a standard or supplementary service is also included.

Table 3 A: Flood Service Schedule

Number	Title	Description	Standard/ Supplementary
3.1.	Number and maintenance of flood warning network rainfall and river level gauges	The flood warning network rainfall and river level gauges are observation locations providing rainfall and river height data for the flood warning services, owned, and operated by various agencies including the Bureau as detailed in the Service Level Specification for each State and Territory. The Bureau will continue to own, operate, and maintain its existing river level gauges consistent with the Flood Warning Infrastructure Standard. The Flood Warning Infrastructure Network program is focused on the acquisition, upgrade, maintenance and operation of Commonwealth, Local and some State-owned flood warning assets in high priority catchments across Australia. Asset owners of medium and low priority catchments are required to own, operate and maintain these assets.	Standard
3.2.	Data re-publishing for flood warning purposes	Under the <i>Water Act 2007</i>, the Bureau has specific obligations in relation to compiling and disseminating water information. The Bureau ingests data from third parties required for flood forecasting and warning services. The Bureau re-publishes this data in near-real-time on the Bureau's website.	Standard
3.3.	Locations for which the Bureau provides flood warning services	The <i>Meteorology Act 1955</i>, Section 6, states that the functions of the Bureau are: • ...the forecasting of weather... • The issue of warnings of gales, storms and other weather conditions likely to endanger life or property, including weather conditions likely to give rise to flood... Standard:	Standard & Supplementary

Number	Title	Description	Standard/ Supplementary
		The Bureau provides flood forecasts and warnings for locations within riverine flood basins as outlined in the Service Level Specification for each State and Territory. Products include the Flood Watch and Flood Warning products to the Australian community, and the Flood Scenarios Product to Emergency Services Agencies. Melbourne Water currently provide riverine flood warnings for locations within the Port Phillip and Westernport catchments. As the Bureau is responsible for riverine flood warnings, this riverine forecast service is being transitioned from Melbourne Water to the Bureau as of 1 July 2026¹ as referenced in the IGA clause 6.4 and Schedule 3 clause 2.1. Service establishment: The establishment of new forecast locations and warning services is a supplementary service provided by the Bureau and funded through cost-recovery. Service provision: Funding for service provision and maintenance will be determined during the service request based on the Bureau's capacity to service the new request. This assessment will be done on a case by case basis and may therefore be either a standard or supplementary service.	
3.4.	Provision of flood-related information for reservoir operations	Standard: The Bureau provides flood-related information and support to state and territory emergency services as stipulated in Schedule 3 of this agreement. Where reservoir operations are impacted and could pose a risk to the public, the Bureau will provide information to support reservoir owners to satisfy emergency management obligations as defined by the state or territory. <i>Emergency services and reservoir operators only.</i> Supplementary: Tailored supplementary services are available to reservoir operators for routine, non-emergency related operations.	Standard & Supplementary
3.5.	Establishment of Flood Classifications	The Bureau uses a three-tiered classification scheme that defines flooding as minor, moderate or major according to an agreed definition in this schedule (Schedule 3, clause 1.2). The determination of flood classifications is the responsibility of the jurisdictions. The Bureau's role in determining, reviewing and adopting flood classifications is detailed in jurisdictional Service Level Specifications. Following endorsement by the relevant Flood Warning Consultative Committee, the Bureau includes flood classifications in its Service Level Specifications.	Standard
3.6.	Collection of Flood Intelligence to support interpretation	Flood Intelligence is developed by collecting, evaluating and analysing flood information relating to an event. Flood information may include identifying areas impacted, the depth of water in these areas, the impacts in these areas (such as infrastructure and utilises flooded or people isolated) and the extent of the impact. Flood Intelligence is typically captured by State, Territory and Local governments pre and post flood. The Bureau uses flood intelligence during flood events to validate forecast information. This may include comparing river level data to the documented flood extent and impact. Pre and post flood, flood intelligence is used to establish and review the flood warning service, informing the establishment of flood classifications.	Standard
3.7.	Bureau contribution to government led flood risk management	The Bureau contributes to government led flood risk management through the provision of: - Subject matter expertise, - catchment hydrology, - recorded historic flood data, - advice on the Total Flood Warning System. The Bureau provides self-serve design rainfall data which can be used to develop design floods for flood studies. Flood risk management projects may include the development and review of: - Flood studies - Mitigation measure (including flood warning systems).	Standard

¹ Transition timeline dependent on the successful completion of the Melbourne Water Riverine Transition project

Number	Title	Description	Standard/ Supplementary
3.8.	Flood Watch	A Flood Watch provides early advice of increased flood risk over an area up to four days before the onset of possible flooding. A Flood Watch is issued when hydrological and meteorological guidance indicates that at least minor flooding is possible at forecast locations and/or when guidance indicates an increased risk of flooding causing impacts, in consultation with emergency management agencies. The Flood Watch product is provided for all catchments in Australia as detailed in the Service Level Specification for each State and Territory.	Standard
3.9.	Flood Warnings	Flood Warnings are issued when flooding at a forecast location is expected to reach and/or exceed a flood classification (or has already done so). A Flood Warning may also be issued when a flood classification has been reached or exceeded, in one or more locations (including at multiple information locations), or as specified in the jurisdictions service level specification. Flood Warnings are updated at an appropriate frequency to the catchment, flood severity, and flood phase. A Flood Warning service is provided as per the Service Level Specification for each State and Territory.	Standard
3.10.	Flash flood forecasts and warnings support	The Bureau's flood forecasts and warning services are targeted at riverine flooding. While the responsibility for Flash Flood warnings rests with state, territory and local government, the Bureau provides a range of weather and technical guidance services as outlined in the IGA clause 6.5 (3). The potential for flash flooding within a Basin, for which riverine Flood Warnings are not provided, may be noted in a Flood Watch product. In addition, as per 4.12, 4.13 and 4.14, Severe Thunderstorm and Severe Weather Warnings state when there is the potential for heavy rainfall, which may lead to flash flooding. The Bureau supports the development and review of flash flood warning systems by State, Territory and Local Governments by providing subject matter expertise to support utilisation of existing Bureau products and services when requested (such as application of the Flood Warning Infrastructure Standard (2019) and utilisation of existing Bureau products and services.	Standard
3.11.	Locations Type	There are three 'location types' utilised within the Bureau's flood warning services. Location types provide river level data to the Bureau, to support the issue of flood forecasts and warnings. Locations are categorised into three types: - Forecast locations: a location for which the Bureau provides a forecast of future water level either as the classification of flood that is predicted (minor, moderate or major) or as a water level and classification). - Information locations: a non-forecast location at which flood classifications are defined, and observations of water level data are provided; and - Data locations: a location for which just the observed water level data is provided. Flood classifications are not available for these locations and forecasts of future water level are not produced. These are detailed in the relevant jurisdictions Service Level Specifications.	Standard
3.12.	The Bureau's National Flood Operations	The Bureau assesses the national flood risk every day, Monday to Friday during business hours and operates 24/7 on an as required basis.	Standard
3.13.	Flood Scenarios Outlook	The Flood Scenarios Outlook is provided to emergency services agencies. The product provides forecast information for the next seven days. It complements an issued Flood Watch by providing additional detail on the likely magnitude and timing of flooding based on two different rainfall scenarios. The Flood Scenarios Outlook is provided in consultation with Emergency Services Agencies for riverine flood events and only for a subset of riverine forecast locations where qualitative or quantitative forecasts are provided using hydrological modelling. A Flood Scenario Outlook is not provided for catchments and locations which receive generalised flood warnings, flash flood locations or any other form of non-riverine flooding. <i>Emergency Services Only</i>	Standard
3.14.	Flood awareness material	Standard service: The Bureau works with emergency services agencies to contribute to the development of flood awareness material. This may include contribution of pamphlets, web content, brochures or booklets.	Standard & Supplementary

Number	Title	Description	Standard/ Supplementary
		Supplementary service: If significant contribution from the Bureau is required (e.g. new content or rewrites of content are provided from the Bureau) the Bureau's contribution would be provided as a supplementary service and cost recovered.	
3.15.	Bureau contribution to post flood activities	At the request of emergency services agencies, the Bureau will participate in and contribute to post flood activities. Activities may include: - Agency debriefs/after action reviews, - Community debriefs, - Surveys, - Review of flood warning services.	Standard
3.16.	Hawkesbury Nepean Valley Probabilistic Flood Forecasting Service	The Probabilistic Flood Forecasting Service is an automated product that uses probabilistic ensemble forecasts to provide a greater range of possible outcomes including peak river level heights and timing of exceedance of thresholds. A visual PDF product and 3 data products (csv, xml, NetCDF formats) is issued automatically by HyFS (the Bureau's Hydrological Forecasting System) to Emergency Services agencies. <i>Emergency Services Only</i>	Supplementary

Table 3 B: Services provided to the Bureau to support Flood Warning Services

Number	Title	Description	Standard/ Supplementary
3.17.	Third party data provision for flood warning purposes	Under the <i>Water Act</i> (2007), third parties are required to provide the Bureau with a wide range of water information, including data for flood warning purposes. The data provided by third party providers play a critical role in the provision of Bureau flood forecasting and warning services.	NA
3.18.	Reservoir release strategy provision for riverine flood forecasting and warning.	Reservoir release strategies are provided by water operators to the Bureau to support riverine flood forecasts and warnings downstream of dams.	NA

Schedule 4 – Extreme Weather

Schedule of Current Extreme Weather and Hazard Impact Event Services

1. Definitions

1.1. Extreme Weather and Hazard Impact Event means any or all of the following:

- (1) tropical cyclone,
- (2) severe weather (including severe thunderstorms), being:
 - a. severe weather including damaging/destructive winds, heavy rainfall conducive to Flash Flooding, blizzards, damaging/dangerous surf and storm tides; or
 - b. severe thunderstorms including tornados, damaging/destructive winds, heavy rainfall conducive to Flash Flooding and large hail,
 - c. tsunami, being generated primarily by undersea earthquakes, which may cause dangerous currents, surges and waves in the marine environment, and potentially dangerous inundation of low-lying coastal areas for larger events,
 - d. an event giving rise to the need for an agricultural warning to support decision-making by the agricultural sector, such as livestock and crop warnings, and
 - e. other extreme weather and hazard impact events, including haze/air quality, extreme heat, road hazards, hazmat incidents, biosecurity incidents and pandemic.

The technical details of these events will be defined by the Bureau in consultation with the Hazards Services Forum and the States and Territories.

1.2. Marine Wind means wind hazardous to mariners in our coastal waters.

2. Nationally agreed services

Table 4 A below outlines those current Extreme Weather and Hazard Impact Event services that are based on those nationally agreed by the ANZEMC Standardisation of Bureau of Meteorology Hazards Services Taskforce. A short description of these services, as well as whether it is a standard or supplementary service is also included.

Table 4 A: Extreme Weather and Hazard Impact Event Service Schedule

Number	Title	Description	Standard/ Supplementary
4.1	Tropical Cyclone 7 - day Forecast	A 7-day graphical tropical cyclone forecast service. The service is provided through the Bureau's website and provides a graphical display of the likely location of any significant tropical low or tropical cyclones out to 7 days. It also includes the percentage likelihood of each significant tropical weather system being a tropical cyclone at each timestep.	Standard
4.2	Tropical Cyclone Information Bulletin	The Tropical Cyclone Information Bulletin provides information on cyclones that are within the Australian area of responsibility, but do not represent a threat to coast or island communities within the next 48 hours. These products may be issued up to 24 hours prior to a tropical cyclone forming.	Standard
4.3	Tropical Cyclone Advice	A Tropical Cyclone Advice is issued when a tropical cyclone is expected to cause gales in coastal or island communities within the next 48 hours. This product contains watch and warning areas. The watch message related to areas under threat within 24-48 hours. The warning message is related to threats within 24 hours. The wind threshold trigger is nationally uniform for gale force winds. Details of the issuing times are detailed in the Tropical Cyclone Service Level Specification.	Standard
4.4	Tropical Cyclone Forecast Track Map	The Tropical Cyclone Forecast Track Map is a graphical product that provides a track of the cyclone showing recent movement, forecast movement and the Forecast Confidence Cone. It also shows the current extent of damaging winds and a graphical representation of the areas under Cyclone Watch and Cyclone Warning.	Standard
4.5	Tropical Cyclone Technical Bulletin	These bulletins provide technical data relating to the tropical cyclone presented in a formatted text file for users wishing to automatically ingest information into their systems.	Standard
4.6	Tropical Cyclone Storm Tide Advice	Storm Tide Advice is issued to emergency management authorities for agreed locations. Storm Tide Advice provides quantitative estimates of storm tide (also known as Total Water Level; TWL) for the "credible worst-case" scenario and the "forecast track" scenario. In Queensland, this information is also provided in a graphical format.	Standard

Number	Title	Description	Standard/ Supplementary
		<i>Emergency Services only</i>	
4.7	Tropical Cyclone Real Time Event Data Product	The Tropical Cyclone Real-Time Event Data product (RED product) consolidates available data for a tropical low or tropical cyclone event into a single machine-readable file. The RED product provides customers with the ability to incorporate tropical cyclone hazard information into their own decision support systems (e.g. Geographical Information System (GIS) software), create bespoke products or conduct parametric modelling of the wind hazard. The RED product is produced when a tropical low is forecast to develop and impact the Australian region and communities in the next 7 days.	Standard
4.8	Tropical Cyclone Wind Hazard Forecast	The Tropical Cyclone Wind Hazard Forecast provides guidance on the risk of exceeding specified wind thresholds for up to the next 10 days. The Tropical Cyclone Wind Hazard Forecast is available to emergency managers, through the registered user web page, from 1 November to 7 May inclusive each year. <i>Emergency Services only</i>	Standard
4.9	Tropical Cyclone Ocean Wind Warning	Tropical Cyclone Ocean Wind Warnings are issued to warn mariners in the Australian area of responsibility when gale-force or stronger winds associated with a tropical cyclone or developing tropical low are expected. For Ocean Wind Warnings not associated with Tropical Cyclones refer to 4.24 Ocean Wind Warning.	Standard
4.10	Tropical cyclone event database	Tropical cyclone best track database presented in Comma Separated Values (CSV) file format. For tropical cyclones dating back to 1970.	Standard
4.11	Tropical cyclone standard format	To facilitate easy exchange of information, there is a standard format to represent analysed and forecast data for tropical and extra-tropical cyclones. This format, called Cyclone XML (CXML), is descriptive and human-legible, making it easy for all human users and most automated applications to read. CXML is defined so it can carry data from observations and analyses, manual and NWP forecasts, multiple cyclones and multiple forecasts (ensembles).	Standard
4.12	Detailed Severe Thunderstorm Warning	Detailed (cell-based) Severe Thunderstorm Warnings are issued for metropolitan areas for severe thunderstorms. Used in conjunction with the Regional Severe Thunderstorm Warnings, they provide more specific information on individual thunderstorm locations. Details of this service can be found in the Severe Thunderstorm and Severe Weather Service Level Specification.	Standard
4.13	Regional Severe Thunderstorm Warning	Regional severe thunderstorm warnings are issued for a state or territory for thunderstorms that are likely to be severe. Details of this service can be found in the Severe Thunderstorm and Severe Weather Service Level Specification.	Standard
4.14	Thunderstorm Forecast	This two-day forecast product provides an indication of the chance of thunderstorm activity for day+0 (today) and day+1 (tomorrow), with an indication of severity. Details of this service can be found in the Severe Thunderstorm and Severe Weather Service Level Specification. <i>Emergency Services only</i>	Standard
4.15	Severe Weather Warning	Severe Weather Warnings are issued for hazardous or dangerous weather that is not solely related to severe thunderstorms, tropical cyclones, or bushfires. Details of this service can be found in the Severe Thunderstorm and Severe Weather Service Level Specification.	Standard
4.16	Coastal Hazard Warning (damaging surf)	Coastal Hazard Warnings are issued for hazardous or dangerous weather events producing unusually large surf waves that may damage beaches and coastal infrastructure. Issued for all states and territories except the Australian Capital Territory and South Australia.	Standard
4.17	Coastal Hazard Warning (abnormally high tides)	Coastal Hazard Warnings are issued for hazardous or dangerous weather events producing abnormally high tides.	Standard
4.18	Tsunami Warning Service	The Bureau issues tsunami warnings on behalf of the Joint Australian Tsunami Warning Centre (JATWC). The JATWC is a partnership between Geoscience Australia and the Bureau of Meteorology. Geoscience Australia detects earthquakes and passes earthquake solutions to the Bureau. The Bureau monitors tsunami, assesses tsunami threat to Australia and issues appropriate watch or warning products to emergency services and the Australian public.	Standard

Number	Title	Description	Standard/ Supplementary
		Tsunami Advice is issued for three threat categories in the event of a significant earthquake or disturbance under the ocean such as volcanic eruptions or undersea landslides: - No Threat - Marine Threat - Land Threat The Bureau's tsunami warning service is delivered through the 24/7 monitoring and response capabilities of the National Production, surge capabilities by tsunami specialists from Environmental Prediction, and heads-up and continuous decision support to affected emergency services by the Decision Support.	
4.19	National No Threat Bulletin	A No Threat Bulletin is provided for significant undersea earthquakes of at least Magnitude 6.5 and the JATWC have assessed no tsunami threat to Australia, or for lower undersea earthquakes of less than magnitude 6.5 but the tremor was widely felt by Australian coastal community.	Standard
4.20	National Watch Bulletin/Cancellation	A National Watch Bulletin is provided for significant undersea earthquake of at least Magnitude 6.5 and the JATWC has assessed it posing potential tsunami threat, of at least Marine Threat level to Australia, but tsunami genesis is yet to be confirmed, or the expected impact is at least 90 minutes away. A Cancellation is issued if tsunami did not eventuate, or a tsunami was generated but observations and further assessment suggest it to be below Marine Threat level when reaching Australia.	Standard
4.21	State/Territory Tsunami Warning/Cancellation	A Tsunami Warning is provided to an affected State or Territory following a National Watch Bulletin being issued, or if there is potential for at least Marine Threat and tsunami genesis has been confirmed, or if the genesis is not confirmed but the expected impact to the State/Territory is less than 90 minutes away. Cancellation of a Tsunami Warning is issued to a State or Territory when the threat has passed and is now below Marine Threat level.	Standard
4.22	National Tsunami Warning Summary	National summary of tsunami warnings current for Emergency Services Agencies and the media.	Standard
4.23	National Tsunami Event Summary	To provide the public, media, emergency authorities and government with summary information that can be used in post-event analysis.	Standard
4.24	Ocean Wind Warning	Ocean Wind Warnings are issued to warn mariners on the high seas in the Australian area of responsibility when gale-force or stronger winds are expected in the next 24 hours. F or Ocean Wind Warnings associated with Tropical Cyclones and developing tropical lows refer to 4.9.	Standard
4.25	Marine and Local Waters Wind Warning Summary	Summary of Marine Wind Warnings issued for dangerous wind conditions over marine areas, with four categories based on average wind strength. They are issued for marine areas within 60 nautical miles from the coast and capital city local waters.	Standard
4.26	Squall warning for marine areas	A squall warning is issued for Port Phillip and Western Port. This is a product only provided in Victoria and covers localised squalls that may affect small boat users in the bays.	Standard
4.27	Hazardous Surf Warning	Hazardous Surf Warning are issued when large and powerful surf conditions are expected to be hazardous for coastal activities such as rock fishing, swimming and surfing. The Hazardous Surf Warning is only issued in Qld and NSW, south of the town of 1770 in Qld to the NSW/Vic border.	Standard
4.28	Road Weather Alert	Road Weather Alerts are issued for weather expected to contribute to hazardous driving conditions (with conditions likely to be worse than normal for the season and location) such as reduced visibility, significant snowfall, flash flooding, or ice. These are only issued for metropolitan areas in NSW, Vic, WA, SA, and ACT, and state-wide in Tasmania.	Standard
4.29	Bushwalkers Weather Alert	Bushwalkers Weather Alerts are issued for hazardous weather for bushwalking such as snow down to low levels, cold and very windy conditions, and heavy rain. Issued for Western and Central Plateau forecast districts (Tasmania) only.	Standard
4.30	Storm Tide Advice (non-Tropical Cyclone)	The Storm Tide Advice is a text product containing quantitative forecast water levels when there is a storm tide expected but not expected to reach warning threshold. The product is issued to emergency services agencies and water management agencies only, for the South Australian Port Adelaide area. The expected water levels at a specific location (Outer Harbor) are provided as a range.	Supplementary

Number	Title	Description	Standard/ Supplementary
		<i>Emergency Services Only</i>	
4.31	Grid information – Australian Digital Forecast Database	The Australian Digital Forecast Database (ADFD) is a database of weather forecast elements produced by the Bureau of Meteorology, such as temperature, rainfall, and weather types, presented on a 3 or 6 km grid. A range of ADFD products are available via the Bureau's registered user service and in MetEye. Most forecast are for 7 days with hourly, 3-hourly, or daily time increments.	Standard
4.32	Health Threats and High-Impact events affecting Agriculture (including Haze/Air Quality)	There are a number of rare, high impact threats for which protocols may exist or ad-hoc arrangements are implemented in the event of occurrence. These relate to incidents that may result in the spread of pathogens, noxious gases, or other such threats. These are managed outside the scope of the general Bureau services with other agencies managing action plans. Such events would include: - Foot & Mouth Disease outbreak or similar - Radioactive threat due to accident or terrorist threat - Biological threat due to accident or terrorist threat - Locust Plague - Bird Flu outbreak or similar - Major atmospheric contamination from bushfire, chemical fire, spills or similar - Major environmental contamination (water or land) from chemical spill - Animal health directives do exist for some regions.	Standard Service for current support level or supplementary partnerships for expanded services
4.33	Heatwave Warning	The Heatwave Warning is issued when Severe or Extreme heatwaves are expected. A warning can be issued up to one day in advance of the heatwave starting, to allow time for agencies and the public to take protective actions. Agreed action statements will appear in the warning, depending on warning severity and timing. For further details see the Heatwave Service Level Specification.	Standard
4.34	Web-based Heatwave Map Product	National Heatwave Assessment and Forecast maps show a broadscale picture of where the significant heatwaves are expected to occur across Australia over the coming seven days. The national maps of heatwave areas are accompanied by a text description of the heatwave areas shown on the map. The maps are publicly available through the Bureau's website. For further details see the Heatwave Service Level Specification.	Standard
4.35	Heatwave Decision Support Product	The Heatwave Decision Support Product (HDSP) is provided to emergency services in each jurisdiction. It provides aggregated information to the weather district and town level based on the gridded heatwave data. It covers 7 three-day periods and is provided through registered user data services. For further details see the Heatwave Service Level Specification. <i>Emergency Services only</i>	Standard

Schedule 5 – Climate

Schedule of Current Climate Services

1. Definitions

1.1. Climate is the average weather pattern over periods generally longer than a week, providing information on the typical weather for a time of year, comparisons with history, identification of long-term trends, or forecasts beyond the 7-day weather forecast.

2. Nationally agreed services

2.1. Climate Services were added as a schedule in the 2023 Intergovernmental Agreement mid-term review. The Hazards Services Forum identified the need to capture current Bureau Climate products and services as they play a foundational role in Emergency Services Agencies' planning and preparedness.

2.2. Table 5 A below outlines current Climate services based on those nationally agreed by the ANZEMC Standardisation of Bureau of Meteorology Hazards Services Taskforce. A short description of these services, as well as whether it is a standard or supplementary service is also included.

Table 5 A: Climate Service Schedule

Number	Title	Description	Standard/ Supplementary
5.1	Long Range Forecasts	Rainfall, maximum, minimum and mean temperature, and sea surface temperature outlooks (including automated maps) for weeks to seasons ahead. These are produced twice weekly for multi-week outlooks and weekly for monthly and seasonal outlooks.	Standard
5.2	Northern Rainfall Onset Outlook	The Northern rainfall onset outlook is used to indicate the onset of the Northern wet season. It is produced in June, July, and August, leading into the Northern wet season.	Standard
5.3	Fire Season Outlooks	Quarterly climate outlooks are provided to AFAC to inform decision making for the southern and northern fire seasons and for year-round fire management. This is released publicly through AFAC. <i>Emergency Services Only</i>	Standard
5.4	Australian Water Outlook	Australia-wide information on key landscape water balance components including soil moisture, runoff, evapotranspiration and precipitation. Provides access to information over different timescales – Historical (daily grids), Seasonal forecasts (1-3 months, updated monthly), and projections out to end of century.	Standard
5.5	Seasonal Streamflow Forecast	Monthly forecast of streamflow at point locations and catchments for 1-3 months and influenced by the Climate Outlook.	Standard
5.6	Weekly Hazards Outlooks	Ongoing briefing to Emergency Services Agencies which provides analysis of selected antecedent conditions along with a range of outlook products. The information is seasonally relevant and focuses on environmental intelligence related to hazards including bushfires, severe storms, heatwave, flooding, coral bleaching, and tropical cyclones during the warm season, while adding content related to frost and coastal erosion during the cool season.	Standard
5.7	Drought Statement	Drought Statement and related drought information products, including rainfall deficiencies.	Standard
5.8	Southern Hemisphere Monitoring	Provision of Southern Hemisphere monitoring (current sea surface temperatures, and ocean and atmospheric indices for Nino3.4, Southern Oscillation Index (SOI), Indian Ocean Dipole (IOD) and Southern Annular Mode (SAM) and information on the Madden–Julian Oscillation (MJO). This information is updated fortnightly on the Bureau's website.	Standard
5.9	Climate Extreme Products	Automated analyses products on climate extremes including return periods, anomalies, and records. Daily climate extremes predictions out to seven days.	Standard
5.10	Climate Summaries	Routine reports on climate and water conditions and their context at the National, State/Territory and Capital City level. Includes climate event reporting on a limited scale. Reports include: - Monthly, Seasonal and Annual Climate Summaries - Annual Climate Statement - Financial Year Climate Update.	Standard

Number	Title	Description	Standard/ Supplementary
5.11	Weekly Rainfall Update	Reports on recent rainfall and any impact on drought conditions.	Standard
5.12	Northern Rainfall Onset	Supporting the Outlook, rain observations for start of wet season across northern Australia.	Standard
5.13	Tropical Climate Note	Potential for tropical convection is discussed. This is updated weekly in the wet season and fortnightly in the dry season. Also includes a discussion on tropical cyclone activity, the MJO, ENSO and may note tropical regions around the globe more broadly.	Standard
5.14	Gridded Reanalysis (BARRA2)	Gridded Reanalysis (Bureau of Meteorology Atmospheric high-resolution Regional Reanalysis for Australia – BARRA2) products for the atmosphere/ocean/land surface. BARRA2 (version 2 of BARRA) has been operational since 2022.	Standard (bulk data requests requiring processing may be considered a Supplementary Service)
5.15	Southern Hemisphere Outlooks	Provision of Southern Hemisphere outlooks (predictions for sea surface temperatures, and the Bureau's ocean and atmospheric indices for Nino3, Nino3.4, Nino4, IOD and SAM), and information on the Madden–Julian Oscillation (MJO).	Standard
5.16	Climate Communications	Specific and general communications on climate outlooks and context, including: - Briefings and standard presentation decks (updated weekly) for Government and Emergency Services Agencies - Current and antecedent situational awareness - Long range forecast commentary weekly (covering weather, climate and hydrology) - State of the Climate/Climate Risk reporting.	Standard
5.17	Climate Event Reports	Post event reporting providing climate context to extreme weather and climate events with significant community impacts. Includes support for post event reviews and inquiries.	Standard
5.18	Gridded Data Services	Maps and gridded data are available for: - Rainfall - Temperature - Vapour pressure (humidity) - Solar exposure	Standard (bulk data requests requiring processing may be considered a Supplementary Service)
5.19	Tropical Cyclone Outlooks	A seasonal outlook giving the likelihood of above average, average or below average tropical cyclones for the coming cyclone season based on El Niño/Southern Oscillation conditions.	Standard
5.20	Historical Data Products	Historical data products including: - TC track maps: - o Tropical Cyclone Data Portal - http://www.bom.gov.au/cyclone/tropical-cyclone-knowledge-centre/history/tracks/ - o Tropical cyclone climatology maps - http://www.bom.gov.au/climate/maps/averages/tropical-cyclones/ - o track maps for all significant TCs that have occurred in the Australian region since 1970 in the reports listed at: http://www.bom.gov.au/cyclone/tropical-cyclone-knowledge-centre/history/past-tropical-cyclones/ - High resolution (0.05°) AWAP daily (9am to 9am LT) maximum temperature grids (data since 1910) - High resolution (0.05°) AWAP daily 3pm (1500 LT) vapour pressure grids	Standard (bulk data requests requiring processing may be considered a Supplementary Service)

Number	Title	Description	Standard/ Supplementary
		- Daily surface wind speed (bias-corrected NCEP-NCAR reanalysis) - High resolution (0.05°) AWAP daily (9am to 9am LT) rainfall grids (data since 1900) - FFDI can be calculated from max temp and rainfall grids above - Historical AFDRS 8 fuel (type) indices from 2001	

Schedule 6 – All Hazards

Schedule of All Hazards Services

1. Definitions

1.1. All Hazards includes Fire, Flood, Extreme Weather and Hazard Impact Event, and Climate, as detailed in Schedules 2, 3, 4 and 5.

2. Nationally agreed services

2.1. All Hazards services were added as a schedule in the 2023 Intergovernmental Agreement mid-term review. This allowed common Bureau services provided across All Hazards to be captured in one Schedule. The majority of the services listed in the All Hazards Schedule have been moved from Schedule 4 – Extreme Weather.

2.2. Table 5A below outlines current All Hazards services based on those nationally agreed by the ANZEMC Standardisation of Bureau of Meteorology Hazards Services Taskforce. A short description of these services, as well as whether it is a standard or supplementary service is also included.

Table 6 A: All Hazards Service Schedule

Number	Title	Description	Standard/ Supplementary
6.1	Season and Event Review and Preparedness meeting attendance	The Bureau supports emergency service preparedness and service provision by participating in scheduled review and preparedness meetings. These meetings support ongoing preparedness by discussing past event/season observations, insights and lessons, and requests for Bureau product and service changes. <i>Emergency Services only</i>	Standard
6.2	Situational awareness briefings - event based	Event ² based, situational awareness briefings may be provided by the Bureau, ahead of and during hazard events. Briefings will provide information on the potential for weather and hazards, and associated forecasts. The Bureau will make best efforts to fill requests for event-based, situational awareness briefings, provided at minimum of once per day, Monday to Friday during business hours. The request to provide event-based briefings on-site will trigger the service being provided as a supplementary service. Embedded services are described in 6.11. <i>Emergency Services only</i>	Standard
6.3	Situational awareness briefings - recurring	Briefings typically include forecast weather, hazards, and climate outlooks. Standard Recurring and planned/scheduled, situational awareness briefings can be provided by Bureau operational meteorologists and/or hydrologists if this can be done within their standard duties (e.g. no additional resourcing is required). This will only be provided Monday to Friday during business hours. Supplementary If briefings are requested out of hours or in-person, this will be provided as a supplementary service, when resources are available. See also 6.11. <i>Emergency Services only</i>	Standard & Supplementary
6.4	Briefings to committees	The Bureau supports State and Territory level Emergency Services Agency committees through participation and the provision of briefings. Briefings may include: - Seasonal outlook - Information on Bureau products and services - Information to support community preparedness - Information on hazard specific weather and climate, as well as products and services.	Standard

² Australian Institute of Disaster Resilience (AIDR) 'event' definition: "An incident or situation, which occurs in a particular place during a particular interval of time".

Number	Title	Description	Standard/ Supplementary
		The Bureau will make best efforts to provide briefings at identified committees. <i>Emergency Services only</i>	
6.5	Preparedness briefings - season launch and season preparedness	The Bureau supports Emergency Services Agencies' preparedness by providing seasonal outlook briefings. This includes supporting "season launch" activities, which are targeted at the Australian Community. These may be presented at a recorded or live media conference. Examples of these activities include the launch of the fire and storm seasons, and 'Get Ready' campaigns, or an agency specific quarterly seasonal briefing. Additional requests for briefings, which may include extended campaigns, would be provided when resources are available, and as a supplementary service including travel costs. <i>Emergency Services only</i>	Standard
6.6	Exercise support – Bureau Participation	The Bureau supports Emergency Services Agency exercises through participating in desktop and functional exercises. The provision of content for exercises is a supplementary service detailed in 6.7. The Bureau will make best efforts to support functional exercises as they would during a real event. <i>Emergency Services only</i>	Standard
6.7	Exercise support – development of exercise material	Emergency Services Agencies may request the Bureau develop exercise material. Content for exercises is provided as a supplementary service, when resourcing is available. Material may be based on past events or hypothetical scenarios. Content may include: - Hazard specific scenarios - Forecasts - Warnings If existing exercise material is available, this can be provided as a standard service. <i>Emergency Services only</i>	Supplementary
6.8	Media briefings & conferences	The Bureau supports messaging from Emergency Services Agencies to the Australian Community during hazard events, by providing a spokesperson to communicate technical information on the weather and hazard (current and forecast) at media briefing and conferences.	Standard
6.9	Field Deployment	Emergency Services Agencies can request Bureau decision support services be provided for field deployment. Deployed Bureau Officers would support Incident Management Teams by providing decision support services for the specific location. Requests would be supported as a supplementary service and if capacity allows. <i>Emergency Services only</i>	Supplementary
6.10	Bureau Liaison Officer	The Bureau makes every effort to provide a Liaison Officer as a separate role from an embedded meteorologist/hydrologist at State Control Centres during significant events. This will be supported when resourcing allows, and when requested by emergency services. NOTE: "Liaison Officer ³ " refers to the role as defined within the Australasian Inter-service Incident Management System (AIIMS) and won't necessarily be a meteorologist or hydrologist. <i>Emergency Services only</i>	Standard
6.11	Embedded services for Emergency Services Agencies	Existing service agreements/contract Reference should be made to jurisdictional service agreements for embedded services.	Supplementary

³ Under AIIMS: "The Liaison Officer role includes: Provision of advice to the Incident Controller on issues related to the supporting organisation; Identification of issues, or potential problems affecting the incident identified by the supporting organisation; Preparation of information for consideration by the Incident Management Team in the development of the Incident Action plan; Provision of advice in relation to resources and support available from the supporting organisation".

Number	Title	Description	Standard/ Supplementary
		In general terms, Emergency Services Agencies can request the provision of an embedded meteorologist or hydrologist ('ologist) to work within the agency. This service is provided once a contract/service agreement is established. The service is typically provided Monday to Friday during business hours. Agencies can request additional resourcing beyond the contracted service agreement (e.g. extended hours or additional forecasters), during significant events. This is provided as a supplementary service and when resourcing allows. No existing service agreement/contract Where an embedded service does not exist, emergency services agencies can request the provision of this service, during significant events. This is provided as a supplementary service and when resourcing allows. <i>Emergency Services only</i>	
6.12	Community Action Statements in Bureau products.	The Bureau includes pre-approved community action statements in warning products. Community action statements are developed with and agreed to by emergency services agencies. Action statements are high level, hazard specific statements. Emergency services issue warnings in line with the Australian Warning System. These warning include locally specific community action statements.	Standard
6.13	Training – products and services	The Bureau provides training or information to Emergency Services Agencies on existing products and services as a standard service. <i>Emergency Services only</i>	Standard
6.14	Training – all hazards	The Bureau provides training to Emergency Services Agencies on severe weather, including Fire Weather 1 and Fire Weather 2, as a supplementary service. <i>Emergency Services only</i>	Supplementary
6.15	All Hazard Services - Data Services	The Bureau provides a range of data services, through both standard and supplementary arrangements to Emergency Services Agencies. The Bureau's data services are currently under review to address technological changes and Australian Government regulatory requirements.	Standard and Supplementary