

# CASE STUDY 1: GRANTHAM AND LOCKYER VALLEY FLOODS 2011

On 9th and 10th of January 2011, heavy rainfall caused flash flooding to occur across parts of Queensland resulting in widespread damage to property and 35 fatalities. Grantham, Lockyer Valley and Toowoomba were severely impacted. Due to landslides caused by flooding, and water blocking the Warrego highway, the Lockyer Valley became isolated; police and emergency services were no longer able to access the area. Excessive fog and rain prevented helicopters flying overhead during the emergency.

Residents of these areas received no warning, unlike the larger towns of Brisbane and Ipswich. The Tsunami like force of the flood was unlike anything that could have been anticipated.



The town of Grantham after the 2011 flood.

*... you've got cars up in the trees meters off the ground. Whole buildings taken off their stumps and moved ... in some cases almost kilometres ... it's just a mess.*

*– Steve Jones, Mayor of Lockyer Valley*

Of the 35 people who died as a result of the 2011 Queensland floods, 21 deaths occurred in the Toowoomba and Lockyer Valley area.

The community felt a false sense of security after the construction of the Wivenhoe dam in 1974; therefore many homes and businesses had been built on floodplains. The dam was designed to lessen the risk of such disasters but could never have completely eliminated the risk. Due to unprecedented rainfall over this period, the dam was unable to hold the massive

volume of water.

There were many survivors rescued from rooftops and tree tops in the following days; victims also assisted the rescue of other members in their community. Extraordinary feats of resilience and bravery were demonstrated by the people affected. Listening to the stories of survivors allows us to learn and better understand what made people vulnerable to the flood impact, and the role 'human factors' play in how disaster events unfold.

## **Flood preparedness**

Many people in the community felt a sense of complacency about flood risks prior to the events of 2011. The Wivenhoe dam gave those residing in low lying areas a false sense of security. They did not have an understanding of the risks during extreme weather, despite severe floods having occurred prior to the construction of the dam in 1974.

*I was complacent and thought we were safe. I thought there would never be a bigger flood ... The attitude that "it will never happen" is no longer an option.*

– Mr Keep

Many people in the community found it difficult to believe their neighbors who were spreading the word of the floods imminent threat.

*I was told to get out of Grantham because there was a big wall of water coming and that Grantham was going to go under, I found it difficult to believe that water in the Lockyer Valley could reach that height.*

– Mr Warburton

*She told me about the wall of water coming to Grantham and I didn't believe it, I told her she sounded like she was panicking.*

– Grantham resident

The community is now more aware of the flood risk to their area and the factors that make them vulnerable.

*Don't be complacent about the risk of natural disasters which strike suddenly. Don't expect warning. Don't rely on anyone to save you. Be prepared to protect your own family.*

– Mr Keep

*I think the most important thing to learn is that there will be more floods in the future and a fair amount of preparedness and pre planning would be very useful to help minimize their damages.*

– Geoff Heatherwick, BOM hydrologist.

## **Flood survival plans**

Many residents did not have flood survival plans ready to implement in the event of an extreme flash flood. If they were able, most residents climbed to safety on rooftops.

*I experienced the 1974 flood when the quarry had not yet been developed. The water had never reached my property.*

*- Mr Sippel (Grantham)*

*By stacking furniture together I made a stairway and got my daughter and two grandchildren to the safety of the roof.*

*- Grantham resident*

Some people had basic plans of how to escape flood waters that were not adequate because of the unexpected severity of the situation.

*I had planned to escape across towards the railway line if necessary but the situation was worse. The water was flowing at a terrible pace, breaking like rapids over a stream.*

*- Mr Warburton (Grantham)*

## **Warnings and rescue**

Residents of Grantham and Lockyer Valley received no flood warnings, news of the disaster only spread by word of mouth if it was received at all. Other people were only alerted to the danger when it became visible.

*Grantham and us and all the little places just got forgotten about when there's a big city like Ipswich and Brisbane under water.*

*– Lockyer Valley resident*

*Why were authorities not able to warn people in seven towns in Toowoomba and the Lockyer Valley that the worst flash flooding in at least a century was about to strike ...? How could such a sudden and catastrophic flood claim three members of his family within minutes?*

*– Mr Keep*

Some residents of Grantham perceived the dangers early and warned neighbours.

*I knew people should be warned. While I was making calls I saw Lockyer Creek break its banks and flood the area of land between my house and the creek. Within 5-10 minutes the water had reached the level of the windows of my house.*

*– Mr McIntosh (Grantham)*

*My daughter phoned me to say that she had seen a warning on television about a “wall of water” in Toowoomba. She told me to please listen to her and told me to get home and get as high as I could.*

*– Ms Mahon (Grantham)*

Emergency services were overwhelmed during the disaster. Triple zero operators advised people to stay indoors to avoid being swept away.

*... on a typical Monday the 000 line in Toowoomba receives about 60 calls, on this day 883 such calls were received.*

– Grantham resident

Many managed to escape onto rooftops and trees if they were able. Once helicopters were permitted to fly through the area, people were rescued from these positions.

*I went upstairs and sat on the verandah to watch the water rise. I got worried so I tore the awning off the back verandah so that it didn't block the path to the roof.*

- Grantham resident

Helicopter rescue crews were shocked at the number of people stranded on roof tops needing to be rescued.



Flood waters rage through the Lockyer Valley.

## **Attempts to evacuate and escape flood waters**

Residents of Grantham and Lockyer Valley were not advised to evacuate the area so most did not manage to do this in time.

*There was no evacuation plan, that's the whole point, there was no disaster management plan ... It all sounds really lovely that the quarry has given us an extra three minutes which is fantastic, but we had no idea it [the water] was coming anyway.*

– Grantham resident

*There was a huge rise between 3:30pm and 3:40pm ... the breach quickly became a metre-*

*high wave of water which travelled between two and four kilometres-an-hour towards Grantham ... At the very front of the water moving ahead, that's where you will see the wave; in the same way if you're at the beach and you're looking at the wash coming up ... You'll see turbulence as the wave tumbles over itself over the dry land.*

*– Dr Macintosh*

Most residents had no time or opportunity to evacuate once they became aware of the dangers. They were also unaware how quickly and dramatically the flood waters would rise, eventually reaching rooftops. This hampered decision making.

*They told me quick get out there's a five foot wall of water coming so I jumped in the fire brigade [truck] and I got out with them to safety. The rest of Grantham, I heard the sirens going through there and they wouldn't have had a chance to get out.*

*– Robert Merideth*

*We all went into the kitchen and I called the SES and told them that water was all around the house and still rising and that we would need to be rescued. Then the back glass sliding doors broke ... By then the option of running to the railway was gone. And the option of climbing to the roof was gone ... The current around the house was running very fast.*

*– Mr Keep*

Some people were almost trapped in their homes and drowned but managed narrow escapes.

*There was no power and the water was blocking daylight. I found myself eight inches from the ceiling. In desperation, I dived underwater and swam out the door of the shop.*

*– Mr Warburton (Grantham)*

## **Dangers of driving through flood waters**

Some people attempted to travel through flood waters in vehicles.

*My mother's car floated away. It had been parked on the road at the front of the property. My mother then suggested we call the SES to be rescued.*

*– Mr Keep*

The Perry family became stranded in their car as flood waters rose. They managed to climb out of the windows and onto the roof of the car at the last minute. Channel 7 helicopters spotted the family but by the time they returned to rescue them the car had disappeared. The family members were found nearby clinging to tree branches and their 9 year old son on top of a floating cattle feeder. Unfortunately one family member was swept away.

## **Damage to property and dangers of flood waters**

People's homes were rapidly inundated with water which quickly rose to rooftops, washing away cars, equipment as well as sheds and some houses.

*With each wave the water level became higher and higher and spread further onto my property. By 3:17pm I could see the Creek carrying away boats and massive trees. By 3:24pm*

*my shed was completely under water. My tractor was swept aside and my shed was ripped out of the ground.*

*– Mr Zische (Lockyer Valley)*

*A surge of water came through the front door and smashed the two front windows inside. I began treading water.*

*– Mr Warburton (Grantham)*

*Water rose suddenly carrying debris that proved destructive to homes and people caught in the flood water.*

*A great amount of debris was coming down the creek and the roar of the water was astonishing.*

*– Grantham resident*

*A python slithered across the debris in the water and into the wheel hub of the sinking car. Rats also began to climb into the car.*

*- Grantham resident*

*A shipping container floated past me down the street.*

*- Grantham resident*