

Post Disaster Survey of Residents in Townsville Following Monsoonal Floods in January and February 2019

The Social Impacts and Preparedness Experiences of Households Which Experienced the Monsoonal Floods in Townsville in 2019

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Contents

Executive Summary

The Monsoonal Weather Event

Meteorological Conditions

Summary of 2019 Monsoon Trough Rainfall and Flood Event Impacts

Research Method of Online Household Surveys

Results

Disaster Preparation

Sources and Ratings of Information and Communication

Shortcomings and Areas for Improvement

Evacuation

Demographic Characteristics of Respondents

Summary

References

Appendix

Tables

- Table 1. Disaster Preparation
- Table 2. Suburb of Residence of Households impacted by the Flood
- Table 3. Primary Source of Information
- Table 4. Reason for Accessing Information
- Table 5. Official Sources used to Access Information
- Table 6. Ratings of Official Sources
- Table 7. Access to Bureau of Meteorology Information Sources
- Table 8. Ratings of Bureau of Meteorology Information Sources
- Table 9. Access to News Media Outlets
- Table 10. Ratings of News Media Sources of Information
- Table 11. Access to Community Based Sources of Information
- Table 12. Ratings of Community Based Sources of Information
- Table 13. Access to Non-government Organisation Sources of Information
- Table 14. Ratings of Non-government Organisation Information
- Table 15. Compilation of Open Ended Responses to the Most Useful Sources of Information
- Table 16. Inaccurate, Conflicting or Misleading Information
- Table 17. Word Counts on Aspects of Information, Warnings or Evacuations that Could be Improved
- Table 18. Overall Level of Trust in Information
- Table 19. Evacuation Plan
- Table 20. Location in Flood Zone
- Table 21. Evacuation Advice
- Table 22. Evacuation Action by Households
- Table 23. Open Ended Responses to evacuation Action
- Table 24. Destination of Evacuees
- Table 25. Gender of Respondents
- Table 26. Age Group of Respondents and 2021 Census Comparison
- Table 27. Educational Attainment of Respondents

Figures

- Figure 1. Word Cloud of most common suburbs of respondents
- Figure 2. Primary source of information
- Figure 3. Reason to access information

- Figure 4. Access to Official Sources
- Figure 5. Access to News Media Outlets
- Figure 6. Access to Community Groups or Sources
- Figure 7. Word Cloud of Most Useful Groups and Sources of Information
- Figure 8. Word Cloud of Inaccurate, Conflicting or Misleading Information
- Figure 9. Word Cloud on Aspects of Information, Warnings or Evacuations that Could be Improved
- Figure 10. Advice to Evacuate
- Figure 11. Response to Evacuation advice
- Figure 12. Word Cloud of What Influenced Household Decision to Evacuate or Stay in Place
- Figure 13. Destination of Evacuees
- Figure 14. Age group
- Figure 15. Educational Attainment

Appendix Tables

Table A1. Open Ended Responses to Question: Do you feel that you/your household was adequately prepared for a disaster before the flood event happened?

Table A2. Open Ended Responses and comments rating the information from the news media outlet source/groups?

Table A3. Please comment on any aspect of information, warnings or evacuations for this event that you believe could be improved?

Table A4. What influenced your decision to evacuate or stay in place? Open ended responses Online Survey Instrument: Townsville 2019 Monsoonal Floods

Executive Summary

- The 2019 Townsville monsoonal floods were caused by prolonged heavy rainfall and the release of water from the Ross River Dam, impacting thousands of properties and infrastructure.
- Preparedness: Only half of surveyed households felt adequately prepared for the flood, despite 65% having disaster kits and 74% having insurance.
- Evacuation Plans: 62% of respondents did not have an evacuation plan, and 50% were unaware their homes were in flood zones.
- Evacuation Actions: Over half of respondents evacuated, with 70% seeking refuge with friends or family, while only 4% used official evacuation centres.
- Sources of Information: Facebook, the Local Government Disaster Management Dashboard, and the Bureau of Meteorology were the primary sources of information during the event.
- Ratings of Information: Official sources like the Bureau of Meteorology were rated highly for accuracy, usefulness, and trustworthiness, while news media and community-based sources received mixed reviews.
- Misleading Information: 58% of respondents encountered inaccurate or conflicting information, particularly regarding dam releases and evacuation advice.
- Areas for Improvement: Suggestions included clearer evacuation alerts, earlier release of flood maps, more specific warnings, and better communication about evacuation centres and pet accommodation.
- Trust in Information: While overall trust in information was positive, only 9% found it completely trustworthy, reflecting the uncertainty of the event.
- Impact on locations: the suburbs of Idalia, Rosslea, and Fairfield Waters were among the most affected due to their proximity to the Ross River and low-lying terrain.
- Community Support: Informal networks, such as friends and family, played a significant role in evacuation and recovery efforts.
- Challenges with Alerts: Text messages were perceived as often vague, overly frequent, and lacking specific geographic details, leading to both confusion and complacency.
- Evacuation Influences: Decisions to evacuate were influenced by rising water levels, advice from emergency services, and concerns for safety, pets, and children.
- Lessons Learned: The event highlighted the need for improved disaster planning, including better flood mapping, targeted alerts, and mandatory evacuations for high-risk areas.
- Demographics of Respondents: The survey sample was skewed towards older, highly educated residents, which may not fully represent the broader Townsville population.

The Monsoonal Weather Event

The floods that inundated large parts of Townsville in late January and early February 2019 are described by the Bureau of Meteorology in its Technical Flood Report for January and February 2019, cited in references. Sections of this report describing the impact upon Townsville are copied below and cited.

"Meteorological Conditions

In late January, a burst of monsoonal westerly winds invigorated a weak monsoon trough located through the Arafura Sea and northern Gulf of Carpentaria. Several low-pressure centres were initially present around Cape York, before a tropical low designated '13U'2 was identified over land, east of Mapoon on 23 January 2019. By 25 January 2019, the monsoon trough stretched across the northern tropics from tropical cyclone Riley in the Indian Ocean, to 13U located over the Cape York Peninsula. The low moved westward over the northeastern Gulf of Carpentaria the following day and deepened. Tropical cyclone advices were issued for the Gulf of Carpentaria coast, but the system moved back over the Cape York Peninsula near Cape Keerweer early on 26 January 2019 and did not develop into a tropical cyclone.

Later on 26 January 2019, thunderstorms developed on the monsoon trough and produced torrential rainfall about the Mossman and Daintree catchments of the North Tropical Coast District. In the 24 hours to 9am on 27 January 2019, Mossman Central Mill recorded 562 mm, China Camp 426 mm, and Daintree Village 405 mm.

Tropical low 13U then moved slowly southwest into the southern Gulf Country and remained there between 31 January and 5 February 2019. At the same time, the monsoon trough extended eastwards from this low through Cardwell and into the Coral Sea. A blocking high in the Tasman Sea contributed to keeping the monsoon trough near-stationary during this period which directed humid easterly flow onto the coast to the south of the monsoon trough.

This humid easterly flow resulted in torrential rain for about a week both near the tropical low over northwest Queensland and to south of the monsoon trough over the Herbert and Lower Burdekin District, most notably Townsville and surrounding areas. The monsoon trough and embedded lows continued to track slowly eastwards during 8 February 2019, with rainfall easing over Queensland's interior. By 9 February 2019, the monsoon trough and embedded lows had moved off the Queensland coast." (Bureau of Meteorology 2019 page 6)

"The heaviest rainfall recorded during the event occurred in the Townsville, Bluewater and Paluma areas, with some locations exceeding their average annual rainfall in less than a week. More than 2 metres of rainfall was recorded over a 12-day period at numerous locations. Some significant multiday rainfall totals are shown in Table 1.

Station number	Station name	Multi-day rainfall total (mm)	End date of accumulation period	Days of accumulation
532047	Upper Bluewater Alert	2223.0	2019-02-06	10
532049	Paluma Alert	2212.0	2019-02-05	10
33307	Woolshed	1669.2	2019-02-05	7
532091	Rollingstone Al	1425.0	2019-02-05	7
32040	Townsville Aero ³	1259.8	2019-02-08	10

Table 1. Significant multi-day rainfall totals at sites around Townsville for January to February" (Bureau of Meteorology 2019 page 8)

"Widespread heavy rainfall and major flooding occurred over coastal and inland areas between Cardwell and Bowen from 29 January 2019 to 9 February 2019. This included the Herbert, Upper Burdekin, Bohle, Ross and Haughton Rivers. Heavy rainfall associated with the tropical low and rising

flood levels also affected the Flinders and Leichhardt Rivers in the Gulf Country from 31 January 2019 to 26 February 2019.

The weather pattern remained largely static for the following five days, with heavy rain continuing to fall in coastal areas between Cardwell and Bowen, and across inland areas between Mt Isa and Hughenden.

The most significantly impacted areas near the coast included:

- Townsville in the Ross River catchment, where new multi-day rainfall and peak flood height records were set. Infrastructure, businesses and thousands of properties were impacted.
- Giru on the Haughton River, where equal record-flood levels were recorded, and the town remained isolated for over a week.
- The Burdekin River, where the road crossing at Sellheim (Macrossan Bridge) was flooded for over a week, cutting the flow of traffic between Charters Towers and Townsville. Burdekin Falls Dam (Queensland's largest water storage) spilled, with approximately 16,000 m3/s of water flowing over the spillway at the peak of the flooding."

(Bureau of Meteorology 2019 pages 11-12)

"Ross-Bohle Catchment Summary

The Ross-Bohle catchment includes the Ross, Bohle and Black rivers and Bluewater Creek located around and just to the north of Townsville with a catchment area of approximately 750 square kilometres.

The flood warning service provided for the Ross-Bohle River catchment for this event is summarised in Table 42

Ross/Bohle Rivers flood warning services overview			
No of Flood Warnings issued	77		
Date of Flood Watch	Saturday 26 January 2019 (issue #4)		
Date of Initial Flood Warning	Tuesday 29 January 2019		
Date of Final Flood Warning	Wednesday 13 February 2019		
Forecast locations affected	Aplin Weir and Mt Bohle		

Table 42. Summary of Ross and Bohle rivers flood warning services

The Ross, Bohle and Blue rivers and Blackwater Creek catchments experienced heavy rainfall during late January to early February. Over 1000 mm was recorded at every rain gaugeover the 10 days to 9am on 4 February. The highest 10-day total within the period 23 January to 8 February 2019 was recorded at the Upper Bluewater Alert rain gauge, with a total of 2223 mm recorded to 9am on 6 February 2019. Upper Bluewater Alert also recorded the highest total across the event (2414 mm). The highest 24-hour total recorded within these catchments was at Woodlands Alert (located immediately upstream of Ross River Dam) with a total of 402 mm to 9am on 4 February 2019.

At most river level locations in the Ross-Bohle catchment, multiple peaks were observed during the event. In particular, Bluewater Creek had three separate peaks above the major flood level within a three-day period. The Ross River Dam spillway gates were fully opened on the evening of Sunday 3 February and Aplin Weir Alert (downstream of the Ross River Dam) peaked with a record major flood." (Bureau of Meteorology 2019 pages 50-51 & 54)

Summary of 2019 Monsoon Trough Rainfall and Flood Event Impacts

The "2019 Monsoon Trough Rainfall and Flood Event" report, presented by the Inspector-General of Emergency Management, evaluated the effectiveness of recovery efforts in Queensland after three years had elapsed. The report, developed in consultation with a range of stakeholders, highlighted 22 examples of good practice and significant positive changes in disaster recovery delivery since 2019. It did not compare the 2019 recovery efforts to current practices but serves as a reference for ongoing improvements.

The report assesses the recovery of 39 local government areas (LGAs) impacted by the monsoon trough from January 25 to February 14, 2019. The North and Far North Queensland Monsoon Trough State Recovery Plan (2019-2021) guided the recovery, focusing on sustainability and resilience across five areas of recovery: human and social, economic, building, roads and transport, and environment. (Office of the Inspector-General of Emergency Management 2024) Key findings included:

The evolution of state-level recovery plans.

The lack of a defined "effectiveness" in Queensland's disaster management legislation.

Alignment of recovery outcomes with the Australian Government's evaluation framework.

The importance of clearly defined recovery outcomes for evaluating effectiveness.

The need for specific, measurable, achievable, relevant, and time-bound (SMART) activities.

Insufficient data for some recovery activities.

The need for comprehensive data collection by state agencies.

Human and Social Recovery:

Thirty six activities focused on housing, health, psychosocial support, education, and social services. Community Development Officers (CDOs) facilitated community-led initiatives and collaboration. Local organizations provided trusted recovery services.

Challenges included coordinating multiple recovery partners and addressing long-term housing issues.

Economic Recovery:

Twenty five activities aimed at supporting small businesses, primary industries, and tourism.

The Queensland Small Business Recovery Centre (QSBRC) and mobile support roadshows were perceived to be effective.

Awareness of long-term mental health risks for small business owners was highlighted.

Insurance issues and the need for better awareness of ombudsman services were noted.

Building Recovery:

Fourteen activities focused on repairing and rebuilding residential, commercial, and public infrastructure.

Local recovery efforts were supported by the Building Recovery Group (BRG).

The Townsville Community Rebuild Project provided significant support to vulnerable households. Challenges included delays in repairs and the need for better referral pathways.

Roads and Transport Recovery:

Seven activities aimed at restoring critical transport routes and improving infrastructure resilience. The Department of Transport and Main Roads (DTMR) efficiently repaired key routes, restoring supply

The \$30 million Betterment Program improved flood immunity and resilience at 10 sites.

Environment Recovery:

Sixteen activities focused on minimizing pollution, restoring biodiversity, and managing parks and forests

The Environmental Recovery Program delivered 145 projects despite challenges like remote locations and weather constraints.

The Weeds and Pest Management Program and Riparian and Coastal Recovery Program were effective. The report emphasised the importance of continuous improvement, research, and collaboration across all lines of recovery. It highlighted the need for better data sharing, community engagement, and adaptive approaches to recovery planning and implementation. The findings and insights aimed

to inform future disaster recovery efforts and enhance the resilience and sustainability of Queensland communities.

Research Method of Online Household Surveys

Centre for Disaster Studies survey instruments have been employed extensively in communities throughout Queensland and elsewhere in Australia, for almost 30 years. Each survey is modified slightly in relation to the place, time, event and specific issues that had already been identified by media and response organisations, but the primary instrument is quite standardised.

A qualitative questionnaire approach was used:

- a) Semi-structured online survey with householders, individuals and residents in affected communities. These usually take 15 to 30 minutes. Most questions are factual, very short answer, avoid accounts of stressful situations, or require a selection from suggested responses. The only personal questions are factual and straightforward based on census characteristics;
- b) Observations of locations by researchers. Disaster impacts for specific places are collected from emergency management and local government organisations to provide context to the residents' responses. This is on-going during the time of the surveys.

Apart from using the results of surveys to analyse community experience of warnings, preparation and awareness, the researchers of the CDS have also contributed to methodological analysis of post disaster studies – for example:

Cottrell, A. and King, D. 2010. Social assessment as a complementary tool to hazard risk assessment and disaster planning. The Australasian Journal of Disaster and Trauma Studies.

Gurtner, Y., Cottrell, A. and King, D. 2008 PRE and RAPID. Community Hazard Recovery Needs and Capacity Assessment. Unpublished Report. Department of Communities & James Cook University Research Project.

Following JCU Human Ethics approval (H9365) the electronic survey was distributed predominantly via local community based social media groups on Facebook. Consistent with previous CDS research, the questions covered the following themes:

- Household Preparedness (kits, plans, insurance)
- Event impacts and evacuations
- Sources of event information, and perceived credibility (and misinformation)
- Basic demographic data

Initially, a brief introduction, overview, and link to the survey were sent to relevant online group administrator/s requesting permission to post and distribute. The approved social media post encouraged community members and respondents to share the link to anyone that may have been impacted by either event. Established contacts from the local council community disaster recovery committees were additionally approached via email to promote the survey throughout their networks. Paper-based versions of the survey were available on request. As the intent was to accurately capture and document lived experiences of events, the surveys were closed on 1 March 2019. The survey instrument and explanation are reproduced in the appendix.

Results

The online survey was delivered through Survey Monkey which produced results of responses in an excel database. Each question has been downloaded as a simple table showing the numbers of each response. These have also been displayed as percentages of the number of responses to each question. For clarity each percentage has been rounded to the nearest whole number, or percents of less than 1 shown as a decimal. Consequently, the totals in each percentage column may add to 99 to 101, but equalled 100 before rounding. An initial 705 people started the survey and responded to some of the questions. Responses to many of the questions were made by a subset of people, with around 550 answering questions in most cases.

A summary of survey questions is included in the appendix. The question, as worded in the survey, is included in the column heading of each table. Open ended responses to some of the questions are listed as written by respondents in the appendix. Some analysis of key words and concepts has been summarised from open ended responses, and Word Clouds are used to illustrate key words. Tables and graphs are grouped into clusters of response sections. These are Disaster Preparation, Residential Location of Respondents, Sources and ratings of Information and Communication, Shortcomings and Areas for Improvement, Evacuation, and Demographic Characteristics of Respondents.

Disaster Preparation

Almost two thirds of the respondents had prepared a disaster kit and almost three quarters had household and/or contents insurance, but only half of the people felt that they were adequately prepared for this flood. The practice in Townsville and northern Queensland is to prepare for the annual cyclone season between November and April. The disaster kit is part of that preparation. Floods are frequently a part of cyclone impact, but a recent increase in extreme or severe floods goes beyond normal expectations and preparation activities.

Table 1. Disaster Preparation

Do you feel that you/your household was adequately prepared for a disaster before the flood event happened?	Number	Percent
Yes	356	51
No	284	40
Other	65	9
Total Responses	705	100
See appendix for open ended responses to this question		
Did you/your household have a disaster kit prepared before the event (minimum 3 days food, water and supplies)?		
Yes	458	65
No	247	35
Total Responses	705	100
Did you/your household have household and/or contents insurance before the event?		
Yes	522	74
No	170	24
Other response	13	2
TOTAL	705	100

While it is positive that 74% of households are covered by insurance, the 24% who are not, are a cause for concern. The demographic characteristics of the respondents are skewed towards older and highly educated residents, among whom it may be reasonable to expect higher levels of insurance cover than

among the bulk of the population. Insurance aids recovery, with a lack of insurance increasing the vulnerability, and reducing the resilience, of a significant proportion of households. This issue extends to a lack of disaster kit and a strong perception of unreadiness for this severe flood event. Table 1 thus indicates a significant lack of resilience among many of the people who responded to this survey.

Residential Location of Respondents

The monsoonal flood impacted Townsville residents very unequally. Ross dam at the southern end of Kelso was constructed for flood control, supplementing earlier weir flood controls further down the river. However, it is also used as a primary reservoir supplying water to the residents and businesses of the city. These uses are conflicting, with a tendency on the part of the dam management authority to maintain high levels of water for general residential use. After the severe flood of early 1998, the flood sluice or spillway gates in the main dam wall were modified to reduce the maximum water level and to allow greater release of water in the event of future floods. While the catchment of the Ross River upstream of the dam is relatively small, extreme rainfall events such as in 2019 are capable of channelling enormous quantities of water into the dam in a very short time. As the Ross dam filled to a level far above capacity at about 247% by the beginning of February the spillway gates were opened to release water. Immediately below the dam the Ross River flows in a deep channel between hills and high levees. Once it turns sharply eastwards at the Willows, the channel becomes progressively shallow downstream with low banks. Consequently the release of water especially impacted the low lying flat landscapes of the suburbs towards the mouth of the river. However, the extreme rain event occurred across the city and the whole region, such that most creeks and rivers, old river channels, drainage areas and flat lands were inundated.

Survey respondents stated their suburb or postcode of residence. Of the 705 places that were identified, the most commonly repeated names are illustrated in the word cloud in figure 1, and are further grouped into contiguous clusters in table 2. Some people identified their residence in a couple of adjacent locations, while others were listed as neighbourhoods within suburbs, or they used the postcode, which included multiple suburbs. There are some non Townsville locations, but the flood event extended over the whole region such that they shared the same experience.





Note: Many double named locations are compacted for clearer identification.

Table 2. Suburb of Residence of Households impacted by the Flood

Legation of Personal onter suburbs or nected as	•	l
Location of Respondents: suburbs or postcodes	Number	Percentage
Idalia, Cluden & Fairfield Waters, Rosslea	162	23
Oonoonba, Roseneath, 4811	49	7
4818 – Northern Beaches – Bushland Beach,	45	6
Deeragun, North Shore, Jensen, Bluewater, Black River, Lynam, Burdell, Mount Low, Jensen, Shaw		
Hermit Park	43	6
	43	6
Railway Estate		
Annandale	41	6
Kirwan & 4817	38	5
Kelso, 4815, Upper Ross, Condon, Rasmussen	30	
Aitkenvale	21	
4814 – Garbutt, Heatley, Mount Louisa	19	
Cranbrook	15	
Mundingburra	15	
4810 - Townsville City, West End, Townsville, South	15	
Townsville		
4812 - Hermit Park, Hyde Park, Mundingburra,	14	
Mysterton, Gulliver, Currajong		
Douglas	14	
West End	12	
Heatley & Vincent	12	
Mount Louisa	11	
North Ward	11	
Wulguru	11	
South Townsville	9	
4819 – Magnetic Island, Horseshoe, Nelly and Picnic	8	
Bays		
Hyde Park	7	
4816 - Alligator Creek, Balgal Beach, Nome etc.	7	
Belgian Gardens	6	
Pimlico	6	
Townsville& City	7	
Alice River	4	
Currajong	4	
Garbutt	4	
Gulliver	3	
Mysterton	3	
Ayr	2	
Bohle Plains	2	
4807 – Cairns environs	1	
Cardwell	1	
Charters Towers	1	
Cungulla	1	
Gumlow	1	
Hervey Range	1	
	1	
Holloways Beach		
Ingham Oak Valley	1	
Oak Valley	1	
Pallarenda	1	
Purono Park	1	
Toonpan	1	
Grand Total	705	

Table 2 indicates percentages for only the major clusters of flooded suburbs. All named places are listed. While a number of locations are numerically small, they cumulatively add to the overall impact. The first two clusters of Idalia, Cluden & Fairfield Waters, Rosslea, Oonoonba, Roseneath, and postcode 4811 (which incorporates them) are vulnerable to flooding in terms of their altitude close to sea level and flat terrain, but their principal impact was a consequence of the release of flood water from the dam. Additional clusters of locations in Mundingburra, Aitkenvale, postcode 4810, Townsville City, West End, South Townsville, postcode 4812, Hermit Park, Hyde Park, Mysterton, Gulliver and Currajong were also subject to direct river flooding or to inundation from former channels of the Ross River.

A secondary primary impact area is the cluster of locations in postcode 4818 comprising Northern Beaches, Bushland Beach, Deeragun, North Shore, Jensen, Bluewater, Black River, Lynam, Burdell, Mount Low, Jensen and Shaw. These low altitude, flat terrain outer suburbs are also drained by the Bohle, Bluewater and Black Rivers and their tributary creeks, which frequently overflow their banks during flood and high rainfall events.

Sources and Ratings of Information and Communication

The major focus of the online survey was on sources of information and modes of communication, as these contribute towards individual and household education and awareness of disaster risk reduction. Education and awareness drive preparedness and build resilience to hazards and disaster.

Table 3. Primary Source of Information

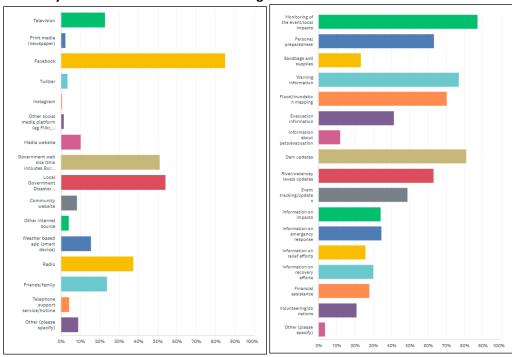
What was your primary source of information regarding the flood event (you may select more than one option)	Number	Percent of all responses
Facebook	487	26
Local Government Disaster Management Dashboard	310	16
Government web site (this includes Bureau of Meteorology)	293	15
Radio	215	11
Friends/family	137	7
Television	130	7
Weather based app (smart device)	89	5
Media website	58	3
Other	51	3
Community website	47	2
Telephone support service/hotline	24	1
Other internet source	23	1
Twitter	19	1
Print media (newspaper)	14	1
Other social media platform (eg Flikr, YouTube,	8	0.4
blogs)		
Instagram	4	0.2
Total	1909	100

Table 2, which is supplemented by figure 2, indicates the primary sources of information for preparedness, and response actions. Respondents were invited to select more than one option. Not all of the initial 705 people who started the survey, responded to most of the subsequent questions. The number of respondents was generally around 560.

Three platforms are dominant: Facebook, Townsville City Council Local Government Disaster Management Dashboard, and a Government web site (this includes Bureau of Meteorology). The next group of information sources comprised Radio, Friends and family, and Television, forming 25% of all sources accessed, compared to 57% for Facebook, Dashboard and Bom site. As these 6 sources dominate we can infer that when people commented on shortcomings, failures and improvements that may be made for future events (open ended questions towards the end of the survey) their responses were primarily influenced by these information platforms.

Figure 2. Primary source of information

Figure 3. Reason to access information



Note: Percentages are calculated as a percent of all respondents.

Figure 3 and table 4 indicate the reasons people gave for accessing information about the flood. The same group of respondents answered this question as in table 3, but selected a far greater number of reasons, with most people choosing 3 or 4 options. Given that about 560 people responded the vast majority of them were concerned with the top 4 reasons: monitoring of the event and local impacts, dam updates, warning information, and flood/inundation mapping.

Table 4. Reason for Accessing Information

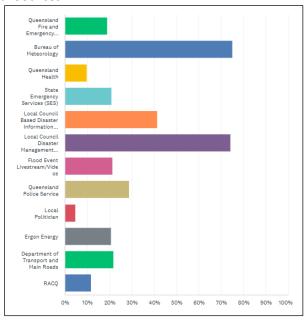
Please indicate the main reason you accessed	Number	Percent
information regarding the flood event (you may		of
select more than one option)		responses
Monitoring of the event/local impacts	499	12
Dam updates	463	11
Warning information	440	10
Flood/inundation mapping	403	9
Personal preparedness	362	9
River/waterway levels updates	361	9
Event tracking/updates	279	7
Evacuation information	237	6
Information on emergency response	197	5
Information on impacts	195	5
Information on recovery efforts	172	4
Financial assistance	160	4
Information on relief efforts	147	3
Sandbags and supplies	133	3
Volunteering/donations	119	3
Information about pets/evacuation	68	2
Other	21	0.5
Total	4256	100

Table 5. Official Sources used to Access Information

Please indicate any official source/group you accessed to prepare or obtain information regarding the flood event	Number	Percent of
(you may select more than one option)		responses
Bureau of Meteorology	429	21
Local Council Disaster Management Dashboard	425	21
Local Council Based Disaster Information Group	236	12
Queensland Police Service	165	8
Department of Transport and Main Roads	124	6
Flood Event Livestream/Videos	122	6
State Emergency Services (SES)	119	6
Ergon Energy	118	6
Queensland Fire and Emergency Services	108	5
RACQ	67	3
Queensland Health	56	3
Local Politician	27	1
Total	1996	100

Table 5 and figure 4 focus on official sources of information and are an extension of the primary source of information, outlined above. The Bureau of Meteorology and Townsville City Council disaster management dashboard along with its related Council disaster information group comprise over half of access to official sources.

Figure 4. Access to Official Sources



Note: Percentages are calculated as a percent of all respondents.

Bureau of Meteorology and the Townsville City Council sources of information dominate the responses in table 6 where people were asked to rate official sources generically. Table 5 indicates that the 705 respondents clearly accessed a number of official sources – average of almost 3 per respondent. The ratings of the official sources are therefore most likely to be concerned primarily with the dominant sources of information – BoM and Council.

Table 6. Ratings of Official Sources

How would you rate the information provided by these official sources?	Accurate	%	Up-to- date	%	Useful	%	Trustworthy	%
Completely	140	25	140	25	139	25	137	26
Very	261	46	261	46	260	46	261	47
Moderately	97	17	97	17	98	17	97	17
Somewhat	41	7	41	7	41	7	41	7
Not at all	12	2	12	2	12	2	12	2
N/A	10	2	10	2	10	2	10	2
No response	6	1	5	1	5	1	0	0
Grand Total	567		566		565		558	

Four categories of ratings were presented to respondents. Although there is some relationship and overlap between them - for example accurate can be assumed to influence the idea of usefulness – each category is otherwise mutually exclusive as far as the ratings are concerned. The ratings of official sources within each of the four categories, are on a 5 point scale from completely through very, moderately and somewhat to not at all. A small number of respondents chose not applicable or gave no response, while still answering some of the questions. At this stage of the survey around 80% of the initial 705 respondents answered most questions. It is assumed that the other 20% lost interest in the survey, or did not feel that a specific question was relevant to their experience. The first question in the survey asked people 'Were you or your household impacted in any way by the major flood event in North Queensland during late January/February 2019': 694 people indicated yes and were asked to complete the survey; only 11 people responded no and were instructed not to continue with the survey although most chose to continue, presumably because their no response was only that they had not directly experienced inundation.

Table 7. Access to Bureau of Meteorology Information Sources

Please indicate if you accessed weather based information generated by the Bureau of Meteorology regarding this event						
Bureau of Meteorology website	464	35				
Bureau of Meteorology facebook page	182	14				
Bureau of Meteorology severe weather warnings	315	24				
Bureau of Meteorology rainfall tracking maps	248	19				
Bureau of Meteorology live streams/videos	104	8				
None	26	2				
Total (% rounded)	1339	102				

Table 7 and the following ratings question focus closer on the Bureau of Meteorology information sources. The Bureau of Meteorology was a significant partner with the Centre for Disaster Studies in sponsoring post disaster surveys from the mid 1990s onwards. The Bureau was interested in feedback concerning its hazard messaging, and frequently responded to that feedback in its development of information platforms and language. It is also significant that the Bureau of Meteorology has always been a major source of information to households, and remains a primary source. However, when citing the BoM as a source of hazard information there are a number of products or webpages that people use. The main ones are identified in table 7, and are then generically rated in table 8.

Table 8. Ratings of Bureau of Meteorology Information Sources

Please rate the information generated by the Bureau of Meteorology	Accurate	%	Up-to- date	%	Useful	%	Trustworthy	%
Completely	142	25	129	23	149	26	179	32
Very	280	49	261	46	246	44	246	44
Moderately	106	19	126	22	115	20	95	17
Somewhat	21	4	24	4	28	5	20	4
Not at all	3	0.5	4	1	9	2	3	0.5
N/A	19	3	20	4	17	3	20	4
Grand Total	571		564	100	564	100	563	

Table 6 in rating all official sources and table 8 rating just the BoM are inevitably very similar, given the significant overlap of the BoM sources of information. The responses are very similar in each table. Each of the 4 categories indicate very similar ratings where completely and very (accurate, up to date, useful and trustworthy) are around three quarters of all responses. Only up to date falls slightly lower, but still around 70% in each table. The difference is selection of completely or very – accurate etc – may often represent a personality difference on the part of respondents, rather than a qualitative evaluation. Some people never tick the outer, more extreme, option. Thus is makes more sense to group the two positive responses, and the negatives of somewhat or not at all – accurate etc. The negatives are insignificant, but around 17 to 20% of respondents rated these sources of information as moderately – accurate etc. This ambivalent, or less impressed rating, suggests that improvements may need to be considered.

Table 9. Access to News Media Outlets

Please indicate any news media outlet source/group you accessed to prepare or obtain information regarding the flood event	Number	Percent of Responses
(you may select more than one option)		
ABC News	251	20
Local commercial radio station	218	17
7 News	217	17
ABC radio	151	12
WIN News	149	12
None	91	7
Online news based services (eg. news.com)	80	6
Other print based news network (eg. Local	55	4
newspaper, The Australian, Guardian, Reuters		
etc)		
SBS News	25	2
Other commercial news network	24	2
Total	1261	100

ABC News SBS News WIN News commercial news network Other print based news network (eg.... Online news (eg. news.com) radio station 30% 80% 90% 20% 40% 50% 70% 100%

Figure 5. Access to News Media Outlets

Note: Percentages are calculated as a percent of all respondents.

Table 9 and figure 5 illustrate access to all news media outlets. The popularity of ABC may in part reflect the older demographic of most of the respondents. People could select more than one option, as in previous questions about official sources and all sources. The number of selections, 1261, is significantly less than access to official sources of information. Ratings, shown in table 10, are also significantly lower, with around 50% or less rating completely and very. The lowest ratings are significantly higher, as are moderate ratings. People were less impressed with media information that official sources.

Table 10. Ratings of News Media Sources of Information

Please rate the information from the news media outlet source/groups	Accurate	%	Up-to- date	%	Useful	%	Trustworthy	%
Completely	55	10	67	12	75	13	70	12
Very	231	40	211	37	206	36	207	36
Moderately	158	28	148	26	148	26	150	26
Somewhat	44	8	58	10	52	9	55	10
Not at all	14	2	19	3	25	4	23	4
N/A	69	12	67	12	66	12	65	11
Grand Total	571	100	570	100	572	100	570	100

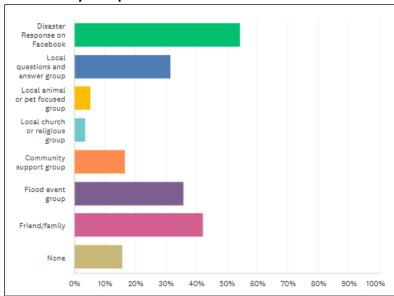
Note: Other open ended comments on these ratings are in the appendix.

Community based sources of information have potential to inform local situations and to give reassurance or community support. Facebook, family and friends comprise almost half of responses, but are not necessarily mutually exclusive. The flood event group is an interesting emergent community entity, but we did not gather any more detailed information on the organisation and access to this group.

Table 11. Access to Community Based Sources of Information

Please indicate any community based forum source/group you accessed to prepare or obtain information regarding the flood event (you may select more than one option)	Number	Percent
Disaster Response on Facebook	311	26
Friend/family	242	21
Flood event group	205	17
Local questions and answer group	180	15
Community support group	95	8
None	90	8
Local animal or pet focused group	31	3
Local church or religious group	21	2
Total	1175	100

Figure 6. Access to Community Groups or Sources



Note: Percentages are calculated as a percent of all respondents.

Table 12. Ratings of Community Based Sources of Information

Please rate the information from community based forum sources/groups	Accurate	%	Up-to- date	%	Useful	%	Trustworthy	%
Completely	53	9	52	9	53	9	78	14
Very	177	31	176	31	176	31	223	39
Moderately	178	31	177	31	178	31	139	24
Somewhat	66	12	66	12	66	12	35	6
Not at all	5	1	5	1	5	1	2	0.4
N/A	89	16	89	16	89	16	90	16
Grand Total	572	100	567	100	569	100	568	100

The ratings on community based sources of information are much less positive than official sources. Accurate, up to date and useful were rated completely and very by 40% of responses, but trustworthy

at 53% is significantly higher. While not at all is insignificant, moderately and somewhat – accurate etc. – are as significant as the most positive ratings. It is ;likely that people used these sources of information as a supplement to more official sources.

Table 13. Access to Non-government Organisation Sources of Information

Please indicate any non-government organisations or agency source/groups you accessed to prepare or obtain information regarding the flood event (you may select more than one option)	Number	Percent
None	511	84
GIVIT	36	6
Australian Red Cross	19	3
The Salvation Army	16	3
Volunteering Queensland	14	2
Lifeline	7	1
RSPCA	4	1
Total	607	100

Use of NGO (non government organisation) sources is quite minimal -84% of responses indicated none, and this is reflected in the ratings in table 14.

Table 14. Ratings of Non-government Organisation Information

Please rate the information from non-government organisations or agency sources/groups	Accurate	%	Up- to- date	%	Useful	%	Trustworthy	%
Completely	22	4	22	4	25	4	28	5
Very	57	10	51	9	49	9	54	10
Moderately	29	5	31	5	34	6	25	4
Somewhat	12	2	12	2	10	2	10	2
Not at all	1	0.2	2	0.4	3	0.3	2	0.4
N/A	449	79	448	79	447	79	448	79
Grand Total	570		566		568		567	

Figure 7. Word Cloud of Most Useful Groups and Sources of Information

Q22: Which group/source did you find most useful/valuable?

Facebook is cited 209 times. BOM is cited 85 times and ABC 32. Local is cited 85 times.

```
Localdisastermanagementdashboard Question
                       InformationAnnandale
                                        support CouncilDisasterDashboard
                    Recovery Group
     Disaster
                                       Notice questions
                          FNQ Face TV DASH
             Oonoonba Cyclone
BOM
                             Radar
                                      event Staying
            ABC website
                         station management
    Storms
     emergency watch All Council
                                         page Dam None
                                 City
                                      sites pages
    Social Railway Aware
                        Village
                               flood
                                                 disasterdashboard
                                          groups
                                            QPS dashboard
             NQ updates
                                    suburb answers
Family TLDMG Twitter
                       government Weather Army
                                                   Committee
         Online board LOCal book Bulletin Mayors site
       response one police messenger
                                         Triple
           Residents
                       Neighbourhood media answer
  Estate
                                        Chasers
         Idalia Wally's
                          Neighbours
            Higgins
                     Disastermanagementdashboard
      QFES
                      OWNSVIIIe Localdisasterdashboard
```

Figure 7 and table 15 illustrate the open ended responses to the question 'Which group/source did you find most useful/valuable?' The responses varied extensively in length, detail and grammar etc. For example responses identified Bureau of Meteorology, or BOM, or BoM and a few other variants, including capitalisation or lower case etc. Each of these tabulate and appear in word clouds as separate entities. Responses such as the disaster management dashboard listed as separate words. The open ended responses were extensively edited to reduce case, title, spelling and spacing variations, including the compression of multi word entities into a single word chain.

There were also a number of descriptive words such as 'local', and generalised nouns like 'all, aware and answers', which cropped up in various contexts but were important pointers to peoples' needs. Otherwise Word Clouds often ignore common words like 'to' or 'is' etc. The intention in both the word cloud and the table, was to isolate the most commonly occurring key words that related to sources of information. Once words, phrases and titles had been standardised between responses, the generation of the word cloud selected from over 100 most commonly occurring words. Facebook and BOM really stand out, but local, disaster, group and weather are also commonly repeated terms, that are not specifically sources of information but are important qualifiers.

Table 15 takes 38 of the most commonly occurring sources of information. These are listed in table 15, where AI was used to generate word counts. Many responses (283) were long and detailed and referred to multiple combinations of sources without actually answering the question as to which was the most useful. The sources that are cited in these response are included in the Word Cloud but as they indicated multiple sources of information without saying what was the most useful, these are not listed in table 15 in the single row entities.

Table 15. Compilation of Open Ended Responses to the Most Useful Sources of Information

Which group/source did you find most useful/valuable?	Number of times cited
BOM	84
Facebook (includes groups, disaster response, social media & local)	89
Wally's Weather	42
ABC radio (includes local & news)	26
None or nil	13
Disaster dashboard (includes management, TCC, local and pages)	33
Radio	8
Oz Cyclone Chasers	7
Townsville Storms	6
Friends, family & neighbours	18
Disaster response	5
Townsville Questions and answers	4
Friends and family	4
Idalia Facebook group	4
Flood event group	4
Army	3
LDMG	3
Disaster management	3
NQ flood watch	3
Local radio station	2
QFES	2
Dam levels	2
Radar	2
Disaster management site	2
Townsville Disaster Group	2
All	2
Townsville Storm	2
Local suburb Facebook page	2
Facebook weather pages	2
Community group	2
Annandale Staying Aware Facebook	2
QPS	2
suburb Facebook group	2
FNQ Flood watch	2
Community support group	2
Higgins storm Chasers	2
Townsville disaster management	2
Local council	2
Various sites described and cited once (including Facebook, Local,	283
Dashboard combinations)	
Total	680

Note: Facebook is cited alone or in combinations of sites and locations 209 times. BOM is cited 85 times and ABC 32. Local is cited 85 times. Many respondents cited more than one source. Not all respondents to the survey addressed this question option.

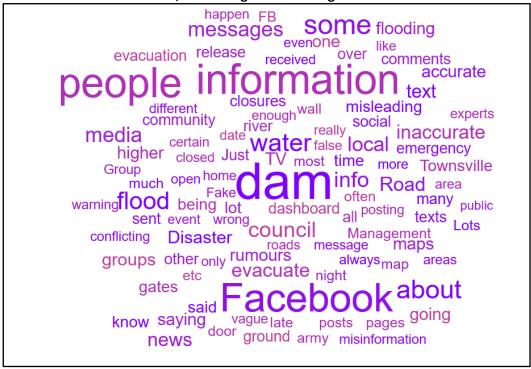
Shortcomings and Areas for Improvement

As described above for figure 7 and table 15 which compiled open ended responses, the same method was used to sort and summarise inaccurate, misleading or conflicting information, and the subsequent word cloud figure 9 illustrating comments on aspects of information, warnings or evacuations that could be improved. Over half of the respondents felt that information was in various ways inaccurate, conflicting or misleading.

Table 16. Inaccurate, Conflicting or Misleading Information

Did you come across any inaccurate, conflicting or misleading information regarding the flood event?	Number	Percent
Yes	328	58
No	242	42
Total	570	100

Figure 8. Word Cloud of Inaccurate, Conflicting or Misleading Information



The word cloud very clearly highlights people, information, dam and facebook as communicating inaccurate, conflicting or misleading information. The word 'People' occurred in a lot of statements in a variety of contexts — people spreading misleading information, people as recipients of misleading information and people impacted in various ways that were not expected or could have been avoided. Following from this question and responses, survey respondents were asked to comment on aspects of information, warnings or evacuations that could be improved.

While the misleading aspects were concentrated into a small range of dominant issues, ideas for improvement were much more varied and specific. These responses are summarised in figure 9 and table 17. The full list of responses to this question are reproduced in table A3 in the appendix. The appendices have not been edited, but are reproduced verbatim. As with the previous word clouds and summary tables, above, raw statements, words and terms can confuse summaries and illustrations.

Words that were entered into the word cloud, and used to generate word counts, were edited to ensure the same font, spacing and spelling. This avoided some duplication.

Figure 9. Word Cloud of Comments on Aspects of Information, Warnings or Evacuations that Could be Improved

```
message street first perhaps expect
                                           move
                                                           expect radio
                    only
      concerned
                           enough
      evacuation days
                                                 inundation
                                                                         every
                                                             expected None
                                            advice
                            warnings
   having decision well one
                                               waters two ground provided road
  go due make released available general know vague rather think hour told
                                                       pets residents
                                               provide
                                                                       knew
                                                             police
                                                   flooding
                                                                       any
              other informed like zone
                                            best council
                                                            through
                                                                   need
                                           higher
                                                                useful others
                                   given
                  info opening
                    over nes map release disaster end because roads
                                                                     detailed
                  zones
                    area more water stay known after clear
        Sunday management most
    going flooded
                            open specific fully event
 gates
          maps
                                                             believe dam
                   opened
                                                danger happening
   emergency home lot able
                                knocked instead
                                                   sms friends
said better even public SES services affected really late
                          much
                                          warning sure
                                                                 door
                                                     media
                                                              help thought
                    now
                                  came alreadytext
                                                                       knock
   DEODIE streets suburbs
                                                                  full
                                                       Facebook
                                                           knocking accurate
            power never everyone earlier
                                            evacuations
           some
                          day receiving time
                                              level access
                                                        needs knowledge
 texts
                     low before being
                                       evacuate centres
                  aboutearly many done feel
phone
                                                                    probably
        different
                                         dashboard made
```

The diversity of ideas for improvement generates a more confusing image in figure 9, compared to that of misleading information in figure 8. The flood event was unexpected and lacked the predictability of a cyclone, which is addressed through an annual campaign of preparedness. The flood event was further complicated by the need to release water from the Ross dam, contributing a human induced element to the flood. Information was constrained by the uncertainty of the event. It did not follow a historical or predictable pattern.

In order to focus areas for improvement, words and phrases were further standardised into a list of key concepts in clauses and phrases of open ended responses. This provides a more focussed isolation of information, warnings and evacuation that could be improved in future events. A cleaner list of words and phrases generated basic word counts in table 17. The first five concepts – flood or flooding, warnings, evacuation, more and information – clearly show up in the word cloud. People stated 'more' in relation to a range of information and warnings. The idea of people wanting more of these things is more important than the specific items identified. The uncertainty of the event triggered a need for more of everything. Other terms like 'more' are local, and earlier – words that qualify the information and advice that people sought. Maps and mapping occurred as information that related to separate actions, such as flood maps, evacuation routes, as well as flood zones. All together, maps, flood mapping and flood zones are mentioned 110 times, but they are separated artificially in table 17 because they were about different experiences.

Table 17. Word Counts in Comments on Aspects of Information, Warnings or Evacuations that Could be Improved

Count of Specific words in open	Number of times
ended responses	cited in responses
Flood or flooding	144
Warnings	123
Evacuation	98
More	97
Information	66
Maps or map	66
Text	66
Dam	54
Council	47
Earlier	47
People	47
Flood map or flood mapping	36
Door knock or door knocking	28
Idalia	25
Pet or Pets	23
Local	19
Inundation	16
Advice or advise	15
Facebook	10
Accuracy	8
Flood zone	8

An analytical summary of the open-ended responses suggest several improvements for alert systems and warnings.

- 1 More Specific Alerts: Alerts should be more specific to locations rather than blanket warnings to everyone. This includes specifying streets within suburbs and providing detailed information about the immediate area of concern.
- 2 Clearer Wording: Alerts should use clearer and more direct language, such as "evacuate now" instead of vague phrases like "move to higher ground if concerned."
- 3 Timing and Frequency: Alerts should be timely and not sent too frequently, as excessive alerts can lead to complacency.
- 4 Detailed Information: Alerts should include detailed information about the severity of the situation, anticipated water levels, and evacuation routes.
- 5 Integration with Maps: Flood maps should be released earlier and be easier to read, with street names and the ability to zoom in on specific areas.
- 6 Communication Channels: Alerts should be sent through multiple channels, including text messages, phone calls, and social media, to ensure they reach everyone.
- 7 Evacuation Centres Information: Alerts should provide information about evacuation centres, including whether they accommodate pets.
- 8 Consistency Across Providers: Telecommunication providers should send the same amount of text messages to ensure consistent information distribution.
- 9 Link to Official Sources: Alerts should include links to official sources like the disaster dashboard for more detailed information.
- 10 Avoiding Confusion: Alerts should avoid causing unnecessary panic by being more targeted and specific to the areas actually at risk.

While some of these improvements may at this time be technologically unavailable, such as street level information, advances in IT may enable such detail relatively soon. Otherwise, these suggestions are sensible and achievable.

Table 18. Overall Level of Trust in Information

Please indicate your overall level of trust in the	Number of	Percent
information provided regarding the flood event	responses	
Completely trustworthy	49	9
A great deal	315	55
Moderately	169	30
Not much at all	34	6
Not at all	5	1
Total	572	100

Table 18 summarises the overall level of trust that people had in the information that was provided. Given the unpredictable nature and novelty of this flood it was difficult for information providers to keep up with the changing, unfolding situation. However, the question did not address accuracy or timeliness of information, but asked people to reflect on their level of trust in the information. The uncertainty of the event is inevitably reflected in the low proportion finding information completely trustworthy. Overall the level of trust is positive, with the summary of the open ended responses providing sensible improvements that may improve trust in the future.

Evacuation

Apart from massive surface run off causing extensive localised flooding, the opening of the spillway gates on the dam resulted in deeper flood levels in the Ross River downstream, and across the lower river floodplain. The City Council operated six evacuation centres to provide temporary accommodation; at its peak these accommodated more than 800 people, and overall received 1,000 evacuees (Townsville City Council, 2025). People who used official evacuation centres were only a portion of those who evacuated, as suggested below in table 22. The somewhat supercilious slogan that we used a couple of decades ago – make friends in high places – is often commonly used by people faced with evacuating from a disaster zone. Importantly the slogan suggests moving to friends on higher ground. Such networks are important and continue to be used by many households during evacuation, as for most households the move is short duration. Thus it is likely that many more than 1,000 people evacuated during the event, but the informal movement was likely to have been short duration to friends and relatives.

Table 19. Evacuation Plan

Did you/your household have a disaster evacuation plan before the event?	Number	Percent
No	436	62
Yes	269	38
Total	705	100

Most households did not have an evacuation plan before the event, but as table 20 indicates, half did not perceive that their dwellings were in a flood zone.

Table 20. Location in Flood Zone

able 201 200ation in 1100a 2011e				
Is your home located in a previously identified	Number of	Percent		
flood inundation zone?	Responses			
No	278	50		
Unsure	90	16		
Yes	192	34		
Total	560	100		

Table 21. Evacuation Advice

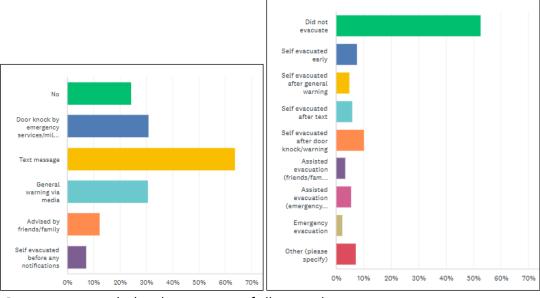
Did you receive advice to evacuate your home/location (you may select more than one option)?	Number	Percent
No	136	14
Door knock by emergency services/military	173	18
Text message	357	38
General warning via media	172	18
Advised by friends/family	69	7
Self evacuated before any notifications	41	4
Total	948	100

Although table 21 invited the selection of more than one option, it is likely that the answer 'no' excluded the other options. The discrepancy between tables 20 and 21 is that 136 respondents received no advice to evacuate, presumably because they were not in an at risk flood zone, but 278 perceived that they were not in a flood zone – ie 142 may have been at risk on this occasion without prior awareness of that risk. Many who genuinely were not in a flood zone received evacuation advice, but as the 172 responses of a general warning via media may not have been specific to some

households, households that were not flood threatened may have received general advice anyway. The other evacuation warnings are much more specific and undoubtedly involved more than one source for at risk locations.

Figure 10. Advice to Evacuate

Figure 11. Response to Evacuation advice



Note: Percentages are calculated as a percent of all respondents.

Figures 10 and 11 supplement tables 21 and 22. Just over half of the respondents evacuated. Table 22 was supplemented with open ended responses which are listed in full, unedited in table 23.

Table 22. Evacuation Action by Households

Did you evacuate your home/location?	Number of	Percent
	Responses	
Did not evacuate	295	53
Self evacuated after door knock/warning	57	10
Self evacuated early	43	8
Other (specified in table below)	41	7
Self evacuated after text	33	6
Assisted evacuation (emergency	31	6
services/support)		
Self evacuated after general warning	28	5
Assisted evacuation (friends/family)	19	3
Emergency evacuation	13	2
Total	560	100

lable 23. Open Ended Responses to evacuation Action		
Open ended specified other response to Did you evacuate your home/location?		
Army		
Army drove me to higher ground so friend could pick me up		

But thought about it only to find out if you did use Ses boats they only took you to the highest ground and dumped you there with no way of being safe or getting to an emergency centre so lucky we didn't as it wasn't a pleasant experience I have heard from those that did

Checked Flood Mapping and only impact via Dam failure

Did not evacuate. I accessed all plans and maps before TCC released any information. I assessed the risk myself.

Did not have anywhere to go that was safe or accessible due to it driving and DV

EVACUATED AFTER RAPID WATER LEVEL RISE

Evacuated by family

Evacuated by partner (ADF) as he took the car to work, but returned to get me.

Evacuated to a high house in street when water came up too quickly to safely leave the area.

Evacuated to another address in the same suburb in a higher position. Before I went into SES on the 3rd I packed a duffel with essentials and took it with me in case I couldn't get back to this address. This proved to be the case, roads were cut and I had to spend a few days at a third address.

Evacuation not required. Outlying Street in the suburb with significantly lower impact

Heard dam gates opening regardless & army came rushing through door knocking, we left half hr after army

high set house; moved car up the street

I was stuck in Rockhampton and couldn't get home. My neighbour messaged me to let me know she was evacuating because a text had been received to move to higher ground by 8.30pm that night

I went on holiday a week before the floor, supposed to return 2 Feb. Forced to stay longer by road closures.

It wasn't easy to find a way out through flooded roads. Extremely stressful. Wading through thigh high filthy water

Landslide in Wulguru 4 doors down, doorknocked but didn't hear them. Self evac late in afternoon Left my daughter where I thought she would be safe, and I went to help with SES when my street started going under.

Live elevated in the city.

No where to go

nowhere to go ...high house so decided to sit it out (been through Yasi)......

Only after advised by Swift Water Rescue to leave with the Army

Only after army came running around panicking on the Sunday afternoon

Only evacuated after losing power

Only evacuated to next door neighbours on Saturday & Sunday nights, as their upstairs is much higher than my house

Out of country unfortunately

Self evacuated after inadvertently speaking to Army personnel leaving the area

Self evacuated after receipt of Emergency text at 5.52pm on 4 Feb.

Self evacuated after Sunday afternoon warming that night when saw more rain coming

Self evacuated after water ran through streets

Self evacuated at own discretion

Self evacuated during event

self evacuated when I realised Burt St Aitkenvale had gone under and friends were stuck.

Self evacuated when water started to come in to home. Prior to this received text messages to say evacuate if you have concerns. Just after we evacuated we receive a text emergency evacuate.

Sunday afternoon, just before main dam release.

We evacuated to high ground at The Precinct as we could not get out of suburb. We were not door knocked and did not receive evacuation message until at least 1 hour after we left home.

We flooded fri morning

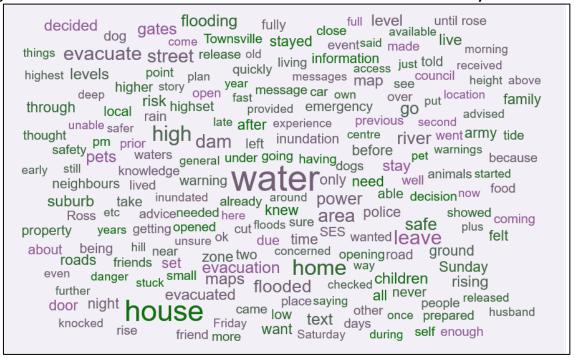
We got the message to tell us there was increased flooding due to rainfall and to get to higher ground if concerned. The QPS did not knock on our door and direct is to leave

we weren't in the mapped areas provided by council this assisted with my decision

went by step ladder over side fence to neighbours high set house

Table 22 suggests more of a structure to evacuation actions than is illustrated by the comments provided in table 23, although the open-ended responses were only made by a minority of the respondents – 41 out of 560.

Figure 12. Word Cloud of What Influenced Household Decision to Evacuate or Stay in Place



See full list of open ended responses in the Appendix

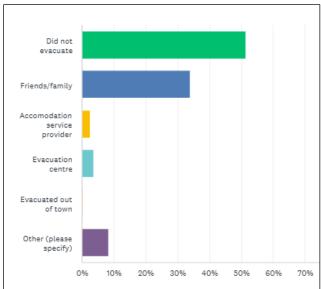
Table A4 in the appendix lists all the open ended responses to question 28 – 'What influenced your decision to evacuate or stay in place?' These were edited and corrected into a list that was used to generate the word cloud in figure 12. This illustration indicates the wide range of factors that contributed to each evacuation decision. Contained within the open ended responses in appendix table A4 are many dramatic events and stories which go far beyond the approximation of influences in the word cloud. Many decisions were late in time, some were influenced by previous flood experiences, some decisions were based on conflicting or inexact information, and there was clearly a lot of luck indicated in people's evacuation decisions and experiences. Table A4 captures both the drama and the danger of the flood event. It seems lucky that in a city of almost 200,000 people only 2 lives were lost.

Table 24 and figure 13 record the destinations of evacuees. Only 20 people who responded to this survey went to the council evacuation centres, that the council records as having accommodated 1,000 people overall. The vast majority went to family and friends - 70% of all those who evacuated. We cannot extrapolate these responses to the whole population because this very small sample representing about 1% of the city's households is probably skewed towards households which were directly impacted by the flood, as suggested by the locations recorded in table 2. However, it is very likely that many thousands of people evacuated temporarily as the flood waters threatened.

Table 24. Destination of Evacuees

If you/your household evacuated - where did	Number of	Percent of
you go?	Responses	respondents
Did not evacuate	288	51
Friends/family	190	34
Other	47	8
Evacuation centre	20	4
Accommodation service provider	14	2.5
Evacuated out of town	1	0.2
Total	560	100

Figure 13. Destination of Evacuees



Note: Percentages are calculated as a percent of all respondents.

Demographic Characteristics of Respondents

The final questions in the survey asked for basic demographic characteristics. These are recorded in tables 25 to 27 and supplemented in figures 14 and 15. The characteristics of the respondents are skewed towards female, older ages, and tertiary qualified. Figures from the 2021 census are placed alongside the survey categories for comparison. We use these responses as indicators from the population. The results of the survey cannot be extrapolated to be representative of the whole Townsville population, which is gender balanced, younger and much less qualified than this survey sample. However it is possible to suggest that preparation and experiences amongst the mass of the city population may have been worse, or more vulnerable than this experienced, well educated survey sample.

Table 25. Gender of Respondents

Are you male or female?	Gender	Percent
Female	434	78
Male	118	21
Other	3	1
Total	555	100

The ABS 2021 Census profile for Townsville City Council local government area indicates that genders are balanced and the median age is 36.

Table 26. Age Group of Respondents and 2021 Census Comparison

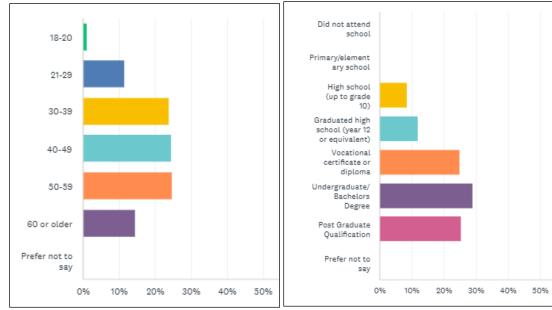
What is your age?	Number in	Percent	2021 Census
	Age Group		TCC LGA
18-20	6	1	4.3
21-29 (ABS Census 20-29)	64	12	15.4
30-39	132	24	13.8
40-49	136	26	12.6
50-59	137	25	12.4
60 or older	80	14	19.9
Total	555	100	

Table 27. Educational Attainment of Respondents

What is the highest level of education you have completed?	Number	Percent	2021 Census TCC LGA
Primary/elementary school	1	0.2	6.6 < year 9
High school (up to grade 10)	47	8	12.8
Graduated high school (year 12 or equivalent)	66	12	16.8
Vocational certificate or diploma	139	25	29.2
Undergraduate/ Bachelors Degree	161	29	18.1
Post Graduate Qualification	141	25	
Total	555	100	

Figure 14. Age group

Figure 15. Educational Attainment



Note: Percentages are calculated as a percent of all respondents.

Summary

The 2019 Townsville monsoonal floods were caused by prolonged heavy rainfall. The release of water from the Ross River Dam had widespread impacts on infrastructure, businesses, and thousands of properties. The event was unprecedented in scale, with some areas receiving over two meters of rainfall in less than two weeks. The survey conducted by the Centre for Disaster Studies aimed to understand the preparedness, experiences, and social impacts of affected households.

Preparedness and Insurance

The survey revealed that only half of respondents felt adequately prepared for the flood, despite 65% having disaster kits and 74% having household or contents insurance. While insurance coverage was relatively high, the quarter of respondents who reported no cover is significantly high, and probably represents an indicator of higher levels of no insurance within the general community on account of the high levels of education and older ages of the respondents to this survey. The lack of disaster kits and evacuation plans also highlighted gaps in preparedness. Notably, 62% of respondents did not have an evacuation plan, and 50% were unaware their homes were in flood zones. This lack of awareness and planning contributed to the vulnerability of many households during the event.

Evacuation Experiences

Evacuation was a critical aspect of the flood response, with over half of respondents evacuating their homes. Most evacuees (70%) sought refuge with friends or family, while only 4% used official evacuation centres. The survey highlighted challenges in evacuation planning, including the lack of pet-friendly evacuation centres and perceived unclear evacuation advice. Many respondents reported receiving vague text messages advising them to "move to higher ground if concerned," which led to confusion and delayed decision-making. Additionally, some areas were reportedly not door-knocked by emergency services, leaving residents uncertain about the severity of the threat.

Sources of Information

Facebook, the Local Government Disaster Management Dashboard, and the Bureau of Meteorology (BoM) were the primary sources of information during the flood. These platforms accounted for 57% of all information accessed by respondents. Official sources like BoM were rated highly for accuracy, usefulness, and trustworthiness, while news media and community-based sources received mixed reviews. Community-based sources, such as Facebook groups and friends or family, were valuable for localized updates but were less trusted overall.

Challenges with Communication

The survey revealed significant shortcomings in communication during the flood. Over half of respondents (58%) encountered inaccurate, conflicting, or misleading information, particularly regarding dam releases and evacuation advice. Text messages were perceived as often vague, overly frequent, and lacking specific geographic details, leading to confusion for some residents and complacency for others. Respondents suggested improvements such as clearer evacuation alerts, earlier release of flood maps, and more specific warnings tailored to individual streets or neighbourhoods.

Trust in Information

While overall trust in information was positive, only 9% of respondents found it completely trustworthy. The unpredictable nature of the flood and the novelty of the event contributed to this uncertainty. Respondents emphasized the need for more detailed and timely information to improve trust in future disaster scenarios.

Demographics and Social Impacts

The survey sample skewed towards older, highly educated residents, which does not fully represent the broader Townsville population. It is likely that responses from a broader sample of the population may have been less positive. The results of this survey should be interpreted as indicators of experiences and issues. The findings highlighted the importance of informal networks, such as friends and family, in evacuation and recovery efforts. Community support played a significant role in helping households navigate the challenges posed by the flood.

Lessons Learned

The event underscored the call from members of the community for improved disaster planning and response. Key recommendations included better flood mapping, targeted alerts, mandatory evacuations for high-risk areas, and pet-friendly evacuation centres. The findings also highlighted the importance of clear and consistent communication to reduce confusion and enhance public trust during emergencies. Overall, the survey provided valuable insights into the social impacts and preparedness experiences of households affected by the 2019 Townsville floods, offering lessons for future disaster management efforts.

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Appendix

Table A1. Open Ended Responses to Question: Do you feel that you/your household was adequately prepared for a disaster before the flood event happened?

Sort of, it was the unknown that made preparing hard

As adequately as we could have been.

As prepared as I could but had no idea of what could happen with flooding

As prepared as possible but only moved in 3 weeks prior

But not flood

Did not believe water could ever come up that high

Did pretty good preparation but did not move one car or move everything high enough. But did move one car and move up to 2nd level much

don't really know as no one could had envisioned the amt of rain we were going to get

Everything of value was moved up but not sand bagged.

Food yes. Sandbags during

House was built 200mm above Q100

I did not believe that our house would flood as we were in the white zone but my husband and I discussed the possibility and had a bag of clothes packed. I also put all of our photos and special things up in high cupboards the night before we were flooded "just in case".

I don't think anyone could've really been prepared for the event.

I knew we were safe

I moved from Airlie the day before the rain started. Boxes were all under the house and got sogged. I wasn't aware of the weather event until it was occurring. My fault for not checking the forecast.

I needed a generator

I thought so at the time but did not feel that at the time when reality of the disaster set in

I was, but the house needed major work that the real estate refused to do

In some ways, but not all

It didn't matter, because we had a water higher then 1 meter

It was only a bit of rain, a normal wet season! No thought it could get worse

Leaks in roof should have been fixed and windows left shut with air cons running. This would have saved me 1000's in replaced furniture and other items

Mostly

Mostly prepared

No one came to evacuate us.

No, as we thought we wouldn't be impacted

No, because I did not believe it would flood, and even I did a low set house, with low set windows is difficult to flood proof. Maybe folk 2 hundred years ago who built houses on stilts had more common sense than greedy developers.

Not on Facebook. Get a warning 2 hours before the flood gates were to open from Brisbane based nightly news! Need improvement here. Council flood map could not be opened when first put on council website and when able to open no street names. The numerous disaster centre media scrum should be telecast on all local TV stations interrupt 'Days of our Lives' if this is so serious. Media shouldn't be censored by some peanut that doesn't live here

Not prepared for flooding but prepared for cyclones

Not prepared for release of Dam water

Not prepared for the anxiety when the rain didn't stop

Not quite as I'm more prepared for cyclones than a flooding event

Not really

Not specifically this kind of disaster.

nothing we did could have stopped that amount of water

Partially prepared - cyclone kit ready but needed to re evaluate and adapt for flood

personal yes, in terms of being provided wiht sufficient informed information no

prepared for familiar levels of flooding, not necessarily for this high water level and speed of rising water

Realitively so... I had never experienced one first hand before.

Semi prepared

Somewhat prepared, but we did not anticipate how long and how major the flooding will be

somewhat, not for the extent

Unable to move goods to higher ground

Unsure as we just did not know the extent of further rain and how the dam would hold up or let go, etc.

Unsure. Our area of our suburb was not initially expected to flood; neighbours said that this area of Mundingburra had 'never' flooded. When I was evacuated, we lifted furniture as much as possible and tarped/sandbagged the entryways. However, water still entered the house. I'm unsure if that is prepared enough? Could I have done more? I feel I am more familiar with cyclone preparedness (e.g. strong winds) than flooding where I live.

Was not home for the event. There was no preparation.

Was unsure of what would happen - always ready for cyclones but unsure of what to expect

Wasn't given enough warning by emergency services

We became prepared during the first few days of the Monsoon *January 30th got cans and water* We could have done a little more.

We did as much as we could for the expected flooding but then evacuated with gates opening

We didn't expect house floods to enter our home. We did lift some furniture but didn't think to move kids documents such as report cards, certificates etc.

We flooded fri 1st feb before they opened the flood gates due to council drainage not being adequate

We had a generator ready to go but nothing packed as we live on a hill but of course will could have experienced a landslide.

We had an emergency kit, but not an evacuation plan.

We had emergency kit etc. just not prepared for the length of time this would take

We had food and water. Two friends offered places to go. We thought the roads would just get flooded and we would be stuck at home with electricity for a couple days, but we had no electricity and the water came up to our doorstep.

We had prepared to the extent of previous events

We were somewhat prepared.

Yes but it could have been worse it was just a gamble weather it would or not

Yes though was excepting it to go so high

Yes, but we had no power for 2 days prior to the main release - serevely impacted on proper communications

Yes, we would have been if the dam gates were not opened at the time they did it!

Yes. We had a current cyclone kit so was prepared for that sort of a disaster, but never anticipated a flood. I don't think there was anyway we could have prepared for this flood.

Table A2. Open Ended Responses and comments rating the information from the news media outlet source/groups

4 MMM

4TOFM did an amazing job keeping everyone informed and broadcaster stayed at the radio station during the flooding event to continue giving updates to audience. Same as for Cyclone Yasi - it is very comforting to get very regular updates and warnings on the local radio station. Having a battery operated radio should be compulsory for everyone living in Cyclone/flooding areas.

ABC Local radio especially good

ABC news (and ABC 24) sometimes repeated information from hour to hour (but I understand it's not easy always having something 'new' to report between live crosses)

ABC radio was great, the others dramatised things and gave no details about what areas were weren't flooding

ABC radio was staffed by journalists totally unfamiliar with Townsville and provided bizarrely obviously false reassurance - irrelevant to me in a house outside of a flood zone - though our driveway was washed away so I was impacted personally - but was interested in any consequences for my family elsewhere in Townsville

ABC were on air full time which was most appreciated, but they were not supplying information themselves, so it was only as good as commented on previously.

ABC were slow to pick up on the event and it was frustrating that they broadcast their normal program during the first part of the event when we knew it was an emergency here, but they didn't seem to think so...but once they figured it out, they were great.

All delayed due to format. Reporters were not over sensationalising the events. Preferred 7

Always room for improvement

Bluewater was largely overlooked

commercial TV news was completely useless and full of hyperbole.

Could only access radio in the car

Coverage from ABC local radio was very good and useful.

Don't read or buy newspapers they only tend to tell their side of the story to make it sell papers there like politicians liars.

I received text message flood warnings for a few days but they didn't stipulate the suburb each time. This caused some concern as to where the flooding was predicted.

I'm not a fan of the media to begin with. I think they were very fast to start pointing fingers as soon as the event finished.

Information from media group's was at times distorted and inaccurate

Let down by the fact they closed local outlets and went online to capital centers who were obviously reading scripts and were lost in location pronunciations

Local radio stations provided the most useful information in terms of traffic, where/how/when to evacuate and they provide the best information related to the relief and recovery efforts (i.e. where/what to donate, where the evacuation centres are, where to volunteer, etc).

Local stations are much better. Very disappointed in other stations.

More frequent dam release and river level and inundation threat updates needed detailing suburbs and streets. No transport info (were buses running?) for people without private transport.

N/A

National news coverage that called the dam "bursting" was alarmist

News based reports were too highly sensationalised to be of any use.

News crews were simply vultures; information they were sharing was easily available online and often hours out of date. Reporters were ill-informed, and were seen doing stupid things like walking through flooded streets in bare feet! They were more of a hindrance than a help.

No accurate information on any news Chanel, not up to date. No direction given on evacuation and what areas would go under.

No electricity, no access to media after that

No power

none

On the media it said everyone with mould can receive the 10000 grant even if water has not come into your house. Was untrue caused alot of arguments in townsville

Over dramatised sometimes

Playing the tragic card

re accuracy: N/A as hard to make that assessment

Really disappointed in the news channels limited coverage not up to date...if this had happened in Brisbane would have been on 24/7 coverage

reporters standing in the rain telling me there is a flood with out of date information does not help. Sensationalism at its best

Sometimes hyperbolic about potential outcomes - bit of Boy Who Cried Wolf about warnings

Television had more focus on providing images of the event, they weren't providing consistent coverage of recommended evacuations.

The ABC is the only media group that I would go to for information on these sorts of events. They are timely, accurate and trustworthy. Other outlets just dramatise the event and don't provide helpful information.

The ABC seems to be super accurate for other events, like the bushfires occurring in Westernport in Victoria. The ABC would be able to narrow down the specific names of roads advising people when to evacuate on their news channel. However, the ABC, with a complete establishment in significantly smaller cities (like Darwin), seem to be fly-in, fly-outs from Brisbane and have very little clue with the going-ons in the the Townsville area. The coverage was VERY sub-par. However, the Night Shift on Triple M (11:00 pm to 4:00 am) was comprehensive in their coverage, despite being an overnight talk back radio program broadcasting from SYDNEY, OF ALL PLACES! Radio warnings on Triple M were however pretty silly. Like ABC, the names of suburbs were often pronounced incorrectly, indicating that the news organisations reporting on the issue know very little of the area. There does not seem to be enough local coverage of the issues.

the information about the dam came via radio, and Army personnel who were on foot, told my neighbour who was up the street they could not come any further and too tell every one else down our end to expect up to another metre of water. Army said they were coming back to evacuate people but they didn't return to our street, we all looked after each other

The local radio had most up to date information as it was happening. Other outlets were replaying information from several hours prior. Not enough live time information

The news felt as if it sensationalised the event and was not factual on what we can expect

This is relating to radio 4to only.

Too slow with updates

Townsville bulletin are a joke and like to scare monger people. ABC far more accurate and trustworthy in their posts

Townsville Bulletin articles were sensationalised for clicks and not entirely accurate. ABC radio was good.

Townsville Bulletin was just full of drama and poor information

Tv news made Townsville appear fully underwater instead of a handful of suburbs

Unlike the Brisbane floods this was poor. Limited coverage of the event and many family members relied on the same info over and over again and it was generic apparently until the dam opened and the over the top.

Very little reporting early on. Which is what I needed as the event evolved

Was basically relaying the disaster dashboard information only

Watched livestream on ABC news channel and the updates on 7 News Townsville facebook page including live streams with Mayor, police etc.

You have to remember that the commercial outlets "sensationalize" everything, whilst it's good got getting government attention and funding it's not great for international tourism, incoming students etc.

Table A3. Please comment on any aspect of information, warnings or evacuations for this event that you believe could be improved?

the text messages we received and knowing which streets were being evacuated in our area so we could plan our own evacuation if necessary.

1. There was probably a bit of information overload 2. Texts were good, maybe need to give a threat level/status change with each round. 3. Although a bit confronting the plain clothes police car with megaphone sent a clear and definite message which matched the flood outcome. Evacuation was the right course of action at that time.

25 people at least didn't leave because we weren't on the anticipated flood map. Expand flood maps to cover more area as precautionary. Now my car is sitting in a lot somewhere, waiting to be assessed... we could have gotten it out sooner if we knew there was any chance of our street getting flooded. By no one could have guessed it would get that high...

A more precise evacuation message sent as areas became flooded and precise areas to locate to. A general warning to everyone does not indicate the severity of matter.

Accuracy of who sending messages kept being told by palm island council to boil water

Accuracy, timing and wording of text message warnings. Door knock evacuations of at risk areas should have been more widespread

Additional, up-to-date information in a single portal on sensor data, gate levels, and decisions/justification.

Advice for people with pets who choose to evacuate with their pets...where can they go?

Advise residents if they are in a flood zone prior to moving to or purchasing a home in that area. And tell them to evacuate when required. Not a single message told people they had to evacuate.

Alerts were too broad

All good

All of it. The information from members of the community was more helpful than that of the council disaster team

all warnings should have information about the immediate area of concern. people become complacent if they keep receiving flooding inundation report but are not affected during those early days. leads to a false sense of security thinking you'll be ok.

Although our street was completely under, we never received any visit from army or ses. In evacuation announcements, Hermit Park was always mentioned yet across Bayswater road is Hyde Park. Felt like we were forgotten.

An idea on the height of the water after release.

Anticipated water levels that may affect homes to help us move valuable belongings to a higher drier spotl!

Army door knocked single storey houses in the street but not high set. Would have been nice to have received the same information rather than left wondering what was happening. Ergon shut off power as a precaution but didn't notify residents. Text message warnings prior to shut off would be appreciated especially for those who have small children or require power for health reasons

As already mentioned, better maps on flood levels before event and waste collection after.

As it was unknown it is a learning curve and costly one for all affected for future reference

As mentioned several times, a "urgent message" interrupting TV shows with a summary of the message and what to do and the seriousness of it. The door knockers need to have information on hand to provide about evacuation (where to go, what to take, how long for, emergency numbers to ring during and after etc)

As our area is currently listed as a red zone and our insurance costs are higher - but we had NO FLOODING - will council now review their flood maps. The flood maps provided by council were not close or detailed enough to make reasoned plans.

As previously commented.

As previously mentioned, the fact that they weren't giving us reassurances about the dam led me to believe we were right to be worried, didn't know if the flood inundation map could be trusted, and that later proved to be the case for many streets in Townsville, was frightened that when the final gates opened the waters would burst the banks immediately and take us out too, and finally concerned for all the elderly with no internet information.

As previously stated the text messages provided no useful information. It was difficult to gauge how serious it was. After the first few i just ignored them because they were not useful. I felt they were just sending them to cover themselves not to provide usefil information.

At no time were we really advised to leave, even when door knocked at midnight Friday night by Police, they thought we would be fine.

At one stage a vehicle drove around our suburb with someone speaking through a loud speaker. We could not understand what was being said, neither did our neighbours and this actually made everyone nervous. I personally believe this was an uncalled for form of communication.

Be more definite about the need to go, earlier

Better access to detailed flood mapping, Maps were released at 7pm an hour before gates fully opened. Online maps were difficult to access due to system malfunction.

Better access to info should power and nbn fail

Better detail

better maps and eariler maps

City council emergency management dashboard needs a user experience/UI overhaul. It also needs to have detailed information and be kept up to date. If there is no further information available on the dashboard, messages should not refer to the dashboard as having more info. Evacuation messages need to be more specific to locality.

Clearer information to evacuation door knocks. Most of this was unclear - the people door knocking were great but seemed to have limited information.

Comments on government Facebook pages need to be monitored to stop the spread of inaccurate information. People didn't understand that they live in flood zones and were not fully aware of previous flooding, nor the problems caused by rainfall and high tides together at the same time.

Communication from official sources was very good

Consistency with emergency information. We only knew about evacuating from our neighbours who had door knocking and text messages which we did not have. Finding solutions for pets in evacuation centres as that was the main reason we stayed.

Council dashboard did not seem to be enough information of current details.

Council giving more information on the dam levels, gate activity etc

Council needs to ensure it's website is easy to navigate and provides up to date information. Text messages need to be specific and not vague to residents in targeted areas - not sent to the whole community. Projected flooding needs to be provided on maps easily accessible on council website so people can make informed decisions. During this recent event this was not the case and people were left in limbo.

Council should have notified the public of the possibility that the dsm gates could automatically open. They also needed to alert the public when this happened which was hours before the planned opening. By the time we got a text advising us to evacuate at 5.30pm, the street was leg deep and we had flagged dow a fire engine and swift water rescue was planning how to get us and our neighbours out to a waiting truck.

Council should have sent out more precise messages instead of just blanket messages to everyone which many people ignored

Council text messages sent too often and too non-specific. They were sent over a period of time and as the earlier ones seemed to have no consequence for our specific area we were not sure how seriously to take them. Flood maps provided at the last minute were terrible quality and ended up being very wrong. Some door-knocking occurred in a nearby street but none in our street.

Dam and gate information. People were asking if it was going to be a slow rise or a wall of water, no clear answers. Also asking what times.

Dam operators need to receive sufficient training around the dam's protocol in an emergency situation so that the suburbs that were sacrificed in this event never have to endure this horrible tragedy again.

Decisions on releasing dam water should be made at more appropriate times!

Did not send general sms to all of Townsville, leads to ch complacency.

Did not think we would flood

Didn't know where all evacuation centres were.

Different areas were affected at different times and in different ways, warnings need to be more specific to areas rather than blanket warnings to everyone.

Difficult to truely predict as such a serious event may not occur again for 80 years. Plans to evaculate persons in known flooding areas i.e. Idalia, near rivers or gullies. Improve flood maps to incorporate information gained by the flood and use these to inform warnings. Rexamine building regulations. Lot of persons lost their cars - develop high safety car parks.

Door knocking for some and not others- created a view that if you weren't for knocked you'd be ok to stay which wasn't true

Door knocking personnel to have all the facts so public can make an informed decision early.

Doorknock message was very inconsistent. Was told water could come into street and should consider leaving. Heard from other neighbours that had been told to evacuate ASAP. Text message also never said evacuate now just said move to higher ground.

Earlier evacuation warnings.

Earlier notice

Earlier release of flood map. Army actually having up to date information. Seriously suggesting we evacuate when the roads where already closed and not being able to help me work out a route that wasn't flooded to get to an evacuation centre. Door knock did help household prepare....we were just lucky to be at a high point on the road.

Earlier release of flood maps and specific areas of concern. Receiving multiple texts over days was confusing about whether we should actually evacuate and as most who needed to we almost expected they would door knock if we needed to leave. We were ready to leave if needed

Earlier release of inundation map being more understandable. Fewer emergency texts. More forceful evacuations when required.

earlier release of the TCC innundation maps for various dam release volumes

Earlier release of updated flood map - days earlier, with an explanation eg "if it keeps raining, this is what could happen, check the map now and make plans." Instead of relying on people's common sense and also on local knowledge of flood zones. Given the low frequency of flood events, local knowledge can easily be forgotten with both the passing of time and also with movement of people into and out of different areas. Leaving most of the current residents of Townsville a bit clueless.

Earlier warning for initial flooding in northern suburbs like Bluewater. Warnings came after the first event.

Earlier warnings to low lying areas.

Emergency situations should be managed/controlled by emergency services not councils. Councils should stick to rubbish collection & parks.

Evacuation advices were too vague and there were conflicting reports about evacuating too early or too late.

Evacuation centres allowing pets.

Evacuation was only an hour before the water hit the area of Fairfield and Idalia - due to the release from the dam

Everyone did a great job under the circumstances. Although I feel audits of day care centres should have occurred before opening same rules as schools

Everyone ses army police were amazing and could not have done anymore for us

Everything was good and worked well.

Facebook need to filter the comments.

Far to may warnings during the event. Far to many warnings generally for non events.

Final warnings re full gates opening was vague and scary - even though I evacuated to a safe zone-too general

Flood map easier to read An estimate of the level of flooding at all stages of dam release

Flood map fbat Sunday was not clear. It needs to be able to be read so you know the expected inundation in your street. Many homes in Rosslea etc know the street can flood but you need to be aware of what to expect. After 3 days of being flooded in and safe to be given emergency warning signals etc many were complacent. If you had been told we expect worst case scenario x amount of metres of water is coming your way a lot more people would have been prepared to leave. Instead you get a warning at 3pm and people were quite nonplussed about it had I not read another 400mm water expected in catchment I probably would have stayed

Flood map was difficult to understand

Flood mapping available prior to media announcements. My partner doesn't use Facebook and he found it significantly harder to keep up to date and found the local disaster dashboard good and local radio

Flood maps levels expected after dam gates opened fully released much earlier to give an idea of what to expect

Flood maps made simpler and more clear and issued early on.

flood maps to be made easier to access, list of evacuation centres audible Siena in neighbourhood similar to air raid sirens used during the war

Flood maps took too long. Warning texts were vague. People who were in serious danger should have been forcibly evacuated

Flood maps with two finger enlargement feature to narrow in on target areas with STREET NAMES.

Focus on all areas of the suburbs that are meant to be affected. In the original 6 streets of Idalia - Milne, Kokoda, Ransome, Wairopi, Gorari and Oonoonba Rd. We had no contact from emergency services prior to the event.

Forced evacuations instead of suggested door knock evacuations. So many people were told they should leave but didn't because it wasn't forced.

Forced evacuations should have been enforced for vulnerable (elderly, disabled, children) residents from vulnerable suburbs. People in wheelchairs, young children who can't swim, living on the side of the river requiring rescuing at 3am because they did not evacuate should never have happened. Evacuation centres needed to be opened earlier to accommodate those forced evacuations and the provision for evacuees to be able to safely evacuate with their pets into safe evacuation centres needs to be reviewed. I believe the call for Defence help was asked for too late into the emergency. It was clear that we had many residents needing rescue and too few services able to accommodate those requests. The use of residents to help in the rescue/evacuation effort was necessary but poorly organised, this included the clean up efforts also.

Forced evacuations should have happened during the day Sunday as soon as it appear likely that the dam would reach RL 43m and the flood gates open fully. This would have prevented all the evacuations happening on Sunday night in darkness as the water rose.

Friends who were NOT in the danger zone got better sms LDMG warnings than I did in Rosslea. SMS messages advising about inundations resulting from dam releases and their timings would have been very beneficial, and I would have had time to save Mot elf my belongings from flood waters.

From what I hear defence and police did an amazing job for Oonoonba

Gave people lots of notice

general flood warning sms not specific enough

Give more accurate information about timeframes. We were told to be out in half an hour after the first dam release but the dam water did not reach our area for another three hours.

Happy with warnings. The first two doorknocks evacuation was presented as an option. The third advised us to go now even if it meant wading out.

Hard to predict what the floods will do. We started receiving texts on Friday. I worked at the hospital all weekend, the top end of our street started to flood on Saturday. Sunday afternoon was ok arrived home from work at 3, was sent an emergency text by 4.30 then within 30 min the road was flooded.

Has SES sandbag my place. Just needed it higher.

have the dashboard link in the messaging so people have a quick link to see what roads are closed etc

Have the flood inundation map released much much earlier. By the time it was released I couldn't have returned to my house to prepare if I hadn't already done so.

Haven't got time You don't need to evacuate if the people in charge of the dam gate are competent Honesty by Disaster Coordination Group who had advised on Radio earlier that any inundation would be very gradual and there would be plenty of time to evacuate.

I believe all was done that could be done to inform those. At times general public should not been given a choice for their own safety. It was distressing to others receiving ph calls from those that decided not to evacuate that then had to wait to find out how they faired, wanting to rush to their rescue. They put others in danger. Possibly advertising campaigns as to why you should evacuate, the risk to others, becomes real.

i believe that the emergency services, army and TCC responded to the event really well, the community was very supportive while working together in response.

I believe that those in control of disaster decision making knew a lot more, a lot earlier, than they would have us believe. For example: we know people who were told by engineers at the dam to evacuate on Saturday, a full day before the flood event in Idalia. Worse case flood maps should have been released AND advertised much earlier. Evacuation orders should have come, and much earlier... not after it was to late. Information about escape routes becoming inaccessible should have been made clear.

I believe the organisation of notifying people and providing routes to evacuate early could've been better. By the time I received an evacuation text I had been blocked in my suburb for 4 days

I believe the text messages were very vague so may have either created too much panic or not enough panic (for those who stayed and needed to be rescued). In saying that I understand that they need to be brief. I would have liked more information specifically on the opening and closing of the gates and the time it takes for the water to rise in the area etc. as the flash flooding text message- move away from the river now (when we had evacuated to my in-laws in a non flood zone of Annandale) had us panicked about whether to evacuate that house as well.

I believe the text warnings did not escalate enough from advisory to must evacuate. Could be because we stopped receiving them for a period on the Sunday? Because we were at Bushy Beach? Still needed to know what was happening at our home though. Needed info.

I could not access the evacuation centre as i had my mum on a walker 3 dogs and a bird

I do have to note that I was not specifically advised I should evacuate. I had two army come to my door and ask IF i had an evacuation plan. They said it was expected the water could reach to the end of my street (I was only one house from that corner) but "I reckon you should be fine". I took this as an ambiguous recommendation to evacuate. Information in regards to door knocking needs to be more specific and direct. I truly have sympathy for the large number of people that did not evacuate from Idalia and Fairfield Waters who had to be later rescued. I feel that had they been given similar directions that I was, they wouldn't have taken it all that seriously as the directions and information weren't very clear. I only made the decision to evacuate because I was alone in my house. were too many text messages sent out to people for warnings. My parents in Jensen received multiple for many days and experienced zero flooding (never had doorknocking), whereas I was doorknocked to evacuate and did have my house flooded but only ever received one text message whilst there. I think that eventually people tuned out to these because they were ambigous (e.g. "move to higher ground IF concerned") and frequent. I think that the council and all other groups did the very best they could in these unprecedented circumstances. I understand that they can only plan for so many unexpected things, however as we know that the conditions of this planet change and climate change accelerates, they need to prepare more for 'unprecedented' situations. While I can see that situations such as the dam filling to capacity are highly likely and there are measures in place to mitigate that, there were many points where the dam was filling quicker than it was emptying even with the flood gates fully open. Had we received more rain directly over the dam and this continued, it would not be impossible. The council also need to more carefully consider where they build new suburbs; Idalia and Fairfield waters used to be swamps!

I don't know of how it could be improved as it's not my area of expertise. I feel the level of support and assistance from all services was (and still is!) amazing.

I don't think it could be improved. It was excellent.

i don't believe that it could have been handled any better. Jenny Hill and the Townsville disaster team did a fantastic job.

I don't know ...Townsville is a big citymost people don't know their neighboursnobody trusts anybody ...we all live in fear of being broken into and having goods and vehicle stolen, I personally don't even open my front door...just keep it locked....we don't sleep well, especially when dogs bark or you hear cars driving fast and noisily..we have had stuff stolen from under our house, people under our window in early hours of morning, woken to noise at night and found police in our yard twice......People have to have information they can trust, people they can trust, and somewhere safe to go....

I evacuated due to experiences with no power in area after yasi, partner wasn't here during this time so didn't think it would stay out for long and didn't want to leave. No warnings actually assisted us in our decision. Was all based on no power

I felt the warnings weren't strong enough. We were in a known flood area but the warnings weren't clear that the flood could be higher than previously ever recorded.

I felt warnings were clear and informative.

I found the information to evacuate easily available and from multiple sources. No improvement.

I got a door knock when they started to release water from the dam. Before this I had no idea there was any threat of flooding. I live across the road from the river, so some extra notice would have been great. I left early Friday morning after being told it was going to flood within the hour. My husband went back the next day to put more things up as I didn't have time and struggled with the baby and dogs by myself

I have friends in Idalia that were not evacuated in time.

I know there was a lot of confusion with older people who were only relying on friends and official warnings to evacuate as they were naming suburbs so they were thinking because they lived in that suburb named they needed to evacuate when it was only areas of the suburbs that needed to evacuate and not complete suburbs some of these people don't have access or know how to access the flood maps there needs to be more precise information on who needs to evacuate rather than a general evacuation

I know they can't force people to leave their homes, but it needed to be a lot firmer with the texts or door knocking. You are going to flood get out now! Not the if you feel unsafe evacuate to higher ground.

I only left to be with friend to support and protect my own safety.

I read the research outcome after Hurricane Sandy in the USA and it reported that more people died in that disaster because they would not leave their pets, so now in USA disaster committees allow pets...I knew of people who stayed and wd not leave because of their pet's, and then when it became very dangerous, ADF, SES were taking pets as Lives were going to be lost, disaster committees NEED to understand that our pets are our FAMILY and what decent human being would like to choose which family leaves or stays..

I received many text messages warning me to evacuate because I have a couple of rental properties and I was unsure in what area they were telling people to evacuate from. A bit confusing if you have more than one property. Because I was on the hill I ignored them all. It would be good if they included the area they were talking about when they say you must evacuate. I figured that if we were not door knocked we were safe!!

I think everyone did the very best they could under extremely dangerous conditions

I think everything was done well, we were warned with enough time

I think it was fairly accurate.

I think more specification in texts would have been helpful. More pinpointed areas of specific suburbs. Street names given would have been more beneficial and less confusing.

I think that everything that could be done was actioned efficiently & quickly by authorities & emergency services.

I think the army and police did a great job in trying to provide accurate information. Given the circumstances I don't think they could have done much Better

I think the biggest mistake was evac centres not catering to ppl with pets. We would never leave our rescues, so completely understand peoples reluctance. Another thing, we honestky believe the Bowen Rd Bridge works contributed to the extent of the flooding! We understand the gates automatically opening, safely, they couldn't stop it to time it with the low tide but some if us had to go for the sake of others. But have a look under the Bowen Rd bridge, those walls did not help. That bridge should have been checked more regularly & NOT done in a 'wet season' regardless of the fact we hadn't had ine in God knows hiw long. Talk about putting the mocha on us?!

I think the language in the official warnings was too vague. I know this is to avoid panic but I believe it made people complacent. I also believe there should have been mandatory evacuations in suburbs like Idalia

I think the warning text message should be a 3 tiered messages rather than a blanket message for the whole of Townsville, depend on where your location is in relevance to flooding on the disaster dashboard map.

I think there could have been more television coverage. I think it is important to see pictures and footage as things are happening instead of waiting for the 6pm news. Even then they showed footage that was days old. I think that could have made people realise how bad it was going to get.

I think there were too many 'warnings' that were so broadly distributed that perhaps people became complacent. Not sure how to target better but should be reviewed.

I thought pretty much every part of this extraordinary weather event was well managed as much as it was possible to do so

I thought that the information and warnings were accurate, timely and strongly worded. I heard from a few people that they decided to stay home because they didn't want to leave their pets. So perhaps in future more evacuation centres could allow animals. That may avoid a number of emergency/assisted evacuations.

I thought the warnings were excellent and do not believe they could have been improved

I was told to evacuate again on Wednesday after waters had receded by 3 Army blokes and the way he spoke was like it was a joke to him. I did as I was told and returned the next day to continue packing/cleaning.

I would have like more updates on flooded streets/roads in my area

I would have liked to have seen warnings abut evacuating Hermit Park, Idalia railway estate and Annandale from official sources 2 days early. So many people could have saved their possessions like I did. It seemed pretty evident that we knew the gates needed to be opened fully and the flood maps weren't distributed to the public until the afternoon of the disaster. My friends didn't listen to my advice and lost so much because the info I was sharing conflicted with the official information.

I would like to see more news coverage on this kind of thing in future.

Ideal if warnings could be more accurately targeted by geography and where possible advise in advance about specific roads likely to be closed. Understand this would be very difficult to do.

If an Evac order is given, box the area by streets. Make evacuations mandatory. Post police on intersections bolstered with SES or security etc. it is a no go zone and people are removed, the area is secure from looters and no rescues should be required.

If the dam was operated correctly this wouldn't have happened. If the new pipeline was going to work, they could have released more water earlier. If the dam was structurally sound, it could have held more water closer to its "369% capacity" instead of the gates being automatically set to fully open at less then 220%. Council could make actual bridges with pylons that allow water to flow

under instead of using dirt, creating more "dams/weirs"... Port access road and Fairfield waters roads.

In what turned out to be a 1:500 year event, it was hard to now what would happen... and while we received repeated texts and robocalls, somehow they did not gel with what we could see out our front door... a mismatch with received information V viewed local situation/information-not sure how to add further clarity.. except as mentioned above, some increase specificity... some sections of suburbs rather than whole suburbs... parts of Idalai were flooded by Saturday I believe...others not until Sunday night. The warnings about the dam releases at 830 were clear and provided advanced notice to evacuate... but by then our road access was blocked by flood water... and who knows ...! Just a huge thanks to the SES, the wonderful army teams and council

Info distribution very disorganised. A site with multi media headline overview community wide news, alerts ses warnings power outages etc then linked to status on various services availability ie transport retail council public amenity etc then to localised issues broken into section of the town possibly related to flood pronality or interlinkedness. First category updates every 15 minutes then second and third categories updated in respect to critical priority and resources but obviously as soon as possible.

Info on risks on going into flood waters, particularly driving through shallow but fast moving water. Information much earlier advising our suburb to self evacuate before the roads were cut. By the time people were asked, there was already no way out by car.

Information on TCC emergency dashboard could have been more readily/ instantly displayed rather going through various links to obtain information. Review measures needed to achieve the elimination of prank notifications.

Information regarding damaged goods rubbish pickup to areas bordering the main hit suburbs.

Information was adequate for a informed dissishion to be made in weather to stay or go. overall the event was managed well considering the amount of people etc that were affected.

Information was pretty good in general.

Information was wonderful

Inundation map would have been more reassuring if had street names readable

it could have full media coverage

It is never clear where the centres are and the conditions of evacuation. Pets? What to bring, what is available. A bed? A square metre of floor? Hard to make a decision when so little known. Maybe have an evacuation centre open day so people can assess the facility.

It should be announced on the local tv channels, at least every hour

It was a disaster no one knew was coming. The maps need to be accessible earlier.

It was reported that police, army or others door knocked on all houses in Idalia. That is not true, nobody, and I mean nobody, came to our house and knocked on our door. As the power was turned off to our area two days before the flood, we had no means to obtain information on the situation.

Less *non mandatory* evacuation texts

Less from Kedron Disaster management model designed to improve powers and decisions made at local/regional level

Less scaremongering and more actual facts. I moved up from down south and still after 7 years can't believe the amount of rubbish that goes on in the lead up to a serious weather event.

Less sensational reporting from TV

Like a cyclone warning should have been something broadcast on local television as well as broadcast in full of the local disaster press conference. If not broadcast waste of time having someone sign if we can't see it

Link to Disaster Dashboard on the text messages so people can make informed decisions from reputable sources. Greater promotion at the dashboard in general. Consideration for how text message warnings are transmitted and how often, more than 5 per hour probably causes undue panic.

Local council should have opened the dam gates earlier

Local government presence on social media to quash rumours on local community pages

Mandatory evacuations for known flood zones

maps of flood inundation were late and basically unreadable which made it impossible to evacuate a longer distance. A time schedule when the gates opened and approx time it would get to the suburbs. higher ground is vague, how high? is a high set house going to help? Putting whole suburbs for evacuation warnings is useless, there wasn't enough resources to cope..

Maps out at same time as w warning. Clear readable maps

Maybe have something from council telling us what we have to listen to - the numbers the text would come from as there was some texts that were not from council and now we know what to expect if it happens again what we should do - I also understand that most townsvillians would have not experienced this before and think that the TLDMG did a wonderful job with what they had

Messages and phone calls were pre-recorded and automated. The message to evacuate would have been followed if an actual person had discussed the situation acknowledging facts particular to my self and property.

Messages to evacuate need to be more direct in their wording. Directing people to evacuate & places available to go to, rather than indirect wording such as "if you feel concerned" and the phrasing "get away from the Ross River". This is too vague.

Military, council, emergency services need a more coordinated approach

More accurate map of closed/flooded roads would be useful.

More certainty and direction for evacuation, not just "if you are concerned" and better updates with road closure

More clarity from the texts. They were constant and didn't indicate level of urgency, especially as we were looking at radar and flood maps and the texts were clashing with that information. At our end of our street we were barely affected compared to all the houses around us and two blocks up. Clarity about whether pets were able to come to evacuation centres or with rescue boats/trucks/vehicles. I think this influenced many people. Pets are family. Whoever is organising needs to acknowledge that. More flood map coverage broken down into specific areas. It was accurate for our area. Unsure of accuracy in other areas.

more clearer texts using the actual words evacuate

More concise warning with advice on where to go and how to get there. Just saying leave if you are concerned was not very helpful.

More detail about potential inundation and scenarios similar to cyclone prep.

More detailed and frequent social media posts from official sources addressing the common questions being asked via public groups etc. Not just blanket statements and avoidance of detailed answers. People will try and make up their own answers otherwise and rumours or false information etc can then have more weight than officials. Also, there was no live local media coverage. No TV alerts or updates that are common during tropical cyclones.

More info on the promised help that did not turn up

More information on text messages as to current threat.

More links to the dam levels would have been useful. And clear information about how much it can hold and when the gates open. This could have been provided on the Sunday.

More specific info regarding locations within suburbs - if we had headed the text, unnecessarily displaced AND we wouldn't be able to host the evacuee family that we did have with us.

More specific information on likely water level rises would have been good and would have helped to make decisions .

More specific information, too much general information about the suburb, needed to know more about our street, when the water came up it was too late

More specific on location for flood texts. We were in high point of suburb so was unclear if warnings were applicable till it was too late

More specific warnings with more information rather than general warnings

More specified warning text messages. My suburb received an evacuation text, but we were no where near the risk zone. My suburb is a big place, and yes some of it did flood, but my entire half of the suburb was fine.

More time

More warning of local impact of dam gates opening as when they opened, our street was immediately flooded in with 1m of water. If we knew this consequence beforehand we would have got the cars out. We did not expect 1.3m of water through our property

Mother Nature, no one can predict or read exactly what would happen. They informed and gave worse case scenario. I think all involved did the best they could

My area received direct evacuation information from emergency services; other friends severely affected nearby e.g. Idalia, Annandale didn't

My partber got multiple text message updates to his phone (telstra), I'm with Optus and only got 1 message. Have discussed with numerous other account holders and they say the same thing

My phone did not receive the text messages. I received the EMERGENCY GET OUT TEXT after SES dragged us out.

My son (14) has a phone paid for by me through same carrier /same home address and he received text warnings to evacuate and both parents did not. The warning network cannot explain??? So texting appears to have been hit/miss and should not be relied upon

N/a

N/A

n/a - I think we were very adequately informed about what was happening/flood level alerts. Having the army door-knocking was very beneficial for affected areas, I think.

Need a place where pets can be accommodated.

next door neighbours received text messages in the AM that I did not receive - seemed a bit hit and miss when/who go them. More information on where to go required - evac centres opened however roads were closed so some couldn't get through

Nil

No

No choice for people In known flood areas. People who chose to stay then endangered the lives of our service personnel

No improvement, well informed

No improvements needed. They were clear, categoric and definitive. Some people felt that the direction of 'evacuate if you feel unsafe' was confusing. I didn't like the fake texts that were received - pretending to be the LDMG - better cyber security is needed.

No official evacuation was ever given, just advice to more to higher ground if concerned. Too general for each suburbs. The order to more to higher ground was given at 4pm on Sunday afternoon when water was already waist deep at the end of the road. (a little late)

No warnings what so ever were given to Bluewater residents on 30th Jan when river suddenly rose 9.5mtr

None

None

None - very efficient

None really. It all came down to street by street....suburb by suburb. And personal circumstances I.e. Elderly..disability...Low lying home...close to river or dam

None. All warnings were informative. We just stupidly decided to stay as we didn't want to leave our pets. Our internet was down and we didn't call to see what our options were.

Not everyone has the internet or mobile phone. Radio is the best information source for us

Not going to make any difference

Not much. Authorities did all they could.

Not much. I feel that warnings were given early, frequently, and via different media (including door knocking), so I feel that there was not many excuses for able bodied persons to have been caught out.

Not really, other than already stated, but I would expect improved dam management and raising the dam. Consider raising river embankments at known breach points. Review estuary release points to ensure excess water escapes to sea more effectively. The design of houses should be reviewed. In other words, prevention is better than enduring that debacle which was only successful due to the commitment of those involved in rescues, which was also enabled by relatively low water levels.

Not sure how it could be improved.

Not sure it could have been. This was way outside anyone's knowledge or prediction and the low death/injury toll is a testament to the level of warnings

number the alerts so you know that you are watching the latest.

Our area was included in the messages to evacuate when it wasn't required or needed at all

Our street never got door knocked

Over warned in some ways. But unsure how to improve.

Overall good, but police and army need more power to evacuate. I know of someone who had the army knock on the door in Idalia and they suggested evacuation. She chose too stay and had to be rescued at midnight as water was neck deep in her house. From my suburb I knew the water was a danger and I personally would of evacuated. Some people don't think the same. If the army / police and SES know the water is coming they need to use their power and enforce people to leave. Also, having places for pets to go, pets are sometimes people only friends and people make emotional decisions to stay. Human life is more important but not all people think this way. Is there more the army / police / SES could offer for pets? I know of 2 guys that drove in fast flowing bonnet deep water to rescue a dog that was not allowed to be taken when the owner got evacuated.

People being told they can't take pets to evacuation centres sucks; the info needs to go out in tandem with what to do with pets. Nobody is going to leave them behind.

People didn't appear prepared or that they would be flooded

people didnt evacuate so they need to stress the fact they are in real danger a little more

People in certain areas perhaps needed to take more advice of the warnings. I believe authorities did everything they could.

People need to be educated on how to use sand bags effectively. ie Place plastic sheeting behind sand bags to prevent water entry. Don't just rely on sand bags alone for protection. Plastic sheeting should be made available at the sand bag distribution centres.

People need to be made aware that they will not necessarily be door knocked. They need education regarding their own safety. I have since spoken to a number of people who said 'but we weren't door knocked' or 'we weren't told to evacuate'

People need to heed warnings

People should have been made to leave places like Fairfield waters and Annandale

People who lost power and had no battery operated radios were not kept informed of rising waters Perhaps evacuation routes out of suburbs. And places to evacuate too. Initially we didn't leave because we didn't know WHERE to go or HOW. We do not have a 4x4 and our car only JUST made it out of our suburb.

Perhaps ring me. This takes too long to type.

Pet accommodation plan

Pet friendly places to go to, even if dog/cat needs to be kept in a crate so people don't feel they need to choose between their pets and their home.

Pets must be allowed at evacuation sites, it is not acceptable that people were being told they had to leave pets behind

Phone calls as well as door knocks. Also telling upper/higher homes as well as lower homes at same time to prevent having to go back for people when water was higher

Possibly the TDLGM having a way to verify that any information about the event was by them (and is trustworthy), to attempt to invalidate any rumours involving extreme scenarios (such as a breach in the dam wall) and thus potentially halt the spread of misinformation surrounding the event.

Probably not in the scope of this survey. I do feel that to have tried to keep the dam at or below 100 per cent may have stopped the surge. There seemed to be no grasp of the fact that this dam is a flood mitigation device not a water storage device, although that is a secondary purpose. Cognisance do not seem to have been given to the completion of the Burdekin Dam pipeline, thus diminishing the need for water storage. I do not believe this lesson from the Brisbane flood was given the weighting it should have been given

Probably the only thing I was looking for more often were news updates and live stream updates Prohibit the expansion of Townsville into flood zones

Provide all information related to the matter so that people can make informed decisions

Real time of dam opening.

Receiving an automated robot-voice phone message that suggests all residents in my suburb plus 2 others (Julago and Alligator CK) should evacuate, received when flooding was at its peak is not helpful or comforting. Those three suburbs have very different rain catchments and tolerances to heavy rain and should not be grouped together because you don't know whether or not it should apply to you.

Receiving repeated text messages to "move away from the river" were unclear - did they mean move away from the riverbank or evacuate riverside suburbs? People in non affected areas received this advice in error, only adding to the confusion and traffic on the roads during highly dangerous periods. Subsequently received evacuation messages about the Burdekin River - seemed no one knew what was going on.

Regular updates. There weren't many from the disaster management team, though we know they were working hard. It would be good to have someone on their team just doing hourly updates e.g. dam at this level, rain over dam, not over city, police/army coming door to door to ask people to evacuate, or even no change in the past hour.

Release of the flood inundation map with your ability to pin point your house position much much earlier than it was made public. I found it circulated at night.

Saying 'evacuate to higher ground' but not saying where that was, given Townsville is pretty flat & roads were cut to higher ground

See above response re irresponsible management by Townsville City Council

See comment above about texts. Not sufficiently explicit for those areas that realty needed the info - compared to the NSW bushfire texts with the 'go now' or 'it's too late' texts. I understand that they did not want to implement forced evacuations but using 'if concerned' as the trigger was unhelpful

Sent too many non-targeted tests, people tuned out and ignored them. Should not list almost every suburb for evacuation when roads are already flooded, General info was good, emergency texts were not, Caused unnecessary panic in our area - all river areas were told to evacuate but we did not flood

Seriously not impressed with Govt warnings to evacuate late in the piece and patchy info (initially no street names, low res map) on the flood warning areas. (My home is at the opposite end of the section of Annandale that was badly hit and it did not suffer damage).

Severity of warnings. Identify more potential council evac centres on the south side of the river. Increase awareness of evac centres. Don't focus on the negatives of evac centres.

Should be mandatory to include pets in evacuation. Also have little faith in appropriate, adequate evacuation resources and support services in Townsville.

Some more specificity on where is higher ground. Kept getting told to go to high ground but no instructions on where that would be.

Some people in Idalia were directed by the QPS to evacuate. Others like me did not receive this direction from the QPS. Everyone should have got the same message. It maybe have therefore

enabled us to make a decision to evacuate and prevent any children experiencing trauma. Even if we wanted to leave we couldn't, because the roads were blocked off from noon the day before. We didn't think we were at risk so never even thought to get things up off the ground. By the time we realised we were at risk it was 5:00, it was dark because the electricity was out, and we had to make a swift decision to grab a couple of belongings and get to the two story house across the road

Somebody coordinating what's open/closed & directing how to leave. Somebody updating information that could be accessed on a map. Maps on my mobile phone was useful somewhat but not up to date enough at the very most urgent time that it really mattered.

Specific information on which areas (regardless of high set or low set home) to be evacuated. Not leaving decisions up to the residents - the advice was 'if you feel unsafe' - we didn't (and were safe the whole time) Give residents the ramifications if they do NOT leave - for example, toilets not flushing, no electricity, stuck in house for 5 days. Not leaving emergency text messages to the afternoon when you want people to leave. Those in flood inundated suburbs had been stuck for some time due to preexisting flooding in the street - we simply could not leave without assistance then.

Specific streets within suburbs

TCC Disaster Management Dashboard. Please don't solely rely on facebook or other social media for Disaster Information.

TCC FB page would have been a great accurate point of awareness in regards to small general info. Telecommunication providers all need to send the same amounts of txt messages. Certain providers sent 13 while others sent 4/5.. Send txt to those is the appropriate areas not all Townsville. Change the wording in the txt messages - be more forceful.

Tell people to go to higher ground, but not where the higher ground is

Tell us the plan. Don't assume we know what the mayor does in relation to gates being opened. If the flood map was released early on the day of the gate opening and we new it was possible we could have been better prepared. We honestly thought a new house would have been built above the possible flood levels.

Text could say where the evacuation centres where...

Text message alerts need to identify location for the warning. And should provide a link to evacuation centre oin each area. Areas considered "higher ground" should also be listed.

Text message was a useful prompt to seek more information.

Text messages ...if you believe you are in danger evacuate now ... without power not enough info on radio to make decisions...ok for me I had net n backup power banks for phone, discovered some people didn't, so more detailed info on radio maybe ???

Text messages needed to be much more specific as to location, and flood maps should be easily accessible well before the event. By the time we realised our street may be affected the surrounding streets were already inundated and escape was impossible by car. I believe our street (Lakewood Dr) was due to be door knocked but emergency services/army ran out of time. If a list of potentially affected streets had been published earlier we would have immediately self evacuated.

The adf were amazing

The amount of information available was good. But the level of expertise to put it all together in a site specifically meaningful way was beyond me. My sister who has studied planning was able to help with the decision-making here. I'd have strong concerns that without such overall training, it would be very confusing for the average (lay) person in the city, or some people anyway, who do not have this type of understanding. Deciding early to evacuate was such an uncertain situation. The uncertainty, a kind of mood, I developed made it difficult for me to make practical decisions and I'm usually a very practical methodical person.

The amount of resource and information at the evacuation centre needs to be improved

The council emergency dashboard provided great 'official' information. The texts were also good, except the 'hoax' text. The local weather and emergency event groups on facebook provided 'realtime' or a running commentary on what was happening in different suburbs of Townsville.

Photos and videos uploaded by group members also provided valuable info on what was happening. There were many people using these groups to gain info they had missed. These groups also provided other means to ask for help when they couldn't get through to official emergency lines or services. For future emergency events an official social media group manned with trained staff to answer questions and provide information in 'realtime' or running commentary would be beneficial. It would also provide reliable and accurate updates as the event was happening... perhaps linked to the council's emergency dashboard.

The council information disaster board needs to be continually update. Limited and old information The disaster dashboard for the council was not working most of the time

The disaster management dashboard needs to be constantly updated. The Facebook page was updated more regularly.

The engineers should have know the extent of flooding when the dam gates were fully opened and emergency warning on the severity should have been sent earlier and not just the warning to move to higher ground. Should have read - you are in danger, you will flood, leave immediately.

The evacuation warning made me drop everything and leave on the Fri, we didn't prepare enough and move things higher first which i would have had plenty of time to do.

The fact that generic messages were sent to most of Townsville I fealt no one really knew who would actually be affected. More specific information and facts to be sent.

The flood map after the dam was open was hard to interpret and more detailed.

The flood map provided on line was not clear enough. We thought we were out of the danger zone.

The flood mapping potential impact areas should have been more widely promulgated. I believe that was the sole reason that we were more concerned than others is because we had access to the different levels of inundation based on the dam release levels. We also knew that the dam releases were increasing every time it happened and what that meant. We only had access to this information because of being in the Army and getting it directly from the disaster management meetings.

The flood maps should have been released long before they were released to the public. Our street/area should have been doorknocked as I had no concrete knowledge if we would flood, because no flood map information was released days before the spillway gates opened in full. Also, prewarning that the spillway gates would open fully at some possible stage would have been beneficial knowledge prior to the day it occurred. Only finding that out 3-4 hours before caused last minute panic.

The flood maps to be easier to see street detail. They were grainy when zoomed. To be honest though, if you are trying to drill down to specific streets and it is touch and go, like we were, probably best to leave.

The military did knock on our door and asked if we were ok which was fine. They didn't pressure us to leave despite other properties around us being inundated as they could see we were ok - I was happy with that.

The radio was atrocious with its coverage. The police seemed to be unclear about what was about to occur.

The radio was too general - Oonoonba in particular is too spread out, and it was unclear if the warnings were the whole suburb, or just the new part. The text messages were unreliable, if we had evacuated on our first text message then we would have been out of our house 3 days before there was any water here. The inundation maps were released way to late. They should have been released 2 days earlier to allow people to make their own judgement calls. People evacuated that were in white zones and stayed in black zones because they were working of sea storm surge maps - very different zones!

The radios station really need to talk to local people in the towns that are flooding and have more up to date information we found that as a lot of older people do not have Facebook they where behind the 8ball with information and we found that we where able to give more detail information

to the older community (grandparents and friends) that did not have Facebook and easy their worries

The text message as my sister had the same text and she was in Cranbrook

The text message needs to be more specific

The text message warning was quite generic and hard to know if it 'really' applied to me or not something like: emergency imminent flooding of the ross river evacuate to higher ground.. and i wasn't sure if I was high enough already or where i should go. Or what parts of my suburb the warning applied to. Also got quite a few messages throughout the event that were similar, they were all mostly the same but slightly different and were just a bit vague and i dismissed them as not relevant to me Additionally it was just so many suburbs by then didn't know if anywhere else was any better, and everyone else in townsville was just getting these warnings too so sort of dismissed it as not really applying to me - figured if we were doorknocked that would mean it was me (in the end my place was ok and i would not need to evacuate so was ok to dismiss it). - BOM seems to (compared to brisbane) give really generic and broad warnings for northern qld in general, that don't really tell anyone anything that specific - e.g. whereas in brisbane you get the maps with the circles of where the storm cells are and which direction they're moving, here is like half the state is yellow and 'thunderstorms might occur over the next few hours' - they also only update like one or two times a day, brisbane is 'the next warning will be issued by' and it's about an hour; so that makes the warning information for north qld a bit vague and unhelpful in general including in this event when this event started the warnings were so broad and so generic that i didn't realise the significance of the forecast event and how long it would go on. (tho don't know if bom would have either at this stage) - some radio and some bom people pronouncing suburbs wrong and you just get the sense it isn't local information and they're not here - would be good to get more local and specific weather info from someone who knows this place - more frequent official updates from bom that could be a bit more localised would potentially make this information more relevant and more useful to people, i tend to dismiss it - by the end there were so many warnings that it was just completely overwhelming, in contrast the dam release on sunday night and the river overflowing information seemed to be disseminated around 5-6pm and we were told we have to make a decision and evacuate by 8.30pm - - so despite seemingly heaps of information on one hand, fairly short warning for that too and i remember waiting for the flood map to be released which was a bit later again, to make a decision - maybe if this was available earlier it would have helped.

The text message warnings were too general and not specific. The text message said to move to higher ground if concerned. I don't really know what that meant and I wasn't sure if I should be concerned. I had no power and no internet from Saturday morning. This left me with limited and intermittent access to warnings and information

The text messagens were general and after a few day receiving them without anything happening you start to discredit the information.

The text messages and door knock messages were very general and made it difficult to make an evacuation decision. If you feel unsafe was used a lot but made it difficult to judge what to do. A more precise or clear direction would have been preferred.

the text messages should specify locations / streets that need to evacuate

The text messages were very confronting and we were not sure exactly what they meant and the seriousness of the situation as people everywhere were receiving them

The text messages were very good, perhaps they could be more specific about who should definitely evacuate. Many people received them and seemed to think they were too general, and didn't take action.

The text warnings were confusing and not clear about what we should do. When we had water on downstairs and did not know how higher we weren't sure if best to stay or try go through flood waters to leave- did not know if would get so high that might even flood 2 nd storey

The texts are too generic, we didn't realised they applied to us, when we lost power we also had decreased network speeds and therefore had no way of keeping up to date on our phones

The texts could have been more specific (they were not direct enough such as you have to evacuate!! These areas) and timely would have been good we got the urgent msg after already flooded and almost night time didnt have enough time for decisions.

The three army gentleman advised we'd be fine and it was only a recommendation and not advise, probably not the right info to be giving.

The timing of the flood map being issued was too late and it was unreadable and looked like we were not in the flood zone. A link was circulated by a friend where street names were readable and then about an hour later council released the link. All communications seemed unprepared

The warning were far to general which lead to complacency - evacuations should have been mandatory from the Sunday morning

The warnings came so regularly and so generic that it didn't feel like a real urgency and when the police door knocked there were no options for us to go

The warnings were too generalised to be useful. They came too frequently without supporting information.

The warningvabout the dam gates would be opened to their full extent should have gone out earlier. The water should have been released earlier - once the dam reached 120% Warnings of release should be given much earlier and with more emphasis of consequence.

There could have been more places set up to take pets 😟

There needed to be clear maps indicating likely inundation issued several days before the event. Given the BOM predications were warning of the risks on the Thursday/Friday and the event occurred on the Sunday if the maps were made available people would have been able to make a much more informed decision early. These maps are available and on the Council Website as part of the 2013 Ross River Dam Study document, but this was not communicated during the event. It also makes little sense that the maps council did issue were of such poor resolution/quality and took so long to generate when this document exists.

There needs be an evacuation centre that's available for families with pets. We could not evacuate due to this. Very poor.

There needs to be purpose built evacuation facilities so people aren't being shuffled around when schools go back. They also need to have separate lockable kennels or similar for pets. Most people didn't evacuate so they could stay with their animals. This is dangerous and needs to be rectified!

There should have been at least one pet friendly evacuation centre. Flood maps should have been issued earlier. Lack of information on inundation water heights was the most important thing not shared. If it was mapped and known as a worst case scenario, it should have been made more easily accessible

There was a great deal of uncertainty about who should evacuate. It is apparent the authorities had no clear view on the extent of the flooding that would result from the dam release. More like every man/woman for him/herself

There was conflicting information about water consumption safety/usage/conservation. It would be better if we each knew where our water was sourced from (e.g. in the northern beaches suburbs a different water supply than town water = different recommendations for water consumption safety likely)

There was not enough urgency via the text messages we were sent. Urgent evacuation messages were sent after we were emergency evacuation...not good enough. If it wasn't for social media and I had a power pack most of my street would not have known to leave after we lost power

They could all be improved but in the end people knew they lived in a flood zone and they knew it was going to flood with plenty of advance warning. They had no excuses.

Those who supported evacuees and flood victims should also be eligible for government compensation as helping is expensive, especially for retirees.

Those who supported those flood evacuated should be eligible for relief funding too. But we are not. I've spent over \$3500 on supporting families with nowhere to go.

Time lapse maps, enter your address to see what exact inundation could be expected

Told to evacuate if we were concerned for our safety but had no indicators or information to know if we should be concerned for our safety.

Too many SMS warnings. Thought they were a mistake

Too many thought they were going to be okay. People did not imagine flooding extent

TSV council needs to release better maps. They argued they delayed opening the gates so that people down river had time to prepare but they passed on that info minutes before opening the gates. If their reason to delay opening the gates was to allow people to prepare then they should have stated that they might flood the city on Friday night.

Tv coverage was limited

Unsure, as accurate information was always given in most cases

Very happy

Very poor, low resolution flood maps provided. No evacuation routes. No indication of expected flooding street by street. Dam release timing was a disaster that needs a full inquest.

Visits to individual home to help prepare. Sandbagging for single people living alone.

Warning need to be specific. They appeared to be the same message day in day out. If you feel undafe move to higher ground. We did finally get one ssying our area would br inundated but nothing saying to what extent. That is why most stayed

Warnings far too general and not informative. No knowledge of flooding / heights etc so when advised to evacuate "if necessary" in general warning this meant absolutely nothing

Warnings on SMS were good but maybe some accurate info to dispel rumours eg flood gate levels

Warnings should have been more urgent and clear as to what the situation is. Warnings about the high possibility of the dam gates fully opening and the ramifications of this should have been clearly communicated days earlier.

Warnings should indicate authorities best information on WHY the evacuation is required (ie dam flood gates at 100% + peak tide + x amount of water requiring release Warnings could indicate the areas being targeted to give confidence they are relevant

Warnings were to advise us to evacuate but if you said I'd like to stay they didn't bother to insist

Was all good, too much info if anything but I think that was a good thing

Was happy with warning and feel like it was handled well.

Was very general. We lived in Annandale was not in an identified zone initially so took the first few text messages as very general

Water rose to quick to get information out. Sand level in creek is so high that the amount of rainfall the only place for the water to go is through every ones property.

We did not at any point receive a knock on the door from emergency services or defence personnel. We received the text messages like everyone else but did not think we were any different to the rest of the city getting them until it was almost too late. Our entire street was overlooked and it caught a lot of people out.

We didn't get any of the text messages... I don't know why.

We feel our street got forgotten in the doorknock, we never received any visits from ses etc like all other streets. Use facebook for specific street warnings

We got 13 messages saying FLOOD WARNING FROM TLDMG. Increased flooding from intense rainfall. Move to higher ground if concerned. Ph 1800738541 or listen to local radio. You can imagine they lose their impact after a while It wasn't until a friend who worked at the Dam sent a message saying GET OUT NOW when the second release was about to happen that I paid attention A clear directive would have been better

We got a number of sms's to evacuate, and I think the SMS's could of been worded better and directed properly

We left the house to attend other events on the day. Note in mailbox would have been helpful. Notice from authorities we could return would have been useful. Texts re river rising and flood gates could be targeted more specifically. Ie at mt stuart foothills, floodgates unlikely to be a problem (if it was, Townsville was screwed!)

We live in Kirwan which is a HUGE suburb in area and very variable in elevation relative to MSL. We received several Emergency Warnings by SMS from 061444444444 telling us to leave yet all our research showed (and proved to be correct) that we were in a safe location. Perhaps the messages need to be more sensitive to area; however, I understand that messages are sent to those in post code locations so this suggestion would be invalid.

We never got door knocked and were told we were at higher ground. Until water came into our house and we had to swim out to safety with two large dogs

We picked up evacuees from Lavarak but did not know where they were taken to for some time

We received upto 3 evacuate messages within 10 minutes. Unsure if that was purposeful or accidental, was quiet worrying though

We should have been door knocked and had help with sandbags on the Sunday.

We were door knocked twice but I understand from friends in Idalia they weren't door knocked at all

We were new to the area. Just recently moved from Darwin (2 weeks), had never came across this type of flooding before. New occupants from interstate should be given an advice package on the likelyhood of such events and what to expect as warnings and what actions should be taken.

We were recommended to evacuate and heeded the recommendation, but many did not and paid the price. At some point evacuations should have been enforced/mandatory; people are dumb, sometimes they don't know what it best for them.

What supplies were at shelters. We were taking evacuees to shelters who were coming off boats cold and wet. We sourced and gave blankets as there were none at some shelters (not the shelters fault).

Where to go when evacuated

WHY WATER WAS NOT RELEASED EARLIER.WHY THE DAM WAS OPENED TO THE MAX IN HOURS OF DARKNESS.

Wider explanation of flood potential for different dam release settings in the community. The event was unprecedented but the knowledge of the flood conditions if the dam gates were fully opened was not. Better explanation of that potential risk would have have made community better informed. We tried to evacuate friends when the warning was reeiv d but could no longer access. Earlier knowledge may have lead to earlier evacuation attempt.

With warnings have a list of evacuation centres could go to. As had pets with me options were very limited as to where to go. Pets were eventually put into a boarding kennel so I was then able to get accommodation with CWA

worst case scenario flood maps being sent out sooner

Would have liked a fact sheet to provide context on the management of the dam gates prior to the council advice they would open the dam gates, I am still a bit confused as to the role of the dam in flood mitigation- or not! Text message alert should include the suburb to be a little more specific. I was at a large workplace and all staff received the alert, when staff lived all over town including non flood suburbs, this caused confusion about who should go home, stay or if everyone should go.

Zones not used to communicate flood areas. What's the point of them if not used for communication purpose.

Table A4. What influenced your decision to evacuate or stay in place? Open ended responses

unsure if we would be flooded but didn't want to risk being stuck in a flooded neighbourhood and /or wet house with our 4 young kids..

1)our next door neighbour worked for council and said we would be fine to stay. 2)we had a 2 story home and were out of the 100yr flood zone. 3) we stayed up all night watching and waiting though and were prepared to leave at the first sign of rising water if it looked like blocking our evacuation to Lavarrack base.

2 storey home

2 story house

200mm of water flowing through the house.

4 children, highest house

A friend sent a text at 4.30pm to say that they had heard that the dam gates were to be fully opened at 8.30pm. We turned on the car radio, heard the warning and decided to evacuate immediately. Unfortunately by this time, just after 4.30pm, the street had begun to rapidly fill with water so we could not self evacuate without assistance.

A press conference a friend tagged me in. Jenny Hill spoke first but didn't mean much. Then the official spokesperson for emergency services came forward & said don't leave it until 2am & the situation has worsened to now. I decided we had best leave. Then the army arrived & told us to leave before we had actually left. Nobody knew which roads were open, nobody could radio elsewhere to get more information about the roads. I asked police & army, several different times over different staff members. Nobody could find out.

A rapid rise in the lake at the front of our home, power being cut and notification of further release of dam water,

Able to monitor the height of the creek that floods near my house online via BOM site and compare that with tide info and rain patterns over the catchment to assess how high water levels were likely to get, and the levels never looked to get high enough to warrant leaving our highset home.

Able to self evacuate, local knowledge.

Accurate river readings and prep we had done - we are in cyclone season - EVERYONE in Townsville should be prepared for the unexpected.......

Advice from emergency services

Advice from neighbours and eventually having a good guess where our house was in relation to the council flood maps.

Advice from professionals we should be ok to stay but stay vigilant.

After receiving the information for our suburb to evacuate, we sourced noinformation from disaster dashboard and flood inundation maps and made the informed decision to stay.

Age

Alternative accommodation available

Although we live in a flood plain, the river doesn't directly affect our suburb, so I wasn't concerned with the dam release impacting the already flooding levels in my area.

Amount of water in street, friend rang us about dam release info

Animals, wanted to stay to keep our home safe, we knew that if we left, we wouldn't be able to come home for a couple of days when the water subsided

Area we live

Army advice

Army coming around and saying leave now or you won't get out at all

As a number of key neighbours decided to go after either calling SES or being door knocked on Sunday night, we felt we may be the only ones left..and be isolated..so we joined our neighbours to wade down our street guided by the SES to a safety point then waited for evac by army zodiac boats and then army trucks

As we are so close to the ocean and very high up. We made a decision to stay off the roads and out of flood water as we had plenty of food and water

Assessed flood level myself and came to conclusion house would be ok and thus no need to evacuate. Correct decision.

at work

Based on where the water and foreseen flood zone was, we were in a low risk section, so we stayed. Because I have small children. I literally had no idea what would happen.

Because the roads had started to be cut off and I didn't want to get stuck at my place and not be able to get out, I left a day before the first warning was issued

Been in Townsville 46 yearws and in that time have seen 1000mm water across road in front of our home - this time there was no water across the road. Examination of the Emergency Management Plan - Ross River Dam showed that in a worst case scenario (complete breach of dam wall) our street would see maximum 740mm water - so our house was clearly out of flood water inundation levels.

Before I purchased my house (Aug 2017) I checked the flood levels on the internet and knew my house would be safe.

being told getting another metre of water which would take it over floor. No evidence of personnel , water to deep to get car through gutter , to deep to walk through. Have $\,$ a dog , friend had evacuated to my house $\,$ with her dog $\,$

Being unable to take pets to an evacuation centre forced us to stay in place during the event, we were SES evacuated the day after

Belgian gardens, raised location, not near the river or and predicted flooding even if the dam failed. So no need to leave.

By the time we evacuated (friday evening after first minor dam releases) we had 40cm of water downstairs (built-in queenslander). We thought we have to leave now or we might have to be evacuated by boat later on and we didn't want to put the kids through that and waste the emergency crews time.

Checked flooding maps and based on our location

Checked river level to dam and gate level, noted rise to % and determined risk of flooding if gates were to open further with more rain

Concerned for safety

Confident in ability to self manage. Reluctance to abandon pet.

Confinement influenced our decision to move

Considered it safer to stay in place and avoid driving in heavy rain/floods. Home on high ground and prepared for cyclone season at this time of year, had water, food, battery power, etc, sufficient to remain at home even if access roads closed and power supply cut off.

Continued to me monitor. We haven't flooded in previous events

Could not take my dog with me

Could see river from my bedroom window. Too scared to sleep Friday night as it was still raining and I wouldn't have been able to see river in dark.

Current level of water

Dam gates fully opened. Pink zone.

Daughter told us fire brigade to her to tell her neighbours to get out

Decided to evacuate as water levels continued to rise, electricity went out, could not flush toilet or get water. Decided then to evacuate and that's when the army door knocked and assisted us to leave.

Decided to evacuate earlier than planned when river burst it's banks at Sherriff Park

Did an assisted evacuation to a so called safe area. Them police and army evacuated this safe area when water rose to inder the waves of houses.

Did not evacuate

Did not expect quite that level of water after experience with previous flood events and highset house.

did not have anywhere to go. was planning to go to motel and pay for room . but near the end this was not a viable option . could not get out of street.

Did not have to evacuate.

Did not leave

Did not need to evacuate

Did not want to lose our cars or have to be evacuated in flood waters in the dark

did receive a general warning via text (but hours later than neighbours - I was curious about this); I monitored soil saturation around house, visually checked water levels on street and general

information online. Neighbours and I also checked in with each other and decided to leave together if needed.

Didn't believe we were under threat

Didn't feel the need too and the roads were flooded in my area making travel unsafe.

Didn't know where to go if need to evacuate - closest evacuation centre flooded in initial bluewater floods and was always advised you can't take pets with you. I would never leave pets behind

didn't need to

Didn't want to be isolated with no power

Didnt want to leave

Disability and two small children. Needing to be somewhere safe.

Discomfort with young child

Door knocked, no power, getting dark, water rose halfway up driveway at high tide - wanted to be able to evacuate safely with dog. Knew we wouldn't sleep staying

Elderly, small car, by self

Emergency emergency text

Emergency services

Ended just staying and hoping it wouldn't get up to our top step

Entire neighbourhood chose to "stay" until it was too late

Evacuated because door knocked and provided with clear instruction about how to safely leave the suburb

Evacuated because we have pets

Evacuated due to close proximity to Aplin's Weir. Text messages were vague and ambiguous and other information provided by local government was the same.

Evacuation not required. Street in the suburb with lower impact anticipated. Live in a double storey house

Even if I was in an area to be flooded severely I would not have left without my dogs - would have preferred to die with them

Experience of previous major events while living at this property

experience with flood in our street in 1998

Family, friends and pets. It wasn't worth the risk to stay, so i activated my emergency plan and got to higher ground and stayed with family.

Felt safe & confident based on various sources of information that it would not be a major issue for us

Felt safe enough based on evidence, history of previous floods incl. 1946. Knowledge of geography of area.

Felt safe that water wouldn't reach the level of entering the house

Felt the creek behind us was travelling fast enough not to rise too high. The water inundated the house surrounds and back porch though.

Flood inundation map did not show our street as likely to flood with the dam release. It was confusing however receiving the warning messages which just said whole suburbs and weren't specific

Flood map

Flood map indicated Kirwan was low risk. Spoke to a police officer for opinion. Got sandbags before dam gates released. Kept up to date with media. Spoke to neighbours and family in the area. Had pets to consider

Flood map showed we weren't in flood zone.

Flood mapping

Flood maps

Flood Maps and Sanctum and Mount Low residents FB page monitoring information through posts in real time

Flood maps including dam failure map showed our house would be safe

Flood maps indicated no need to evacuate, text message was somewhat inaccurate

Flood maps showed Bohle River would only reach our footpath which it did.

Flood maps showed no need to evacuate

Flood maps showed our area was not at risk

Flood maps showed our house was far out of the way of being inundated

Flood maps.

Flood maps. Advice from disaster dashboard.

Flood maps. We are in a white zone even in a dam breach.

Flood water

flood waters stayed low enough

Flood waters were receding on low tides

Flooding in the estate

For reference: my suburb, especially the streets surrounding me, prior to the door knock had been relatively unscathed by flooding. I live approx 300m from the Ross River but could see that it was still 2-3 metres from the banks after a solid week of heavy rain. My partner was stuck in Charters Towers at the time so I was at home alone. I was very aware that I had a dog and two cats and did not want it to come to the situation where I had to leave them behind. I also had a small two door car and was worried about getting anywhere if I had to evacuate. I didn't want to unnecessarily burden anyone with myself and my pets, however the door knock was something that I took seriously and knew that they wouldn't be doorknocking unless it was seriously expected.

Full opening of dam gates

Got an SMS for Cranbrook but its a large suburb and we were in the white section of a map

Had a foot of water through my house.

Had an apartment available

had to meet a doctors appointment in Brisbane

Has been forced to leave my house due to inundation zone

Have an old pet dog. No family here. Limited friends. None were able to provide accommodation for myself and my dog. Was informed that emergency shelters were not allowing pets.

Have lived in Townsville for many years and know the flood zones

Having children at home with me while my husband was away in Bne

Having children. If it was just me I would have stayed

Having seen the aftermath of Night of Noah as a child, and having seen the result of complacency I decided to get out early.

Having small children in the house

High and dry, no threat

High block home

High set dwelling that in night of noah had 1 metre of water under house so felt confident given amount of rain we had already had that we would be OK.

High set home and numerous evac plans in place with high prepping taking into account flood inundation maps, and other info

High set home, back front the river so only concern was localised flooding. We had supplies to get us through. If needed we had family but the confusion of shelters regarding family pets would mean I would not leave my animals.

High set home.

High set house, couldn't leave animals, flood waters prior had not entered property

Highest home and never had flood water in this street before

Highest home several kilometers from river

Highset home, unlike 95% of the population, we prepared and lifted furniture. Monitored local river levels both online and physically on regular basis.

Highset house and animals

Highset house which I felt was at a high point in the road. Once the flood map was available to me it was reinforced. This was available 24 hours AFTER the door knock. Was unable to get to some places to evacuate. Unable to think clearly about places to go at the time. Had supplies.

Highset House, well prepared, husband QFES so up to date advice

Highset house. Had pets so harder to go. Streets out cut off early so too late to leave. Had did and water supplies for a few days.

Highset Queenslander in a previously unaffected area of Idalia. (Original section) Have lived here for over 20years and never been impacted before.

Home not located in flood inundation zone

House not located close to Bohle River

I am an international student so I have limited options

I decided to evacuate due to the amount of water in the yard and on the roads. I live 200m from the Ross River and before the gates were opened it was already inches deep. I drove to St Ignatius and the roads were almost impassible when I went through. Too scary.

I didn't

I didn't think my house would flood

I don't Drive, I had no where safe to go due to DV. As well as having pets.

I don't believe in mucking around in this kind of event, and had family in TSV where myself and my pet could go.

I drove past my street on my way to a sandbag job and was surprised to see a road closed sign and water over the road. I knew I'd be busy with SES so made the decision to stay at SES headquarters until the weather event had passed.

I evacuated after the first call to evacuate my suburb on Friday. I put the safety of my family above everything else.

I evacuated early as I had no means of transport, no friends nearby, and my dog to care for. ADF dependents we able to evacuate with animals to Lavarrak Barracks

I had a safe place to go and despite my house being fine during previous cyclones this event was different as the river has never broken its banks in the 23 years I have lived in the suburbs - this 'unknown' factor made me more nervous. My house was also without power from the Sunday morning of the day flood gates were open until friday afternoon

I had many people who had to evacuate stay with me for over two weeks

I had no control over the situation, I was stuck in Rockhampton due to road closures.

I have 2 big friendly dogs and no vehicle.

I have 2 small children

I have 4 children

I have a 2 year old, was told I had to leave

I have a 5 year old daughter and wanted to keep her safe

I have previous emergency service experience. I knew the capabilities of my daughters and had an evacuation plan. I have lived here for a long time and know my local area well and how close we were to rivers etc. I did speak with a friend who also has Emergency Service experience and has been a local resident for over 30 years and lives on the other side of our estate as to his thoughts, and we both agreed in our best educated guess, that we "should" be ok, but both made sure we had an evacuation plan and kept in regular contact throughout the event.

I knew we were safe from the reports on fb and but monitoring the actual outside conditions

I live in a high set house, no car & my life wasn't in danger.

I live in a two story house up high from roads

I live in s highest house on a hill but had 5 family members move into my home when they had to evacuate

I live with two small children. According to Dam maps there was a chance we would get flooded when gates fully opened (we did). If not flooded, we may stuck in our street wth no electricity.

I read the Dam EAP and saw that my house was in the 2100 Cumecs flood zone. I wanted to be able to evacuate under my own control by driving my own car. I have sleep apnea and when the power was disconnected (Saturday) my CPAP wouldn't be able to work.

I reside in a second story unit I felt very unlikely to water reach

I reviewed flood/tidal maps prior to purchasing the house. I knew how many metres it would take. I also chose not to buy a home on reclaimed land/floodplain.

I thought the roads would become impassible and we would not be able to get out if we stayed longer

I wanted me n my daughter to be safe

I was monitoring flood levels in my street and also had no where to take my pets if evacuated 🙄



I was unsure if blanket txt message considered my actual circumstances

I wasn't going to flood but evacuation wasn't an option as I was cut off by water in a floodway for 12 days

I'm very self-reliant

In a high area. Flood maps indicated flooding

Inability to leave own premises, access to main road from property was inaccessible for 4 days

Information by council was not clear

Information read on the Disaster Management Platform showed that my home was not at risk of flooding. Also, the council was excellent with communication of what was happening with the event.

Informed assessment of relative risk. Outside of core flood zone

Instructed to on the Monday

Inundation map

it did not flood enough to leave

It was about to flood, only an idiot would stay.

Keeping updated with news and emergency response information provided us with enough information to understand what was going on in our suburb

Knew that home was above expected max flood level (one of the highest parts of Annandale).

Knowledge of 100 year flood levels and a high set house

knowledge of the local topography to a level of granularity seemingly unavailable to those making evacuation calls

Knowledge that the living area of the house was in a different flood plain to the garden and that that site of the house had not flooded in 1946. Most of the garden went under.

Known flooding maps zones

Lack of knowledge about impact to new development. Had a small car, do wouldn't have been able to get out if we left it late.

Landslides and living alone.

Last neighbour left, then I felt very vulnerable on my own so decided to go

Level of floodwater - Two story house. Emergency supplies - Ability to fix something quickly during event and protect house.

Listen to local and close observations of water movement

live at the top of Hervey Range - not in flood area, house safe. only issue was our access to Townsville Live close to Mount Stuart

Live in Kelso so had a warning on Friday before the disasteron the SUnday - but after knowing they were opening the spillway of the dam knew the water was going down stream

Living alone, earlier flash flooding in my street made me concerned to be in the house overnight in case it did flood.

Living in a high set house

Living in a low set house with a 1 year old and a dog and cat. Staying was going to be too risky. Also had lived in the area less than a year so wasn't sure what we were in for.

Living on high ground.

Local area knowledge, high set house, comfortable knowledge of what would areas roads cause problems and what probably wouldn't.

Local knowledge

Local knowledge, if our house was flooded Townsville was doomed.

Local map indicating flood levels showed we were safe. Also talked to the neighbour and it was decided it was a sms sent to everyone.

Looking at the water in the next suburb and only seeing one way out of the suburb I was in

Looters

Loss of power

Loss of power early on, potential of getting stranded with flood water in downstairs if house

Lost power and water was rising into our street

Lost power. Army evacuating Aitkenvale. Floodwaters begins our house about to spill onto road. Did not want to have to drive through floodwater in the dark

Lots of animals. Safe upstairs and had plenty of food/water. Left with help post flooding as water taking too long to go down for the kids happiness.

Low house so didn't want to risk it.

Low level flood height we were in the edge of the flood map

Low probability of inundation, high set home, prepared with generator, fuel, water, food, medicine etc

Low risk Not near river, drains

Low risk to stay, at the same property through Yasi, confident with structure and high ground location

Lower chance of full flood event due to location of house

Mapping said we were to be ok however we were not

maps provided by council

Minimal flooding

Monitored water levels

Multiple prior warnings that inundation would occur in our area, door knocking by police at 3am Saturday gave the impression of urgency, seeing neighbours evacuating, no harm in evacuating to be on the safe side.

Multiple texts on Sunday afternoon from TLDMG urging us to leave the Riverbanks as the Dam gates would be fully open, and advice from SES.

My dogs

My family's safety

My friend from ergon rang me to say go now! 2 days before the gates fully opened.

My furbabies 2 cats and 5 chooks

My home is on a cliff face so flooding was not an issue.

My husband is a quadriplegic and in an electric wheelchair and I have two children (13 & 9) so we thought it would be safer for us to leave early.

My husband is in the army & was conducting rescues. He wanted us to evacuate so he knew we were safe & he didn't have to worry about us whilst looking after others.

My location was not a danger zone on the map provided on the disaster dashboard

My neighbours and I live in high-set houses and consulted the flood maps and decided that even if the water reached 1.5m (the next level up from our predicted maximum), we would be ok in our homes. Three of us have pet dogs and we had read that some evacuation centres and rescuers were not accepting pets. We are a tightly-knit neighbourhood and were looking after each other.

My own research.

MY pet , there was no evacuation centres that would take my dog.plus i had a son who lived down the same street with his flamate so wanted to make sure we were all safe

My pets as I couldn't get them to aafety

My road was already flooded (due to water coming up from a storm water pipe) on the Friday before the major flood on the Sunday.

My son lost home in Hermit Park & they were worried about us.

My suburb not included in list of affected locations. only superficial water present at our location My two dogs and 5 month old. I was home alone so definitely wasn't sticking around to see what happened.

My unit was high enough off the ground so I thought I would not be affected. Unfortunately, did not realise the yard would be flooded so badly.

My unit was not on the ground floor

My wife has an injured knee, and we were able to walk out to safety when the water was about knee height - to risk it getting higher would have impacted on her injury. As we left a civilian dump truck came around the estate taking people to safer ground.

n/a

N/A - self evacuated as per Police recommendations

Na

Na wasn't here and nothing could do

Nearby friends suggested.

Needed to get to airport Wanted to get pets and family to safety

Needed to monitor vulnerable entry points to house and prevent egress.

Neighbour worked for council and lived in our area all his life said will not go under

Neighbours assured me it was a general warning for low lying parts of my suburb, this warning came on the Friday morning when the dam was still only(!) 186%. Rang the council helpline to ask where the higher ground was, that the text suggested we evacuate to, and was told friends or family with high block (of which we know nobody) or the Heatley evacuation centre if we were concerned, although it appeared that the roads were flooded on our route to get there...

Neighbours were all evacuating and the concern regarding the opening of the dam gates at 8.30pm when the water had risen so rapidly from 5.30pm

New to the area so wasn't sure how we would go

News and text updates

No alternative option available

No chance of flooding

No door knocking

No door knocking not in a low lying area however next to a causeway that flooded had water in the shed and up to step but did not enter house

No evacuation order and flood map for river flooding showed we'd be OK.

No evacuation required

No flooding in our area we do not live in the vicinity of Ross river or Boulie River

No flooding in yasi. We didnt receive a doorknock by army like other streets did, we got text message to say evacuate at 5pm but it was too late. In the end we left the suburb via army boat after 60 other people came into the house. We werent the obly ones who thought we were safe due to not having a doorknock or being in the white on the map.

No impact from river flooding

No need

No need did not flood

No need to evacuate

No official request

No other way out

No power and we needed to have access in and out of home each day for work.

No problems

No reason to leave

No rush in water in our suburb

No threat from Ross river however the amount of rain run off was concerning

No urgency in text warnings, map showing flood areas with a 2000ML/s dam release, friends who were long term residents of the area, general geography of my property

No where to go, and only parts of my home were flooded.

No whete to go

Nobody else in my street was evacuating.

Not affected

Not at risk, when the rain stopped the water was gone.

Not flooding

Not in a flood zone on any maps

Not in a flood zone, felt safe

Not in a recognized flood area

Not in a risk area

Not in the immediate flood area

Not on flood inundation map

Nowhere suitable to go and trying to prevent further loss and damage to property

Nowhere to evacuate to that was pet friendly. Stayed with my dog.

Nowhere to go as we have lots of pets.

nowhere to go.....couple of relatives we do have here live Rasmussen area near the Ross River ...thought we were safer here....because of volume of rainfall and not being sure if the dam would hold up we thought all of Townsville was probably doomed

Observation of flood plans and current conditions

On an elevated site with reliable access. Ready for several days of power and water failure.

On edge of TCC inundation map. Door knocking stopped a street away from us. Live in a highset house.

On high ground near castle hill

on the cusp of the area of flooding

Once we were already flooded we made a decision to evacuate as a family. I wanted to stay and start the clean up bit my son wanted us to evacuate as a family. Also we didn't know if there was going to be any further flooding so just decided to get out

Only road leading out the house was close to inundation

Other people stayed behind, plus living in Douglas meant that (despite being very near the river) I was higher, and further away from the ocean.

our area did not flood

Our home is mid set and significant upgrades had been made to the drainage. We have a large dog we didn't want to leave. We have our own boat in our front garden if things got worse so we could self evac if necessary. We kept and eye on things and regularly discussed info with all of our neighbours in the street and we made a collective decision following the sunday morning high tide levels being lower that we had thought.

Our home is very highset and we had no water come on to the property other than through a leak in the roof

Our home was in a direct flood zone and we didn't want to be blocked on all roads or need to be evacuated as we have small children

Our home was in a position that was not required to evacuate

Our neighbourhood not inundated

Our pets and children.

Our street had been inundated by floodwater from a flood mitigation channel on Saturday during the high tide. I decided to leave on Sunday before the water from the dam release would impact. I did not want to be in a flood, potentially isolated, or trying to get onto my roof with a child and two dogs at night.

Our suburb was not on the list of recommended evacuations. We only received text advices to move to higher ground if we were in a low lying area. I checked the storm water drains around our street regularly for signs of flooding and each check showed the drains were coping well with the heavy rain. We were not in the 'Ross River flood zone', according to the map released by the council on the dashboard website.

Out of flood zone

Own judgement, actions of neighbours we still had power and house is high set

Part of my suburb was in danger but not all

Partner is a mapping professional, had done flood prediction mapping, and this indicated that we would have water to the house if aplins weir exceeded 3.5m

Personal contact

Personal door knocking by Fire Brigade, told us to go now or we would not get out at all.

Personal safety

Pets

PETS. Would have evacuated much early if there was a safe place to go with my 2x dogs

Photos on Facebook of nearby streets getting flooded

Police advised due to amount of water after gates fully opened.

Police advising me to leave

Police Instruction to evacuate immediately

Police man explained my house would be inaccessible for days - he was right

police saying it was our last safe opportunity to do so

Possibility of losing power and being isolated for days

Potential for, and then actual water entering house

Power went off, relentless storm over the dam on Sunday, so not sure if I would be able to get out once the flood waters rose

Previous experience with 1998 floods - we were not affected io our property, but unable to leave once waters started to rise. Both 1998 and 2019.

Previous experiences of flooding (different town) Advice from friends

Previous flood events. Was prepared (food, water, gas cooker, torches, medications etc) My house is highset, (2mtrs above ground) although near open drainage very unlikely to fully flood. There were several times I was unable to leave the house due to flooding but I was prepared enough that I could have easily provided 7 days worth of food & water for my 3 children

Previous flood levels, mapping data, highset home

Prior knowledge of river height required to inundate house

Property was stable and living above flood water line

Pumping station had been working very efficiently. Low area in street had no water over it on going to bed at 1am.

Pure chance circumstances which made us aware that exit routes were completely cut off.

Rain, nowhere to go, roads cut, not sure of high ground in our area

Rain, rising water jn street(not the lake) and advice on the release of a huge amount water.

Ran out of power to phone and could no longer communicate to get help so felt was unsafe to stay

Reasoning and persuasion from friends and family

Recommendation by SES

Reported expected flood levels.

Reside in Cranbrook. There was no need to evacuate as there was no risk. My street/area was in the safe zone on the flood map released during the event.

Reside on second level of apartment block and pets were not readily accepted into evacuation centre

Reviewing flood maps

Rising water and suspected further release of dam water.

rising water kid with medical condition, place to go

Rising water on street, text messages from Council

River level rising fast

Roads were flooded House was located at a higher level than others

Safe

Safe from flood

Safer in the house, roads, highway & bridges flooded.

Safety of family

Safety of family & Emergency service safety. ie not effecting evac at night.

Safety of my children

Sandbagged doors and stayed because our power wasn't turned off. Also evacuation map didn't show house to be in danger. Also needed to stay so parents could evacuate to my house.

Saturday- Police checked on us, told us jist to keep an eye on things and leave if we fealt the need to, So we stayed. Sunday - When Army told us we had 5 mins to get out as there was a surge of water coming from the dam

Saw that we were going to inundated, but not sure to what level. Decided to not take the risk.

Secure in home no sense to go.

See 25. If I had been home I would have self evacuated to a friend's house because her mental health has not been good lately and she would have benefitted from the support.

see above

Seeing no water coming around the house so stayed put.

Seeing the water rise quickly and getting multiple texts

Self assessment situation - no flash flooding prior to the event

SES insisted we leave

Small children and the fact that we knew other parts of home already not inundated would be - major living area

SMS messages were general in nature -- covering entire suburbs regardless of elevation. I judged that even in a worst case scenario we would be above flood levels.

Specific location of my home within my suburb - elevation

Split level house plus was not leaving pets

Standing in daughter's room, looking through full size windows, at water gushing down the creek from the hill.

Stay in another place

Stay in place.

stayed in place as long as possible to protect property. Also where the hell do people go. they keep saying go to family or friends. some people don't have that option. evacuation centres are absolutely last resort.

Still had power until the dam water release, live in a highset. Evacuated Monday morning because of no power.

Text message advised move to higher ground if concerned, felt that my house was pretty safe - which it was.

Text message.

Text that dam gates were being opened and heavy rain causing water levels out front of house were rising rapidly.

The 2nd time the house flooded

the advice of the imminent gates opening

The army told us they were opening the gates and it would definitely flood our house and they were panicking running through the water

The elevation of my house ensured that we were safe from floodwaters.

The fact the police came and told me to evacuate was enough. i've only lived in Townsville 2 years and had absolutely no idea this was possible.

The final emergency text message

The flood map suggested the inundation wouldn't reach our property, although close

The flood map that was released

The flood Ross river dam inundation map where you type in your address and it shows where your house is as a dot on the map

The information provided indicating the dam flood gates were to be open completely. The combination of the flood gates, a high tide, and river/flood waters present in the street were not a good mix.

The last flood map shown before the gates opened to full

The level of increasing water

the level of urgency from police that door knocked in middle of the night

The location of my house being well outside of any of the storm surge maps

The map showed we were ok.

The map when they were finally released.

The need to get to work with fears of our home being cut off from the rest of the town - which it then was. Also having no power and our lack of preparation to be in that situation

The police told us to

The quick rise of the water

The rate of rising water on our driveway

The rate the water rose was scary

The residence is a two-storey house which allowed us to comfortably remain out of the floodwater as we believed (and were later advised by the flood maps produced by the local council) that the water would not rise above 2m which would leave the second level out of water.

The rising floodwaters

The river had broken bank and was flowing through the street. We had received a general text saying if we felt unsafe to evacuate. As we were packing up to leave there were army advising evacuation in the street and our power was turned off.

The road flooded once to the point we couldn't get out and that's when we started packing, we then got a text and phone call saying to evacuate while packing so when the water fell a little we drove out and as we were driving out police had just started door knocking

The roads were closed around us from 9am so we physically could not evacuate early.

The SES and police told us to go because they never anything like that flood.

The severity of the situation wasn't explained properly, and by the time we wanted to leave, we were well and truely flooded in

The sleed at which the flood waters rose in our street & driveway.

The speed of water rising.

The text warning, discussion with neighbours, watching the water in our street rise

The text was a blanket "IF you are in a flood area" one... I am honestly not sure why I received it because I wasn't in one of the listed suburbs.

The tone of the police officers voice and the fact that she said if I didn't leave then I would have no choice when she returned later that evening.

The txt advising that the spillway gates would open fully by 8 or 8.30pm that Sunday night 3/2/19.

THE UNKOWN LEVEL OF WATER TO EXPECT

The warnings and the water in out street

The water at our doorstep

The water in my street rose really quickly. The drain near the street broke its bank and people were canoeing down my street. I figured it was a good idea to evacuate at that point.

The water levels

The water rising up our street

The water rose incredibly fast and stopped me from driving a car out and onto the road.

The water was rising

The water was rising so thought it best we evac

There was conflicting information, but ultimately the decision was made due to proximity to the Aplins Weir and Ross River and concern that if I didn't leave early enough I would be able to make it out to relatives in North Ward.

There was no where to evacuate to. The evacuation centres were full

There were so many warnings to evacuate that we started to ignore them.

There were too many text messages saying evacuate if you feel you need to The police knocked Saturday so we left but returned home Sunday It was until I got a message from a friend who worked at the dam to say 'get out now' when the second release was about to happen that I actually left. The warning text messages were far too vague

Though in a flood known area we felt the property hadn't flooded before so the police on the doorstep at 1am we felt we had to go.

Tide & gates opening combined & we would NEVER leave our animals, EVER!!!!

Told by army to expect an extra 1.5 m on already 50 cm. Two small kids plus a dog

Townsville has useless evac centres. I have an old high set house designed for floods and a dog, my house is safer and I won't abandon my "pet"

Two storey home

Two story house

Two story house. Sought refuge on the second level

Unit flooded

Unknown flood levels

Unknown quantity of exactly how high the river would get

Unsure of threat. Text messages were not accurate.

Unsure of what was happening

Untrustworthy behaviour from neighbours, and concerns over hygiene. I didn't want to be trapped in the company of emotionally unstable people.

Upstairs area was out of the water, my husband is an amputee and couldn't wade through the flood waters.

very high water level

Wanted to protect property and had large dog. Didn't flood during 'Night of Noah'. My subdivision relatively new and drains into the Bohle River. There were no King Tides

Warning that the dam was gonna open fully. Our suburb and the suburb behind us (Pimlico) included in warnings. Ross River broke the bank on Aitkenvale side

Warnings, power went down, neighbour left. The water release happens at night, so we couldn't see what was happen and the rain was biblical.

Was home alone

Was informed of the decision to open the flood gates further. At this stage, the water had already reached my patio so I knew the house was going to be flooded.

Was not keen on getting stinky flood water all over me.

Was so I could get my car out. Otherwise I would of stayed

Wasn't on the flood maps that were released

Wasn't effected

Water already inside - 3 days without power - lots of notice the Dam was going to be openned

Water coming into house and the increase in the flow rate of the water.

Water coming into unit

Water coming thought all the walls and cracked roof had to leave

Water coming up the driveway.

Water entering house

Water has never come up that high so no need to leave - water this time only went through shed but not house

Water heights

Water level

Water level inside the house

Water levels

Water levels rising so quickly and having children and pets

Water levels na

Water on Oonoonba Rd

Water peaked and started going down after high tide, then rose very quickly approaching the house before fire brigade told us we had to leave immediately

Water Rapids down my street and I spoke to some army chaps.

Water rising quickly

Water rising quickly up the driveway on Sunday afternoon no power or gas & the information that the dam gates would open at 8pm

Water rising very fast. 2 young children and SES were evacuating in the street

Water rising very quickly and small children.

Water started rushing down our street.

Water started to get in the house

Water suddenly rushing through the house knee height. Flash flooding

Water up on road but not more than last year rain in March?

Water up to our doorstep and not draining quickly while rain continued Monday morning

Water was coming next to the door

Water was filling up the inside of our house so we swam out to safety

Water was getting higher

Water was knee deep Saturday morning and power had been turned off

Water was only ankle deep in the yard, did not come in the house. Evacuation was unnecessary.

Water was rising at a rapid rate. Waded out in waist high water

Water was rising fast in our area, we received text and kids were panicking. We decided to evacuate before we became stuck and needed rescuing

Water was rising over our knees, we were yet to see the full effect of the Dam release..

We are above any flood mapping, we were well prepared, all services were available, we were experiencing leaks and mould and needed to take ongoing action to protect the house, children were comfortable and safe here

We are high on slope of the hill

We are in a highest home

We are in a legal height home in railway Estate and if we were going under the whole of Townsville would have gone under. We still had power and had almost enough food as we had a friend and her 2 children seek refuge in our home as hers is a lowset unit wasn't expecting the extra people but we would have been fine otherwise

We are in a two storey house and stayed to protect our gear under the house by raising it and bringing it upstairs as the water for higher

We are not in an inundation area - evacuation text was general to west end as a suburb - not helpful. Some geographic/location specifics would be more useful - Eg west end west of Ingram road/rail line.

We are on high ground and have well resourced and knowledgeable neighbourhood community. Also high set home. Received a moved to higher ground text.

We are on the side of a hill on a military power grid so we decided to stay

We checked flood maps before purchasing the home. We are good distance from the river. We have two large dogs. With highway blocked in both directions we could not identify suitable "higher ground". We had nowhere else to go with our pets.

We choose to stay, we prepared our home and we had removed our children prior to all the flooding. We had discussed when we would leave and where to. It was only when we were given no choice, did we leave.

We decided that we can try and protect our property to the best of our ability and could not leave our pets to nature (cat, chooks & 2 fishtanks)

we decided to move to a neighbours house which was higher at about 5pm on Sunday 3 Feb, then at about midnight the army arrived in boats and we all decided to leave. They took 63 people, dogs and cats. If they didn't take animals we would not have gone.

We did not feel that the Flood was affecting our area.

We didn't get a door knock & we've never flooded in 28 years. Plus we couldn't take our dog & we never would have left her.

We didn't want to wait until it was too late. Our friends were concerned, and we decided to take their advice and leave when the water touched our street.

We didn't flood

We evacuated after the council's announcement that the dam gates would open fully on Sunday night.

We evacuated after the flood waters rose to never before experienced flood levels and after the text warning of the flood gates to be fully opened on the dam at high tide.

We evacuated to a house 3 doors down with stronger steel stilts as ours is only on wooden stilts. We were unsure of the structural integrity of our home. But we only went a few doors up and not to a centre because it meant we could bring our animals.

We felt that the text message warning was for a greater area than our immediate suburb (going off signal towers) and didn't feel that our house or immediate area was under threat.

We felt we were not in an area that was at risk and had an evacuation plan should things change

We flooded before everyone else, we had to get out frid morning

We fought with sandbags as due to ring road we also flooded in February 2018 and did not want to go through this again, however, once it was pouring oversandbags and into the house, we decided that it was time to leave before we could not cross our driveway, so for safety we put things high, took animals and family.

We had a door knock on Sunday, the gates were fully open and knowing we had another couple of metres until the house would be flooded from Saturday night the only cause would be the rainfall in the catchment. Wr had enough supplies for days and things to cook on etc even if the power went out. We knew we'd be ok if we stayed that night.

We had a high block house so felt safe plus we had pets and did not want to leave them

We had children and an alternative safe place to go.

We had localised flooding and access issues but our home was not at risk of inundation. Generally our home is only affected when associated with large storm surge/tides.

we had pets and our suburb had never flooded before. 10am on the Sunday our street was flooded well and truely before the suggested 8pm dam gate release and within an hour we were unable to leave because the water had risen a metre. We were unsure and had mixed information so stay however decided at 9pm to try and get out while we could in case we got trapped.

We had several pets. Evacuation shelters nearby had become full. Or way to evacuate was flooded. We were on the higher side of Kirwan inundation mapped area.

We had to leave as flood waters had come close to us and was not sure once released dam if would get closer and we also had to leave anyway due to sewage in part of the house

We had too many families in one house approx 63people for it to be safe

We have a high home and the rain had not caused flooding on our property as we had experienced in previous years. the Kirwan flood mitigation done years ago I believe helped the Kirwan area - it was obviously excellent.

We have a plan for remaining due to having pets and our previous experience in floods

We have a severely autustic child who does not cope with change so ignored the midnight doorknock warning on Friday night. The garage flooded with the high tide on Saturday morning and did not recede so we waded out to avoid the risk of my son having to be evacuated to an evacuation centre. A friend called offering to meet us as close as he could get in the floodwaters so we chose to wade out to a shallower point

We have a young child, when we lost power and the water was only passable by 4wd we did not want to get stuck at home as we are in the Army and needed to be able to go to work.

We have been flash flooded whilst out camping and we have a 4yr old daughter. So we booked a motel on sat night to be sure.

We have young kids and knew the roads would get cut off, and didn't want to lose our option to get them out of danger if things escalated.

We knew that the dam gates and Ross river would not affect our home, plus we are in a high set

We knew we would be fine.

We know that our place is high and dry in times of flood

We live in a high set home and neighbours with pets evacuated to my home.

We live in an area that had never flooded and we were monitoring the river levels and did not feel at risk.

We live on a hill.

We live on a hill.

We live on edge of inundation- before text we only had less thank ankle deep water anywhere in our area (high point in suburb)

We live on the river but are not in flood mapped zone and did not receive notification to evacuate until a couple of hours prior to the full opening of the flood gates. By this stage, it was too late to get to higher ground - they essentially issued evacuation texts and radio for almost all Townsville suburbs at this time, where would they like us all to go?????

We lived in a higher ground.

We new the water would not stay up for long as we back on to the Burdekin river and had local information on the local flood areas and where it floods we where not worried

We self evaluated to avoid possible emergency evacuation later - also after text alert regarding auto opening of the dam gates along with increased rain falls.

We stayed as we were high and dry, the dam gates being opened was what flooded us, that flooding through the house made us have to evacuate

We stayed in our 2 storey home so we had upstairs. Plus at the time of evacuation they were not talking animals & we don't have friends or family here for us to go anywhere with an animal that wasn't already flooded. It wasn't until late that night the army were finally allowing pets to be evacuated as well on boats which we would have needed.

We still had power. The waters came up too fast to get out via car. From 6.30pm - 7pm Sunday evening. It inundated our street.

We were about to accommodate our mother and sister who lived nearer a waterway in Annandale, but the Council announcement that they would be releasing 2000 cubic metres of water per second as of a certain time, made us uncertain as to whether our home would still be safe. So we decided to call a sister's family out of town, on high ground, and shelter there.

We were advised that this block had never been under water by our solicitors when we purchased 10 months prior, and by the time we were given further information our suburb was already cut off and we couldn't take our animals

We were completely inundated during Yasi and I was concerned it may happen again. The biggest reason we left is because the gates opened fully at night and it would have been harder to leave. If it had been during the day, we may have stayed

We were in a high set home and we have not previously had water into our yard. The Mayor had said that those in high set homes may be more comfortable staying at home, so we stayed.

We were in a low area

We were in a relatively high point and have a second storey. We had adequate food and I have a gas cooktop so we could cook after we lost power. We don't have children at home and our dog was already at the boarding kennel. We felt that other people needed the evacuation centre more. By the time Sunday came and they were warning the dam gates would be fully opened all roads were cut off

We were in no danger where we were. We received a generic text message advising to go to higher ground, but knew our property was not at risk.

We were not at risk of flooding from creek

We were not effected by the flooding.

WE WERE NOT IN A FLOOD ZONE

We were not in danger from the flood levels at Bohle River, and never rose onto street level.

We were not in red food zone

We were not on flood plan, but an unknown person advised what the impact would be once dam was 00% open. I had just read at the time they were opening the dam so we evacuated. Also there was no where for my dogs and I to go so we delayed till we knew we had to leave.

We were on boundary of absolute worst case flood scenario with predicted rise of 30cm which woud not have inundated our house because our house is ona higher block of land

We were prepared with generator, food, water etc and decided to stay put. We live in a high set house and considered it a risk we were willing to take. However upon receiving more than 9 (!) text messages in an hour to "evacuate immediately" I had a moment of panic where my husband had to "talk me down" and through our plan.

We were stuck in Brisbane when the advice came through

We were unsure if we would flood. Previous worst-case flood maps showed the water well-short of us. It was dark by the time we got the message and raining heavily. I thought shelter in place was the safest option with a concrete home and roof access.

We weren't at risk

We weren't in a danger zone as viewed in the council flood map

We're in a high set queenslander. We were advised that upstairs would be fine but we would be flooded in and have no way to leave without assistance for days. We also have multiple animals I wasn't keen to leave behind.

Went from almost no water in my street to a rising river within a few hours

were prepared to weather the event

Whe had pets and a toddler in a highset home it was more reasonable for us to stay put with a generator

When my street filled with water.

When River breached at Sheriff Park was my trigger point to evacuate. We were able to evacuate to friends in an ordered way.

When we were doorknocked the roads were already closed and we couldn't get out with our car. There were at that stage no assistance offered and we also had a pet that would not be allowed in the evacuation centre

Where would i go with a diabetic husband on insulin and i cook all his meals. I would need a fridge for the insulin and he uses a cpap machine which would disturb people in the evacuation centres if we found a power point to plug it in.

Online Survey Instrument: Townsville 2019 Monsoonal Floods

Q1/2: Were you or your household impacted in any way by the major flood event in North Queensland during late January/February 2019 Yes - please proceed to complete the following survey No - please do not complete this survey - thank you for your time Q3: In what town, suburb and postcode do you live? Q4: Do you feel that you/your household was adequately prepared for a disaster before the flood event happened? Yes No Other (please specify) Q5: Did you/your household have a disaster kit prepared before the event (minimum 3 days food, water and supplies)? Yes No Other (please specify) Q6: Did you/your household have a disaster evacuation plan before the event? Yes No Other (please specify) Q7: Did you/your household have household and/or contents insurance before the event? Yes No Other (please specify) Q8: What was your primary source of information regarding the flood event (you may select more than one option). Television Print media (newspaper) Facebook Twitter Instagram media platform (eg Flikr, YouTube, blogs) Media website Government web site (this includes Bureau of Meteorology) Local Government Disaster Management Dashboard Community website Other internet source Weather based app (smart device) Radio Friends/family Telephone support service/hotline Other (please specify) Q9: Please indicate the main reason you accessed information regarding the flood event (you may select more than one option). Monitoring of the event/local impacts Personal preparedness Sandbags and supplies Warning information Flood/inundation mapping **Evacuation information Information** pets/evacuation Dam updates River/waterway levels updates Event tracking/updates Information on impacts Information on emergency response Information on relief efforts Information on recovery efforts Financial assistance Volunteering/donations Other (please specify) Q10: Please indicate any official source/group you accessed to prepare or obtain information regarding the flood event (you may select more than one option). Queensland Fire and Emergency Services Bureau of Meteorology Queensland Health State Emergency Services (SES) Local Council Based Disaster Information Group Local Council Disaster Management Dashboard Flood Event Livestream/Videos Queensland Service Local Politician Ergon Energy Department of Transport and Main Roads Other (please specify) Q11: Please indicate any official source/group you accessed to prepare or obtain information regarding

Queensland Fire and Emergency Services Bureau of Meteorology Queensland Health State Emergency Services (SES) Local Council Based Disaster Information Group Local

the flood event (you may select more than one option).

Council Disaster Management Dashboard Flood Event Livestream/Videos Queensland Police Service Local Politician Ergon Energy Department of Transport and Main Roads RACQ Other (please specify)

Q12: How would you rate the information provided by these official sources?

Accurate Up-to-date Useful Trustworthy

In all ratings questions each rating category was ranked - Completely - Very - Moderately - Somewhat - Not at all or - N/A

If you wish, you can provide comments here:

Q13: Please indicate if you accessed weather based information generated by the Bureau of Meteorology regarding this event.

Bureau of Meteorology website Bureau of Meteorology facebook page Bureau of Meteorology severe weather warnings Bureau of Meteorology rainfall tracking maps Bureau of Meteorology live streams/videos None

Q14: Please rate the information generated by the Bureau of Meteorology.

Accurate Up-to-date Useful Trustworthy If you wish, you can provide comments here: Q15: Please rate the information from other weather focused source/groups you may have accessed. Accurate Up-to-date Useful Trustworthy If you wish, you can provide comments here: Q16: Please indicate any news media outlet source/group you accessed to prepare or obtain information regarding the flood event (you may select more than one option).

ABC News SBS News 7 News WIN News Other commercial news network Other print based news network (eg. Local newspaper, The Australian, Guardian, Reuters etc)
Online news based services (eg. news.com) ABC radio Local commercial radio station None Other (please specify)

Q17: Please rate the information from the news media outlet source/groups.

Accurate Up-to-date Useful Trustworthy If you wish, you can provide comments here: Q18: Please indicate any non-government organisations or agency source/groups you accessed to prepare or obtain information regarding the flood event (you may select more than one option).

Australian Red Cross RSPCA The Salvation Army Volunteering Queensland GIVIT Lifeline None Other (please specify)

Q19: Please rate the information from non-government organisations or agency sources/groups.

Accurate Up-to-date Useful Trustworthy If you wish, you can provide comments here: Q20: Please indicate any community based forum source/group you accessed to prepare or obtain information regarding the flood event (you may select more than one option).

Disaster Response on Facebook Local questions and answer group Local animal or pet focused group Local church or religious group Community support group Flood event group Friend/family None Other (please specify)

Q21: Please rate the information from community based forum sources/groups.

Accurate Up-to-date Useful Trustworthy If you wish, you can provide comments here: Q22: Which group/source did you find most useful/valuable? why?

Open ended.

Q23: Did you come across any inaccurate, conflicting or misleading information regarding the flood event?

Response If yes, please give details

Q24: Please indicate your overall level of trust in the information provided regarding the flood event.

Response If yes, please give details

Q25: Is your home located in a previously identified flood inundation zone?

Response Unsure (please specify)

Q26: Did you receive advice to evacuate your home/location (you may select more than one option)?

No Door knock by emergency services/military Text message General warning via media

Advised by friends/family Self evacuated before any notifications

Q27: Did you evacuate your home/location?

Response Other (please specify)

Q28: What influenced your decision to evacuate or stay in place?

Open-Ended Response Response Other (please specify)

Q29: Please comment on any aspect of information, warnings or evacuations for this event that you

believe could be improved?

Open ended

Q30: Are you male or female?

Male Female Other (please specify)

Q31: What is your age?

Response categories Prefer not to say

Q32: What is the highest level of education you have completed?

Response levels Prefer not to say