State Disaster Coordination Centre

Annual Activity Report

1 July 2020 to 30 June 2021

Respect
Integrity
Courage
Loyalty
Trust

Queensland Government

Produced by / Authors:

Richard Tot
State Duty Supervisor, Watch Desk
State Disaster Coordination Centre
Queensland Fire and Emergency Service
PO Box 1425, Brisbane, Qld 4001
Richard.Tot@qfes.qld.gov.au

The Queensland Fire and Emergency Service web address is: www.qfes.qld.gov.au

Executive Summary

The State Disaster Coordination Centre (SDCC) continues to provide an operational venue for disaster related events while providing state-level support for disaster management responses. As custodians of the SDCC, Queensland Fire and Emergency Services (QFES) was and continues to be at the forefront of the State Government's response to a range of natural disasters by providing both emergency operational responses, recovery assistance, and logistical planning.

This report seeks to provide a summary of Queensland's significant severe weather and emergency events and explores the role and action the SDCC played in preparation for and response to COVID-19, the tropical cyclones that had repercussions for Queensland, major flooding in the southern and southeast of the state, bushfires, and other broader disaster management events. This presents challenges for the SDCC, having to respond to different disaster events in areas of the state separated by great distance, of varying types, and at times simultaneously.

The response to COVID-19 in Queensland has seen multiple levels of government, and multiple state government departments contribute to the Queensland COVID-19 response. This, in addition to other challenges in the disaster management sphere for Queensland provided a challenging year for the SDCC.

This report includes notable findings and observations including:

- The first full year activation of the SDCC; where the SDCC remained at a higher state of readiness for multiple events through the entire reporting period
- The SDCC Watch Desk disseminated 46 Emergency Alert campaigns, which resulted in over 175,000 voice messages to landlines and 3,000,000 SMS which provided advice and warnings to Queenslanders
- The SDCC Logistics cell assisted in the COVID-19 hotel quarantine process by designing, implementing, and processing over 100,000 people into hotel quarantine.
- Over 3,300 weather warnings were sent from the SDCC Watch Desk to affected stakeholders to assist in planning and response at a regional, district, and local level.

These findings indicate that the SDCC maintains a significant role in both preparation and response to disaster and emergency events in Queensland.

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Introduction

Background

The State Disaster Coordination Centre (SDCC) Annual Activity Report provides an overview of the activities within the centre for the 2020-2021 financial year. This report outlines the role and functions of the SDCC preparing for and responding to significant disaster related events, a summary of the work units that form the SDCC, as well as highlighting significant operational activities in the SDCC.

The State Disaster Coordination Centre

The SDCC is a permanent facility located at the Emergency Services Complex at Kedron, Brisbane. The SDCC provides an operational venue for the State Disaster Coordination Group (SDCG) to deliver state-level support to disaster management operations in accordance with decisions from the Queensland Disaster Management Committee (QDMC).

Queensland Fire and Emergency Services (QFES) staff embedded in the SDCC are part of the State Operational Coordination Branch (SOCB), which in turn is within the Specialist Response and Planning Directorate of QFES.

QFES are custodians of the SDCC maintaining a state of operational readiness. During normal business hours, the centre is staffed by personnel from State and Commonwealth departments including QFES, Queensland Police Service (QPS), Public Safety Business Agency (PSBA), and the Bureau of Meteorology (BoM).

Upon activation of the SDCC, the QPS takes operational control of the centre and works with QFES to manage operations and additional staffing arrangements. Staffing of the SDCC is scalable and numbers are based on the anticipated and identified need.

When activated, Queensland Government staff who have received SDCC training, support emergency operations by filling positions across the following seven capabilities:

- **Command:** Provide overall oversight of the actions of the SDCC during a disaster event; maintaining state-wide situational awareness of the SDCC's operations to support decision making
- **Operations:** Report on current response and emerging issues to enable control and coordination of the SDCC capabilities
- **Logistics:** Coordinate the acquisition and provision of human and physical resources, services, and materials to support incident objectives
- **Planning:** Provides situational awareness to the SDCC and complete planning related tasks
- **Intelligence:** Collection, collation, and analysis of information and intelligence to assist with disaster response
- **Aviation:** Provides a state-wide coordination of event related air assets and supporting resources leading to the safe, efficient, and effective use of air assets during high demand periods
- **Public Information:** Responsible for the provision and delivery of Whole of Government (WoG) messaging during emergency and disaster events.

Figure 1: A fully staffed SDCC during an activation for a disaster related event. QFES staff working with QPS and WoG stakeholders (Historical Image).

Liaison Officers from Commonwealth government agencies, Australian Defence Force (ADF), and Queensland government and non-government agencies are embedded in the SDCC during activations to provide agency specific support to impacted communities.

The SDCC is always operating. Tasks continuously exist for the centre and these are managed by a core group of QFES employees supported by relevant stakeholders internal and external to the State Government. However, during emergent or significant weather and disaster related circumstances, the SDCC changes operational readiness, which in turn triggers a change in operational actions and responses. These changes in operational readiness are defined by the SDCC activation levels.

The SDCC operates on activation levels stated within the Queensland Disaster Management Arrangements (QDMA). These levels change based on the needs of relevant Local Disaster Management Groups (LDMG), District Disaster Management Groups (DDMG), and state level resources. Where possible, changes to the SDCC activation levels are made in advance of a disaster to ensure appropriate planning and support is available. QFES and QPS management collaborate on the activation level of the SDCC.

SDCC Activation Levels:

Business as usual (BAU): During this time, the Watch Desk monitor for potential emergency situations. Once an event is identified, the Watch Desk liaise with disaster management stakeholders gaining greater situational awareness and brief QPS and QFES management. These briefings may lead to the decision to activate the SDCC.

Alert: When at *Alert*, QPS are present in the SDCC liaising with LDMGs and DDMGs. The SDCC Commander is briefed on the situation. The Planning Unit develops further plans for Disaster Management Groups (DMG) as well as inclusion into briefings within the centre. The relevant situation continues to be monitored by the Watch Desk as well as any other threats.

Lean Forward: A greater presence in the centre from QFES and QPS is expected at this level. SDCG members and proxies begin to attend the centre. All capabilities will now have some level of staffing present within the SDCC. Requests For Assistance (RFAs) from DMGs may be received and actioned at this stage. Public Information capability may disseminate initial key messaging for the event.

Stand Up: This is the highest level of SDCC activation. The SDCC runs at required capacity in all capabilities at this level and may occur as the first movement after BAU for an incident that has little or no lead time. The SDCC Commander ensures the centre is operating effectively to support the needs of local operations. Event specific reporting to stakeholders commences.

Stand Down: As support to the DMGs decreases, activation movement of the SDCC back to Stand Down occurs. Debriefs, reports and queries on the operation can occur. The Watch Desk continues to monitor the event and supports any RFA’s including resupply that may be requested by the DMGs. The centre returns to BAU status.

SDCC Departments

Watch Desk

The SDCC Watch Desk is the permanent operational unit of the SDCC and provides 24/7 emergency management overwatch, notification, monitoring, and reporting function for Queensland disaster management stakeholders. The Watch Desk also provides a link to the Commonwealth Government, Local Government, and other State Government Departments when the SDCC is not activated.

The Watch Desk supports the QDMA by ensuring:

- The provision of timely and accurate warnings and reports which are disseminated to relevant local, district, regional, state and interstate stakeholders
- The SDCC is maintained in a state of operational readiness
- State Emergency Service (SES) tasking across the state is effectively coordinated.

The SDCC Watch Desk works closely with the QPS Disaster Management Unit and the BoM. SDCC Watch Desk staff are the only personnel trained and authorised to create and disseminate Emergency Alert (EA) campaigns within Queensland.

During SDCC activations, the Watch Desk becomes part of the Operations Capability group and assists disaster response by continuing to compile and disseminate reports to relevant stakeholders, identify significant issues, accurately record events within electronic logs and provide continued EA campaign support.

The Watch Desk works closely with the BoM and continuously monitors current weather patterns and developments, making threat assessments and disseminating weather related information to stakeholders when required for warning and intelligence purposes.

SDCC Reporting

Watch Desk staff monitor a range of systems and sources, working collaboratively with emergency management stakeholders to produce a number of reports that are disseminated on a regular or as required basis.

Queensland Emergency Management Report (QEMR) (0500hrs Daily)

The 0500hrs QEMR provides key ministerial and departmental stakeholders an early daily summary of recent and emerging, significant emergency management activities. It also briefly identifies weather and other local, national and international emergency management related risks which have the potential to impact the Queensland Government and its resources.

Ministerial Summary SMS (0700hrs Daily)

This text message is delivered to a defined group of key stakeholders and is designed to provide a summary of QFES operations for the previous 24 hours, current interstate incidents with the potential to

impact Queensland and its resources, the day's weather and any significant media relating directly to QFES.

Queensland Emergency Management Report (QEMR) (1000hrs Daily)

The 1000hrs QEMR provides a general disaster and emergency management themed report distributed to a broad emergency management audience. This report summarises Queensland emergency management activity from the previous 24 hours as well as significant local, national and international, emergency events which may impact on Queensland Government resources. The report also provides an overview of Queensland weather observations and forecasts, significant QFES operational activity and the status of all Queensland Disaster Management Groups. The report is sent to around 800 disaster management stakeholders.

Weather Outlook (Twice Weekly)

The Weather Outlook is compiled by the BoM Meteorologist working within the SDCC to provide additional weather intelligence to emergency management stakeholders. The Weather Outlook accompanies the 1000hrs QEMR twice weekly from 01 October until 30 April but can be issued at any time if warranted. This report indicates the likelihood and severity of forecasted Queensland weather activity by forecast districts. The Weather Outlook is a restricted document and is not for public or media dissemination.

Incident Briefs (As required)

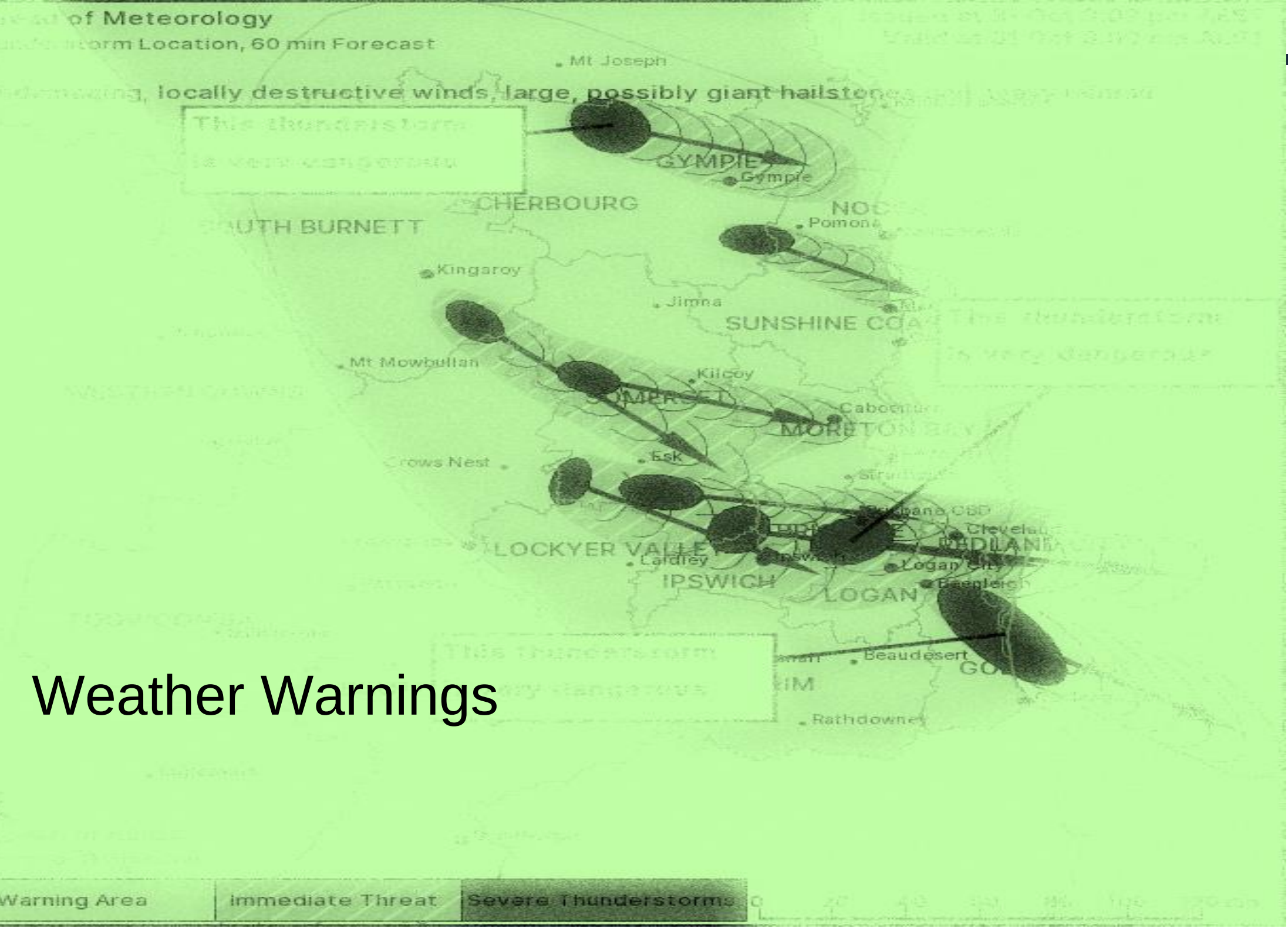
The primary function of an incident brief is to quickly inform relevant stakeholders of a significant event, generally in one of the following categories:

- disaster or emergency related events (natural and man-made)
- other events significantly impacting QFES operations and resources (e.g. staff/volunteer injury, deployments)

Subsequent briefs relating to the event or incident are created and disseminated as required.

State Update (As Required)

The State Update is issued both during activations and in non-activation periods when required and provides stakeholders with up to date information relating to ongoing, significant events. The State Update incorporates information from relevant agencies, consolidated into a single report which can be tailored to suit the current situation.



Weather Warnings

Weather Warnings

The size and location of the state of Queensland contributes to significant differences in weather across the state. While part of the state can be experiencing a severe drought or bushfires, other parts can have significant flooding and storms. Queensland can experience a range of weather phenomena including tropical cyclones, thunderstorms and flooding, as well as disaster related issues that are impacted by weather conditions like bushfires. The BoM issues weather warnings based on the threat or threats and these warnings are further disseminated to a wide range of internal and external disaster management stakeholders by Watch Desk Officers, who assess the warning and impact area to determine the distribution requirements.

In 2020/21, the Watch Desk processed 3,371 weather warnings in EMS for stakeholders. This is an increase of 26.5% when compared to 2019/20. The highest number of weather warnings processed by the Watch Desk in 2020/21 related to:

- Severe Thunderstorm Warnings – 1,240 (37% of all warnings processed)
- Marine Wind Warnings – 1,014 (30% of all warnings processed)
- Flood Warnings – 736 (22% of all warnings processed).

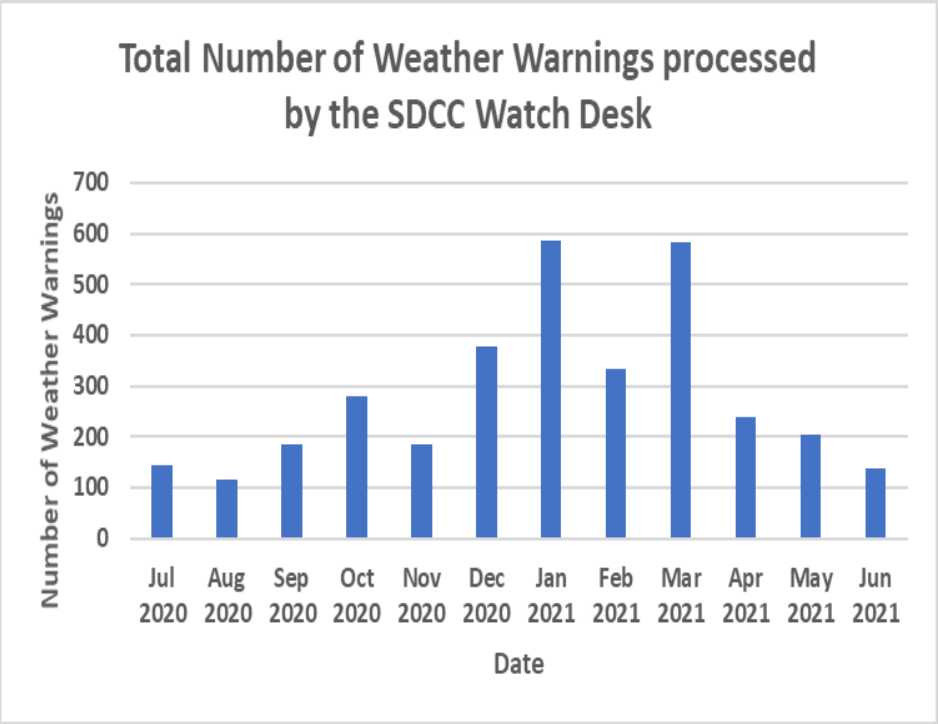


Figure 2: The total number of weather Warnings processed by the SDCC Watch Desk by month.

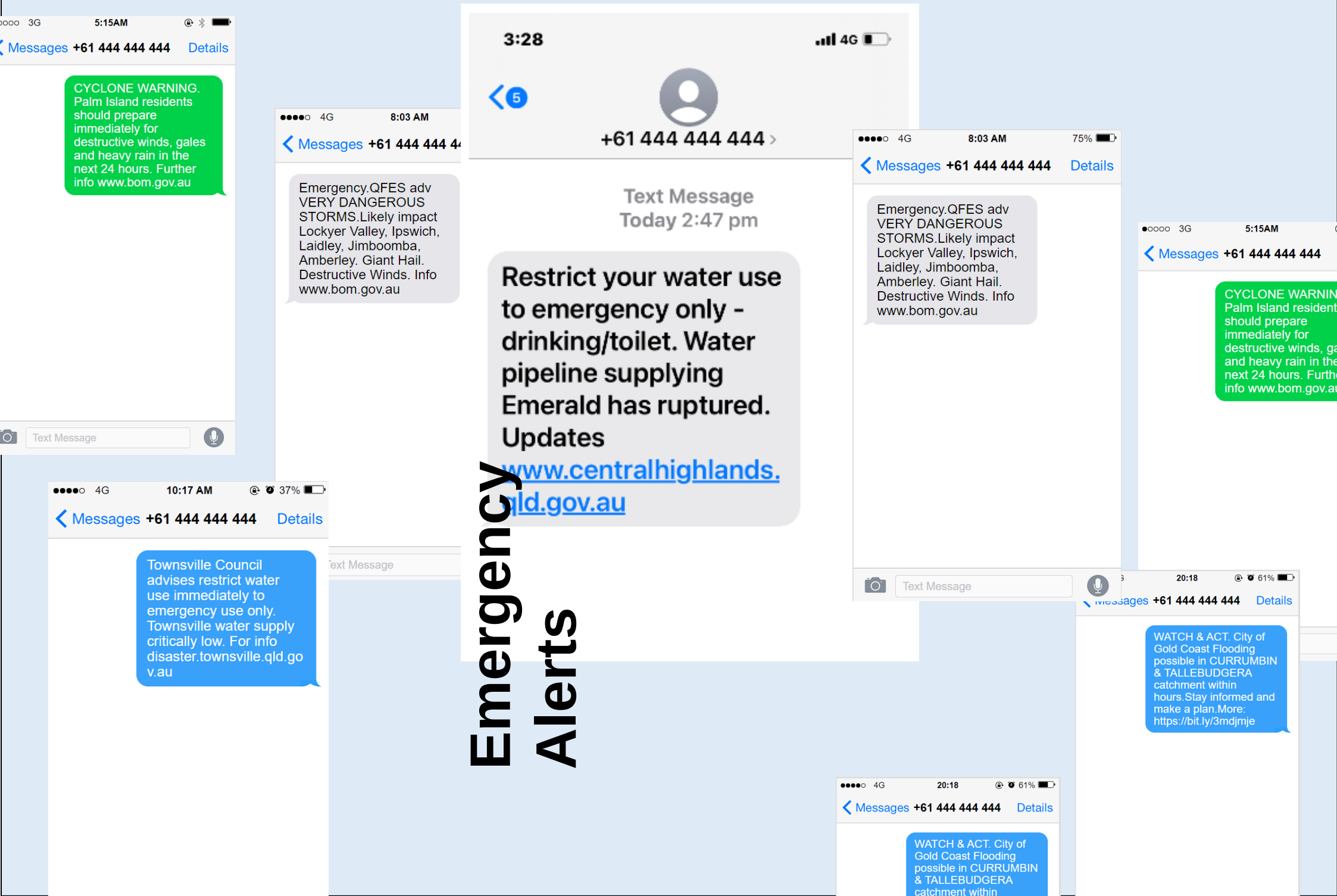
*Figure 3: **(Previous Page)** Example of a BoM weather warning showing storm cells in South East Qld*

		Fire Weather	Flood	Flood Watch Area	Hazardous Surf	High Seas / Ocean Wind	Marine Wind	Severe Thunderstorm	Severe Weather	Storm Tide	Tropical Cyclone	Tsunami**	TOTAL
2020	July				10		128					5	143
	August		6				83	20				5	114
	September	2	17		3		113	41				9	185
	October	4	4		3		65	198				7	281
	November	7					71	105				1	184
	December	5	46	1	8		46	251	20			2	379
2021	January		217			18	103	163	32	13	38	2	586
	February		117	1	8	4	39	138	9	2	6	9	333
	March	2	213	1	4	19	69	203	17	7	32	15	582
	April		115		7		87	17	9			5	240
	May				15		111	74				5	205
	June		1				99	30	7			2	139
	TOTAL	20	736	3	58	41	1,014	1,240	94	22	76	67	3,371

** Absence of data indicates a total of zero for the corresponding month and warning type*

*** All Tsunami warnings relevant to Qld during 2020/21 reporting period were "No Threat". This means they posed no direct threat to Queensland.*

*Figure 4: Total number of Weather Warnings by type and month issued by the SDCC to stakeholders in 2020/21**


Emergency Alerts
3G 5:15AM
Messages +61 444 444 444 Details
CYCLONE WARNING. Palm Island residents should prepare immediately for destructive winds, gales and heavy rain in the next 24 hours. Further info www.bom.gov.au
Text Message
4G 8:03 AM
Messages +61 444 444 44
Emergency.QFES adv VERY DANGEROUS STORMS.Likely impact Lockyer Valley, Ipswich, Laidley, Jimboomba, Amberley. Giant Hail. Destructive Winds. Info www.bom.gov.au
3:28 4G
5
+61 444 444 444
Text Message
Today 2:47 pm
Restrict your water use to emergency only - drinking/toilet. Water pipeline supplying Emerald has ruptured. Updates www.centralhighlands.qld.gov.au
4G 8:03 AM 75%
Messages +61 444 444 444 Details
Emergency.QFES adv VERY DANGEROUS STORMS.Likely impact Lockyer Valley, Ipswich, Laidley, Jimboomba, Amberley. Giant Hail. Destructive Winds. Info www.bom.gov.au
Text Message
3G 5:15AM
Messages +61 444 444 444
CYCLONE WARNIN
Palm Island resident
should prepare
immediately for
destructive winds, ga
and heavy rain in the
next 24 hours. Furth
info www.bom.gov.au
4G 10:17 AM 37%
Messages +61 444 444 444 Details
Townsville Council advises restrict water use immediately to emergency use only. Townsville water supply critically low. For info disaster.townsville.qld.gov.au
20:18 61%
Messages +61 444 444 444 Details
WATCH & ACT. City of Gold Coast Flooding possible in CURRUMBIN & TALLEBUDGERA catchment within hours.Stay informed and make a plan.More: https://bit.ly/3mdjmje
4G 20:18 61%
Messages +61 444 444 444 Details
WATCH & ACT. City of Gold Coast Flooding possible in CURRUMBIN & TALLEBUDGERA catchment within

Emergency Alert

Emergency Alert (EA) is a national telephone warning system. It can be used by emergency services to send voice and/or mobile text message notifications conveying important information relating to a specific threat. SDCC Watch Desk Officers are the only personnel in the state trained and authorised to use the Emergency Alert system to create and disseminate Emergency Alerts.

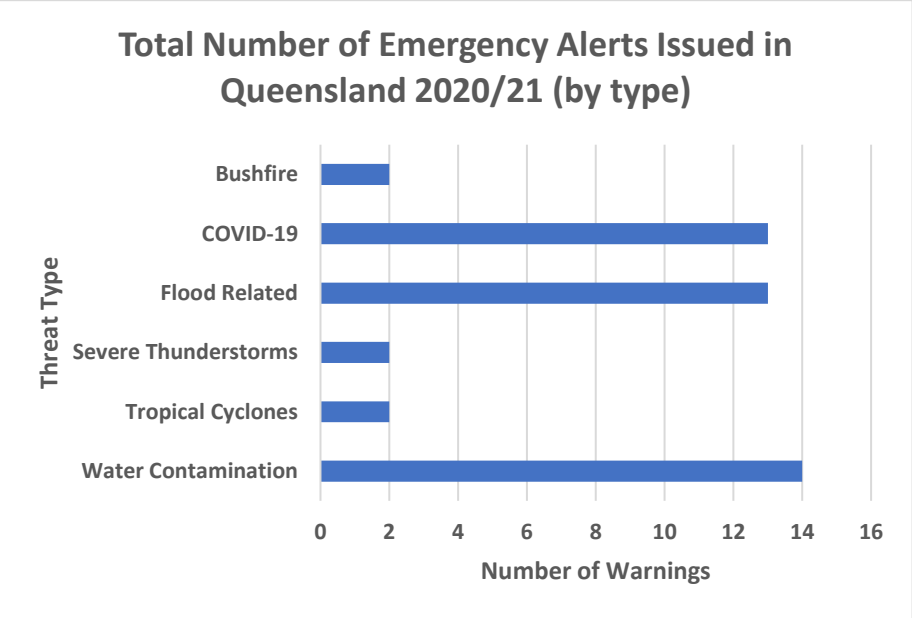
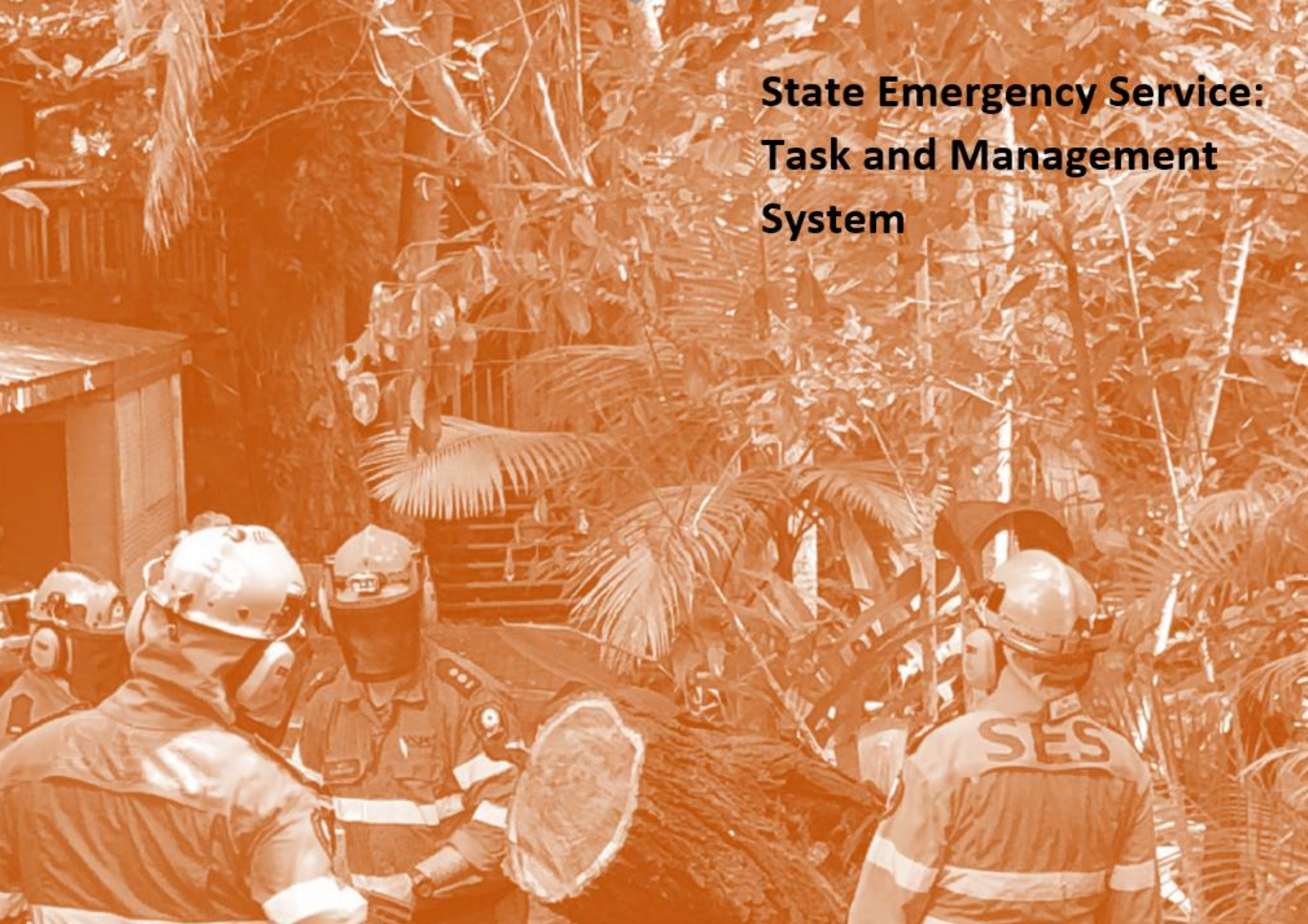


Figure 5: The total number of Emergency Alert campaigns created in Queensland during the 2020/21 reporting period. The data displayed includes the total number by threat type.

Figure 6: Example of actual Emergency Alert messages sent during 2021/21 (previous page).

In 2020/21, the SDCC Watch Desk disseminated 46 EA campaigns which resulted in over 175,000 voice messages to landlines being made and over 3,000,000 SMS being sent to people of Queensland.

The EA campaigns disseminated included warnings to evacuate or seek shelter from approaching cyclones, bushfires, or severe thunderstorms, providing safety notifications regarding infrastructure, advice on river/water levels during flood events, and warnings and advice regarding COVID-19.



State Emergency Service: Task and Management System

SES Tasking

Requests for SES assistance from the public generally result from cyclone, flood and storm emergencies. Leaking roofs, downed trees, and water inundation form the basis of most requests.

Other emergency services agencies can also request assistance from the SES to support operations. This support can take the form of assisting in a vertical rescue, re-supply operations, searching for missing persons (including air observations), traffic control near crash scenes, or other actions. In 2020/21, the SES assisted in COVID-19 operations primarily in Border Operations (working with Queensland Police Service and Australian Federal Police) and traffic control around hospitals and Queensland Health testing clinics.

Between 1 July 2020 and 30 June 2021, the Watch Desk oversaw 13,579 requests for SES assistance via the SES Task and Management System (TAMS). 11,236 requests were for storm and flood related issues from the public, and 2,343 were SES units supporting other agencies. The SDCC Watch Desk maintains communication with SES groups across the state and provides coordination of SES activations, providing additional resource sourcing when requested. Figure 7 shows the distribution of requests for SES assistance across Queensland in this reporting period.

Figure 7: SES crews help clean up fallen trees after thunderstorms in North Qld. Image QFES (previous page).

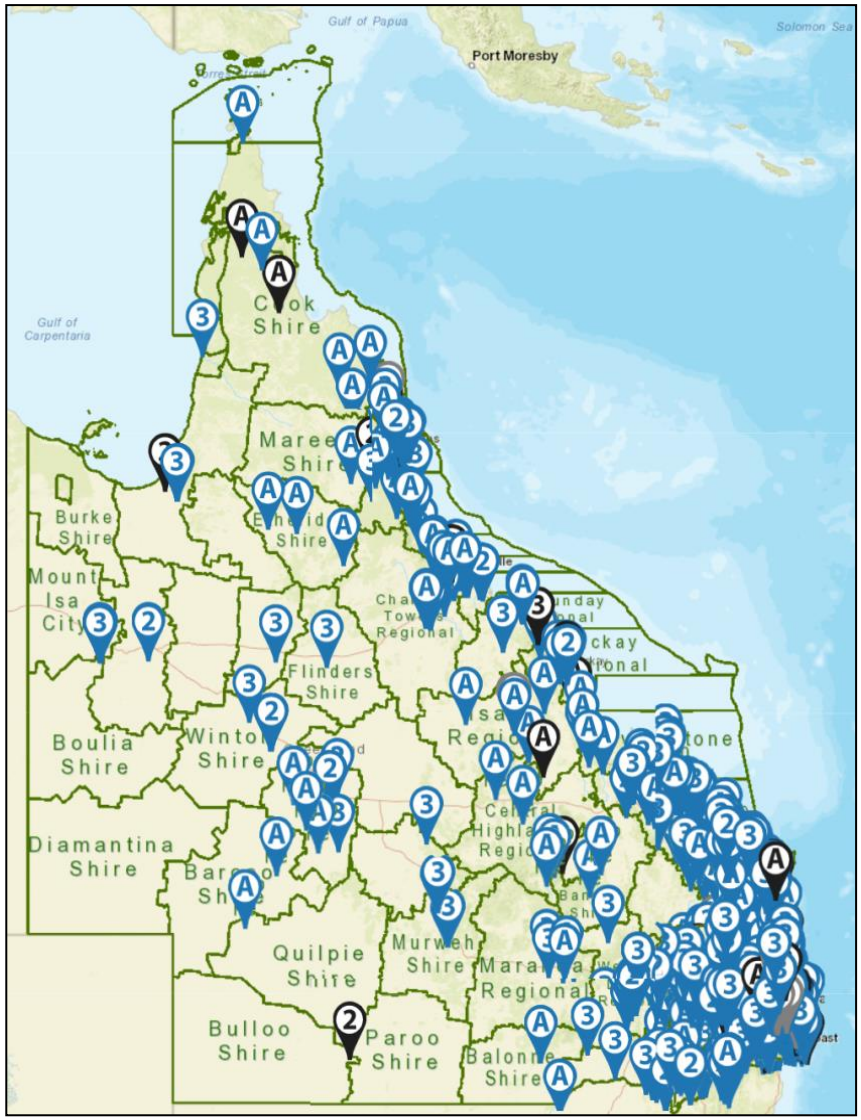


Figure 8: Map depicting location and priority status of SES jobs during the 2020/21 reporting period. Map sourced from TAMS

Emergency Management Exercise Coordination Unit

SDCC staff maintain currency in disaster management capability by committing to ongoing study, attending relevant professional development courses, and attending and conducting training and exercises.

The Exercise Coordination Unit along with QPS and Watch Desk staff provide training for Emergency Alert, QDMA, Train the Trainer and System Administration to ensure the SDCC workforce and relevant stakeholders remains current and competent for centre activations.

Ongoing external stakeholder EA training is also being conducted to ensure staff from local government, QFES and other relevant agencies throughout the State have sufficient skills and knowledge to identify the need for an EA campaign, and the correct process for creating, requesting, and approving the requests.

Capability Training and Exercises

The changing concept of the workplace due to COVID-19 presented challenges in the training sphere. Training for SDCC Logistics staff for instance was re-designed and is now able to be completed remotely and self-paced, thus removing the need for people to travel to the SDCC.

During 2020/21, the SDCC participated in two major exercises. Exercise IOwave20, which was an international tsunami exercise that involved the Watch Desk. And in June 2021, the Watch Desk and QFES Special Operations took part in Exercise Fisherman21, which formed part of the biennial re-validation process for visiting Nuclear Powered Vessels.

Emergency Management Planning Unit

The Emergency Management Planning Unit (EMPU) provides high level planning support through the development, implementation and maintenance of situational awareness products, tools, and projects- to QFES and all levels within the QDMA. At present there are over 225 members made up of representatives from local, district, state, and federal departments/agencies, and over 368 items being shared using these platforms.

The EMPU has also developed the ability for stakeholders to collect, store, and share damage assessment information in real time. This data is made available as either a mapping data layer or as part of the QFES damage assessment dashboard. The real time sharing of this data provides a single point of truth to damage assessment data ensuring consistency for those agencies involved in recovery.

Additional web maps and dashboards have been created to support disaster management activities, including the SDCC Situational Awareness Platform (SAP) and QFES Common Operating Picture (COP). The SDCC SAP which received over 531,000 views from QDMA members (17 August 2020 – 17 August 2021) contains a series of web apps that contain over 370 layers of GIS intelligence data and multiple tools which help provide situational awareness in the lead up to and during an event. The QFES COP which received over 46,000 views (29 January 2021 – 12 August 2021) provides an operational dashboard tailed to the needs of each QFES ICC, ROC and the SOC to further assist in planning for and responding to emergency events. Both platforms were extensively used across all levels of the QDMA for the purpose of PPRR throughout the 2020/21 disaster seasons.

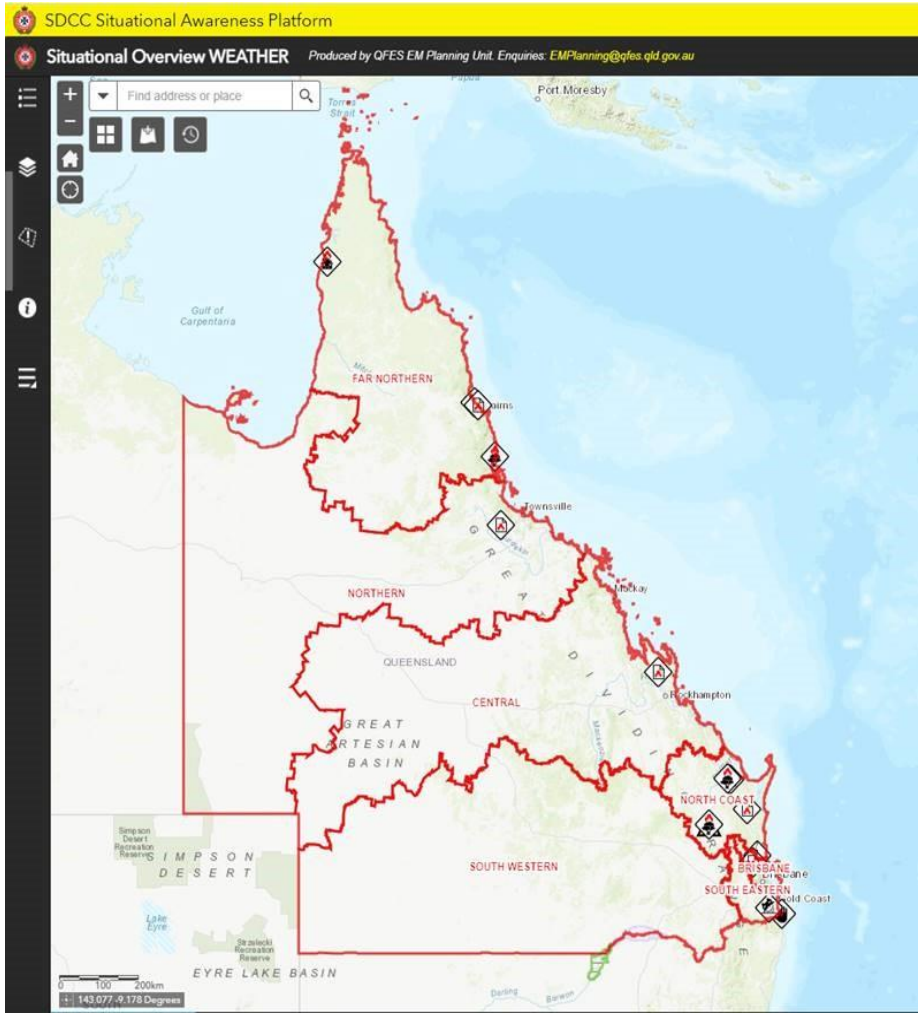


Figure 9: The EMPU has developed the Situational Awareness Platform for QFES staff.

QFES Meteorologist

The Bureau of Meteorology continued to embed a Senior Meteorologist in the SDCC during the 2020/21 season. The Bureau of Meteorology representative provided critical decision support and briefing services to a range of State, District and Local Government stakeholders throughout the season and during tropical cyclone events was invited to brief the Queensland Disaster Management Committee. During non-operational periods, the Bureau of Meteorology representative delivered training to disaster management stakeholders including a week with Queensland Fire and Emergency Services staff in order to support an uplift of their Fire Behaviour Analyst capability.

Some of the key achievements of the Bureau of Meteorology representative in the State Disaster Coordination Centre during the 2020/21 season included:

- Supporting any exercises that State, District or Local level groups were undertaking in order to prepare and plan for any potential concurrent events/activations (relating to COVID-19 and weather).
- Providing decision support services in the response phase to the K'gari (Fraser Island) fire, including a period embedded within the Incident Control Centre.
- Providing decision support and briefing services in the lead up to and during the tropical cyclone events of the season.
- Assisting SunWater, the Department of Natural Mines, Resources and Energy and associated disaster management stakeholders in the provision of weather, climate and flood intelligence to support decisions around the remediation works at Paradise Dam.
- Delivery of a trial Coastal Hazards Outlook service that may be included as part of the implementation of an integrated Volunteer Marine Rescue service in Queensland.

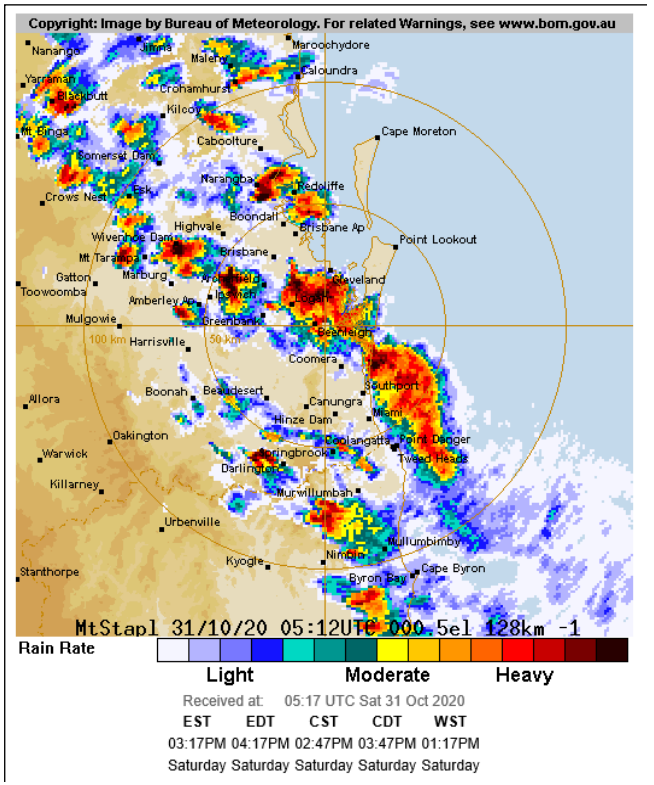


Figure 10: Image from the Mount Staplyton radar at 3:17pm local time 31 October 2020 showing a series of thunderstorm cells progressing through South East Queensland. These storms caused widespread damage to buildings and vehicles with hail up to 14cm in size falling. Image: BoM

SDCC Significant Events:
July 2020 – June 2021

3.0 Events of Significance 2020/21

Due to its size and location, Queensland experiences significant climate variations and is impacted by a range of weather phenomena including tropical cyclones, thunderstorms and flooding. The BoM issues weather warnings based on the threat or threats and these warnings are further disseminated to a wide range of internal and external disaster management stakeholders by Watch Desk staff, who assess the warning and impact area to determine the distribution requirements. Other geological, infrastructure, and health events can also occur that result in the SDCC assessing possible impact to Queensland communities.

Events of significance for the 12-month period July 2020 to June 2021 are listed on the following pages. The increased response can include but is not limited to:

- Increased reporting on event
- Increased monitoring of resources
- Maintaining situational awareness

Figure 11: (Previous Page) "All masked up." The QDMC meets during the approach of TC Kimi in Jan 2021. COVID-19 requirements at the time included masks indoors. Premier Annastacia Palaszczuk chairs the meeting. Image: QFES.

State Disaster Coordination Centre
Significant Events July 2020 – June 2021

July 2020
- COVID-19

September
- COVID-19

November
- Severe Thunderstorms, South East Qld
- COVID-19

January
- Tropical Cyclone Imogen
- Tropical Cyclone Kimi
- COVID-19

March
- Severe Weather, Southern Qld
- COVID-19

May
- COVID-19

August
- COVID-19

October
- Bushfires, K'gari (Fraser Island) Oct – Dec
- Hailstorms, South East Queensland
- M3.7 Earthquake, NE of Collinsville
- COVID-19

December
- Severe Weather, South East Qld
- Townsville Water Supply Rupture
- COVID-19

February
- Severe Tropical Cyclone Niran
- COVID-19

April
- COVID-19

June 2021
- COVID-19

COVID-19

The first confirmed case of COVID-19 in Queensland was on 29 January 2020. On 2 February 2020, the SDCC moved its activation level to 'Stand Up' in response to the COVID-19 threat and to provide support to the Queensland State Health Emergency Coordination Centre (SHECC). The World Health Organisation declared a Global Pandemic on 12 March 2020. A Disaster Declaration for Queensland was approved on 22 March 2020.

The SDCC has remained at *Stand Up* for the entire reporting period of this report. The high-level response of the SDCC has not wavered, and the part played by staff has been significant, professional, and timely.

The SDCC Planning Cell has assisted in the development of a state-wide vaccination plan and continues to support the Queensland Government's response to the pandemic.

The SDCC Operations cell provides the primary link for COVID-19 operational enquiries between government agencies at Local, State and National levels and the SHECC. Led by Queensland Police Service Officers, the Operations cell reports to the SDCC Commander.

The SDCC Logistics cell has provided high level support to the Queensland COVID-19 response. To provide a whole of government response, the SDCC moved to *Stand Up*. SDCC Logistics was tasked to provide logistical support to the SHECC with management of persons entering Australia from overseas into quarantine accommodation.

SDCC Logistics have since developed processes for:

- Engaging accommodation providers
- Securely recording guest information
- Verifying and reconciling invoices
- Maintaining records of offers of accommodation and supply from business
- Transporting guests to quarantine accommodation
- Arranging cleaning of COVID-19 accommodation

Bushfires, K’gari (Fraser Island) October – December 2020

An illegal campfire in October 2020 resulted in a large bushfire on K’gari (Fraser Island). The bushfire burned over 87,000 hectares of land before it was eventually extinguished after heavy rainfall and thunderstorms developed over the island on 13 December.

Significant QFES resources were utilised in combating the fire including Fire and Rescue Service, Rural Fire Service, and State Emergency Service personnel, a large aerial tanker (LAT), and Watch Desk personnel who issued Emergency Alerts for the fire.

Figure 12: Fires burning in forests on K'gari (Fraser Island) Nov 2020.

Severe Thunderstorms, South East Queensland 31 October 2020

In the days leading up to 31 October 2020 Queensland experienced unstable weather patterns that contributed to severe thunderstorms developing in central and South East Queensland. Just after midday on 31 October, radar detected several storm cells south of Ipswich. Within an hour several more dangerous storm cells had formed resulting in additional warnings issues by the BoM which were sent by the SDCC Watch Desk to affected stakeholders. Throughout the afternoon, these storm cells produced giant hail measuring up to 14cm in an area from Amberley toward Logan, 7cm hail in the Gympie area, and wind gusts over 100km/h around Moreton Bay.

Significant damage to houses and buildings in affected areas resulted in over 1,900 requests for assistance from the SES in storm affected regions on 31 October alone; with additional requests from residents in the following days. Estimates place the damage bill to property at over $1 Billion.

A total of 35 Severe Thunderstorm Warnings were processed by the Watch Desk and two Emergency Alerts were issued to people in the likely impact zones around the Lockyer Valley, Jimboomba, Amberley, Coomera, Southport, and Beenleigh, warning of the thunderstorm danger.

Figure 13: Drone footage of damaged solar panels and roofs in Ipswich. The damage was caused by severe weather experienced in South East Qld on 31 Oct 2020. Image: QFES.

Tropical Cyclone Imogen, Gulf of Carpentaria, 1-4 January 2021

On 1 January 2021 a low-pressure system developed in the western Gulf of Carpentaria. This tropical low then moved south east toward Mornington Island and after crossing over the island, developed into a Category 1 Tropical Cyclone on 3 January.

Tropical cyclone Imogen moved rapidly to the Queensland Coast and crossed near Karumba late on 3 January as a Category 1 Tropical Cyclone. Tropical Cyclone Imogen caused some minor damage to infrastructure and vegetation before it de-intensified.

The system delivered heavy rain in parts of Far North Queensland, abnormal high tides, and sustained gales. The SES received over 200 requests for assistance from people in affected areas.

Figure 14: TC Imogen Track map (R) . Image BoM.

Tropical Cyclone Kimi, North Tropical Coast, 16-19 January 2021

On 15 January, a tropical low formed off the northeast coast of Cape York Peninsula. The system tracked downwards parallel to the coast and developed. The system was named Tropical Cyclone (TC) Kimi on 17 January.

TC Kimi continued moving southwards, almost paralleling the Queensland North Tropical Coast and observations indicate it may have reached category 2 intensity for a short duration. Late on 18 January, the cyclone weakened rapidly when it encountered unfavourable conditions

TC Kimi was the first cyclone in the Coral Sea region of the 2020/21 season.

While the system did not cross the Queensland coastline, it contributed to around 60 SES jobs in relation to flooding and leaking roofs in the affected regions.

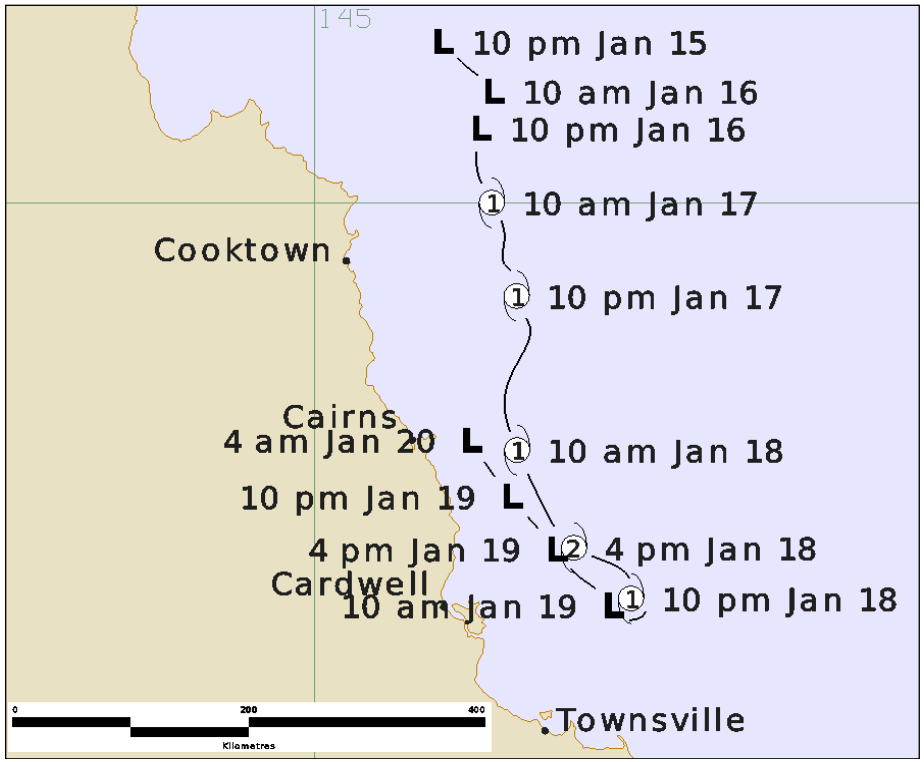


Figure 15: TC Kimi Track map. Image: BoM.

Severe Weather, South East Queensland
12 – 18 December 2020

South East Queensland experienced severe weather conditions in December 2020. A surface and upper level trough led to heavy periods of intense and heavy rainfall. Over 1,000mm of rain was recorded in Upper Springfield between 13 – 17 December, while other areas in the Gold Coast recorded 300-400mm in the same period.

The weather systems contributed to large seas, where an 11-metre wave was recorded off North Stradbroke Island and a 50cm storm surge contributed to flooding of low-lying areas south of Fraser Island. The Logan River exceed minor flood levels, and flash flooding around Killarney resulted in a fatality on the evening of 16 December.

The Watch Desk monitored over 1,500 requests for assistance from the SES, mostly in the Local Government Areas of Gold Coast, Ipswich, Logan, Brisbane and the Sunshine Coast.

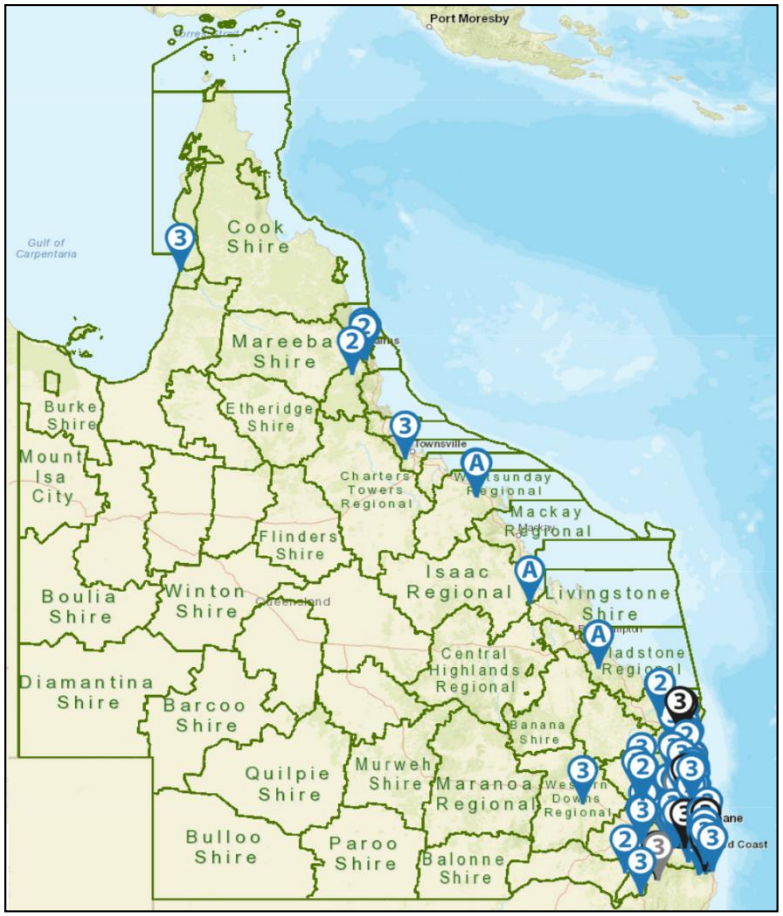


Figure 16: Map of Qld showing location of SES requests for assistance during the period 13-17 Dec 2020. Source: TAMS.

Severe Tropical Cyclone Niran, Coral Sea, 27 February – 5 March 2021

Severe Tropical Cyclone Niran began developing off the north Queensland coast on 27 February 2021. The low-pressure system moved slowly toward Cairns before changing to a north travelling system. On 2 March, the system reached cyclone strength and was named Tropical Cyclone Niran. The system continued to move slowly and began to intensify reaching Category 3 by 4 March.

Severe Tropical Cyclone Niran began to accelerate and move in a south east direction before reaching Category 5 intensity on 6 March.

Severe Tropical Cyclone Niran did not cross the Queensland coast however high winds caused some damage to crops in coastal areas.

Heavy rainfall saw a Flood Watch issued and major flooding was reported on 1 and 2 March along the Herbert River.

While the system did not cross the Queensland coastline, it contributed to around 200 SES jobs in relation to fallen trees, flooding, and leaking roofs in the affected regions.

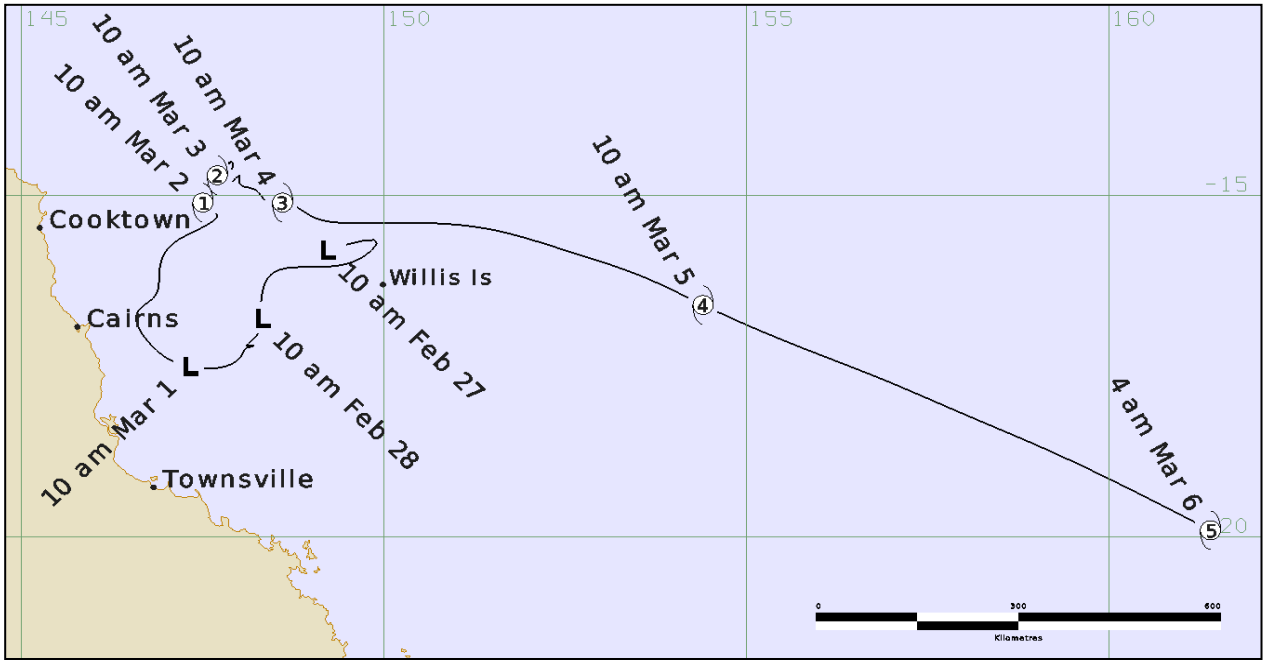


Figure 17: TC Niran Track map (R). Image: BoM.

Severe Weather, Southern Queensland March 2021

A significant rain event impacted parts of New South Wales in late March 2021, and this event saw impacts in southern areas of Queensland. A slow-moving low-pressure system off the NSW coast contributed to intense rainfall in coastal areas of South East Queensland. A second low pressure system generated around central Australia which brought moist air from NSW leading to heavy rainfall over central southern Queensland.

Significant rainfall was recorded at various locations in Queensland, including monthly totals of: Byfield (973mm), Mt Tamborine (710mm), Point Lookout (647mm), and Brisbane (300mm).

This heavy rainfall lead to Major floods in the Bulloo, Herbert, Lockyer, Bremer, Warril, Lower Brisbane, Logan and Albert, Macintyre, Paroo, Condamine and Paroo Rivers.

Over 200 Flood Warnings and eight Emergency Alerts were issued by the Watch Desk, warning residents and stakeholders of rising flood waters. SES requests for assistance peaked between 21-23 March with over 1,100 requests.

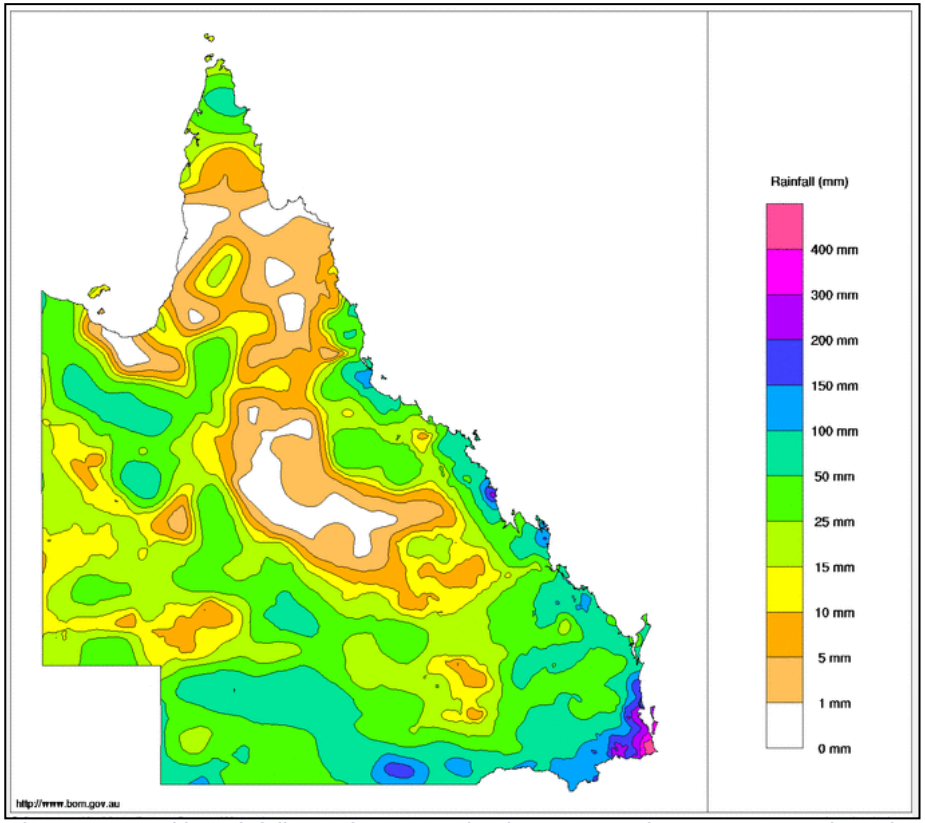


Figure 18: Weekly Rainfall map for Queensland, 20-26 March 2021. Heavy rain and flooding in southern parts of the state.

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Appendicies

Acronyms

ADF: Australian Defence Force

BoM: Bureau of Meteorology

DDMG: District Disaster Management Group

EA: Emergency Alert

EMPU: Emergency Management Planning Unit

LDMG: Local Disaster Management Group

LGA: Local Government Area

PSBA: Public Safety Business Agency

QDMA: Queensland Disaster Management Arrangements

QDMC: Queensland Disaster Management Committee

QEMR: Queensland Emergency Management Report

QFES: Queensland Fire and Emergency Service

QPS: Queensland Police Service

SAP: Situational Awareness Platform

SDCC: State Disaster Coordination Centre

SDCG: State Disaster Coordination Group

SES: State Emergency Service

SHECC: State Health Emergency Coordination Centre

SMS: Short Messaging Service

SOCB: State Operational Coordination Branch

STC: Severe Tropical Cyclone

TAMS: Task and Management System

TC: Tropical Cyclone

WoG: Whole of Government

Glossary

Activation: A state of operational change due to a significant weather or other disaster related event. Additional staff and resources become available to deal with the event.

Bureau of Meteorology: Is an agency of the Australian Federal Government responsible for providing weather services to Australia and surrounding areas.

Damaging Winds: Sustained winds of gale force (63 km/h) or more or wind gusts of 90 km/h or more.

Destructive Winds: Where winds are gusting to greater than or equal to 125km/h.

Dwellings: A house, flat, or other inhabited place.

Emergency Alert Campaign: An instance where Emergency Alert messages are sent to fixed line and mobile telephones within a defined polygon in response to an identified incident.

Event Management System: A cloud-based software system used by SDCC staff and stakeholders.

Hectares: A unit of measurement equal to 10,000m

Major Flood Warning: 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. (Bureau of Meteorology, 2021)

Public Safety Business Agency: Queensland State Government agency responsible for providing information and communications technology, financial, procurement, asset management and human resources services to QFES and other state government agencies.

Queensland Disaster Management Arrangements: Comprise a four tiered system: three levels of government – local, state and federal – and an additional state government tier between local and state levels known as disaster districts. These disaster districts enable a more efficient and effective operational service delivery in support of local communities and address the size, complexity and diversity of Queensland. (Qld Government, 2018)

Queensland Disaster Management Committee: The Queensland Disaster Management Committee (QDMC) provides strategic direction and State-level decision making for disaster management within the State and ensures PPRR activities are coordinated from a whole-of-government perspective and based on an all hazards approach. (QFES, 2018)

Severe Tropical Cyclone: A tropical cyclone that has attained maximum mean winds above 117 km/h (63 knots). Severe Tropical Cyclones are at Category 3 or above. (Weatherzone, 2021)

Severe Weather Events: In the context of this report, an event that causes a warning to be issued to the public or likely to cause disruption to general services in the community.

State Health Emergency Coordination Centre: The State Health Emergency Coordination Centre (SHECC) is the peak emergency coordination centre for state health response to an emergency incident, disaster or public health incident of state significance.

State Operational Coordination Branch: The State Operational Coordination Branch ensures that QFES maintains a state of operational readiness to fulfil its responsibilities. The Branch is responsible for state-wide monitoring and reporting on all disaster and emergency related issues impacting, or potentially impacting, Queensland within QFES and to all disaster managements stakeholders.

Task and Management System: A software program customised for use in the organising and coordinating SES response to requests for assistance.

Tropical Cyclone: A tropical depression of sufficient intensity to produce sustained gale force winds (sustained winds of 63 km/h or greater with gusts in excess of 90 km/h). (Weatherzone, 2021)