

## Terms of Reference

### Review of the Flood Warning Gauge Network within the North West Queensland Regional Organisation of Councils area

#### Purpose

Section 16C of the *Disaster Management Act* outlines the functions of the Office of the Inspector-General of Emergency Management (the Office), including:

- To regularly review and assess the effectiveness of disaster management by the State, including the State Disaster management plan and its implementation.
- To regularly review and assess the effective of disaster management by district groups and local groups, including the district and local district management plans.
- To regularly review and assess cooperation between entities responsible for disaster management in the state, including whether the disaster management systems and procedures employed by those entities are compatible and consistent.
- To identify opportunities for cooperative partnerships to improve disaster management outcomes.
- To report to and advise the Minister about issues relating to the functions above.
- To make all necessary inquiries to fulfil the functions above.

In accordance with these functions, the purpose of this review (the review) is to assess the effectiveness, coverage, reliability and use of flood gauges within the North West Queensland Regional Organisation of Councils (NWQROC) area. The scope is limited to the 12 local government council areas that are reflected in the NWQROC (Burke Shire, Carpentaria Shire, Cloncurry Shire, Croydon Shire, Doomadgee Shire, Etheridge Shire, Flinders Shire, Kowanyama Shire, McKinlay Shire, Mornington Shire, Mount Isa City, Richmond Shire), only for the *North Queensland Monsoon Trough, Associated Tropical Cyclone Koji Severe Weather commencing 24 December 2025* event.

#### Background

Flood gauges play a critical role in informing flood intelligence, warning services and local decision-making during flood events. The performance of the gauges in the NWQROC area is only for the *North Queensland Monsoon Trough, Associated Tropical Cyclone Koji Severe Weather commencing 24 December 2025* event, have highlighted the need to examine whether the existing gauge network data quality, governance arrangements and warning pathways are sufficient to support effective community warnings and emergency response.

This review will provide evidence-based recommendations through assessing the performance of the Flood Warning Gauge Network, as described in the *Queensland Strategic Flood Warning Infrastructure Plan 2021*.

#### Scope

The Office will conduct a review, which will focus on the flood warning gauge network within the NWQROC and will include the current weather events commencing 24 December 2025.

### In scope:

- Inventory and mapping of existing flood warning infrastructure (namely, rainfall and river height gauges).
- Ownership, management and maintenance arrangements (e.g. council, state, Bureau of Meteorology, landholders and other entities).
- Spatial coverage and adequacy of gauge locations relative to flood risk and communities.
- Reliability, functionality and data availability during the “*North Queensland Monsoon Trough, Associated Tropical Cyclone Koji Severe Weather commencing 24 December 2025*” events.
- Data quality, telemetry, redundancy and failure points.
- Use of gauge data by councils and disaster management stakeholders.
- Identification of gaps, risks and opportunities for improvement.
- Any other matters that the Inspector-General of Emergency Management considers necessary.

### Out of scope:

- The review will not consider matters relating to: Integration of gauge data into flood intelligence products and warning processes.
- Broader disaster management arrangements not related to flood gauge network.
- Areas outside the NWQROC council boundaries and the specified event.

### Guiding principles and methodology

In conducting the review, the Office will undertake a desktop analysis of existing data and documentation, analysis of gauge performance during recent flood events and the identification of good practice and lessons learned.

The objectives of the review are to:

- Determine whether existing flood gauges adequately support early, accurate and actionable warnings.
- Identify gaps or limitations that may compromise warning quality or timeliness.
- Clarify governance, accountability and information flows related to gauge data.
- Recommend practical improvements to enhance the flood gauge network.
- Inform strategic investment priorities by assessing opportunities for future funding, together with the processes necessary to support effective long-term governance, operation and maintenance of the flood gauge network.

In conducting the review, the Office will seek to engage with:

- Councils within the NWQROC.
- Relevant state agencies e.g. Queensland Reconstruction Authority (QRA), Department of Transport and Main Roads (DTMR), Queensland Police Service (QPS), Department of Local Government, Water and Volunteers.
- Bureau of Meteorology (BoM).
- National Emergency Management Agency (NEMA).
- Local Government Association of Queensland (LGAQ).
- Disaster management and other relevant stakeholders identified during the review process.

The Office will also seek to engage with affected private operators and consider their views alongside those of relevant agencies and operational personnel, supported where necessary by expert advice.

Further, in conducting the review, the Office will have regard to the Standard for Disaster Management in Queensland and any other relevant doctrine.

### **Deliverables and Timeframe**

The review report will outline findings, risks and opportunities and where appropriate recommendations to improve flood gauge capability.

Before finalising the review reports, the Inspector-General of Emergency Management will consult with relevant entities on draft findings and recommendations.

The final review report will be delivered to the Minister for Police and Emergency Services by Tuesday 28 July 2026.