Flood Warning Infrastructure Network (FWIN) Project

Queensland's Flood Warning Infrastructure

In Queensland, more than 3200 rainfall and river gauges inform statewide flood warnings and forecasts. These are owned and operated by more than 60 entities including state and local government, the private sector, and the Bureau of Meteorology.

Flood waters don't respect boundaries. It is therefore extremely important for all areas of Queensland to have information from other flood warning systems. This will help keep our communities safe by ensuring they are well informed by timely weather and flood warnings and forecasts.

Working together for the best possible flood warnings

The Queensland Reconstruction Authority (QRA) is working with key stakeholders including the Bureau of Meteorology and local governments to improve Queensland's flood warning infrastructure. A high level of collaboration and information sharing is necessary to ensure accurate and consistent flood warning information is being provided to the Bureau and to our local communities.

Flood Warning Infrastructure Network (FWIN) Project

To support Queensland communities in their recovery following the North and Far North Queensland Monsoon Trough disaster event (25 January to 14 February 2019), an $8 million Flood Warning Infrastructure Network Project was approved as part of the $242 million Category C and D Disaster Recovery Funding Arrangements (DRFA) package, jointly funded by the Australian and Queensland Governments.

Project purpose

The purpose of the FWIN Project is to work with the Bureau and local communities to identify high priority locations requiring additional flood warning infrastructure capability.

Once delivered, the $8 million Flood Warning Infrastructure Project will successfully complete the flood warning investment plans from Mackay west to Diamantina north through to the Gulf of Carpentaria and Cape York.

Project benefits

These assets will improve Queensland's flood warning infrastructure, help keep our communities safe with timely weather and flood warnings and forecasts, and reduce the cost of future floods.

The FWIN Project is keeping our communities safe by delivering: suitable flood warning infrastructure upgrades to the most appropriate locations throughout the flood-impacted area; improvements to Bureau services to support primary producers and communities; and a range of assets to support better information being made available including the use of flood cameras and signage.

Project areas of operation

This funding is supporting 28 local government areas across northern and western Queensland to install gauges that record rainfall, river height, as well as cameras and signage. The 28 councils have been organised into three areas of operation: Far North Queensland; North West Queensland; and Townsville and surrounds.

Project managers have been appointed for each area.

Key project actions

- Facilitate a catchment approach - locally led, regionally coordinated
- Define flood warning infrastructure as means for providing timely situational awareness
- Incorporate existing initiatives into one common operating picture
- Analyse existing infrastructure upgrade initiatives against identified risk areas
- Identify gaps in the flood warning infrastructure network
- Develop and apply principles for prioritisation across the areas of operation
- Prioritise flood warning infrastructure improvements across the areas of operation
- Support procurement of infrastructure
- Establish / align with emerging governance arrangements.

Project history

Following the monsoon flood event in early 2019, the Queensland Reconstruction Authority was approved for $2 million through Category D of the joint Commonwealth-State funded Disaster Recovery Funding Arrangements (DRFA) for new and improved flood warning infrastructure in the impacted communities.

Extensive consultation followed with the 39 impacted councils, local communities, the Bureau of Meteorology, Sunwater and state agencies to confirm and prioritise specific flood warning infrastructure requirements.

The FWIN project is very complex due to the technical expertise required for asset placement and the extensive and ongoing stakeholder engagement needed to ensure any infrastructure enables the Bureau to continue to provide the necessary timely warnings and information to the community and responding agencies.

Sixteen councils were initially identified to deliver 36 priority flood warning projects with the allocated $2 million. After securing an additional $6 million in DRFA funding in July 2020 to successfully deliver all of the identified assets, QRA conducted extensive re-engagement and consultation with councils.

Current status

By August 2020, 28 councils had been approved for a total of 188 flood warning infrastructure projects. The assets to be delivered are a mixture of rainfall and river height gauges as well as flood cameras and electronic signage. It is expected that the flood cameras will be able to be incorporated into the Queensland Traffic website.

A group procurement arrangement has been established to ensure greater value for money in the delivery of the FWIN Project and to save the councils having to undertake individual projects.

As a result, more flood warning infrastructure assets will be delivered in more council areas, which will contribute to improved long-term resilience in these areas.

Recognising the scale of the work is four times larger than that initially approved, and due to COVID-19 impacts, the Commonwealth has granted an extension of time for delivery of the FWIN Project until 30 June 2022.

The webpages below include the latest project updates, maps and key statistics for each area of operation.

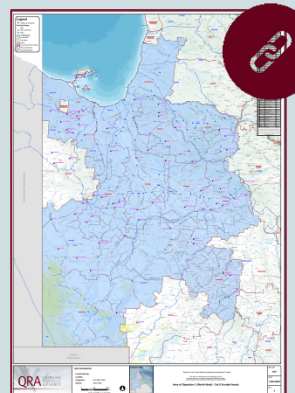# Flood Warning Infrastructure Network Project Areas of Operation

Far North Queensland

The Far North Queensland FWIN Project will have a total of 39 flood warning assets to be installed that will benefit the 10 LGAs.

- Cairns
- Cassowary Coast
- Cook
- Douglas
- Lockhart River
- Mapoon
- Mareeba
- Pormpuraaw
- Torres Strait Island
- Wujul Wujul.

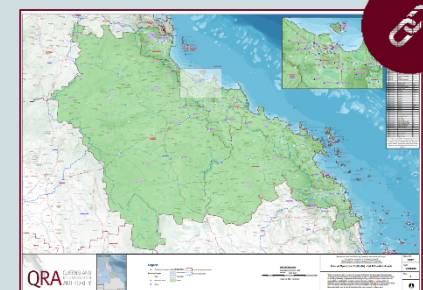www.qra.qld.gov.au/fwin/far-north-queensland

North West Queensland

The North West Queensland FWIN Project will have a total of 70 flood warning assets to be installed that will benefit the 12 LGAs.

- Boulia
- Burke
- Carpentaria
- Cloncurry
- Croydon
- Diamantina
- Etheridge
- Flinders
- Longreach
- McKinlay
- Richmond
- Winton.

www.qra.qld.gov.au/fwin/north-west-queensland

Townsville and surrounds

The Townsville and surrounds FWIN Project will have a total of 59 flood warning assets to be installed that will benefit the six LGAs.

- Burdekin
- Charters Towers
- Mackay
- Hinchinbrook
- Townsville
- Whitsunday.

www.qra.qld.gov.au/fwin/townsville-and-surrounds