I have come to recognise and understand that living and/or owning a business in Lismore is not dissimilar to being in an abusive relationship.

You want your relationship to work out, to be a happy and healthy place to be. You want to grow within it and for others to see how it works and is nurturing for you…

BUT…. You keep getting periodically savaged and belted around by events which threaten your life and livelihood, shatter your dreams and happiness, destroy your optimism for a happy, healthy and stable future… and worst of all erode your self-confidence and belief in a successful future.

April 2022
In the aftermath of Lismores
Catastrophic Flood event

The Lived Experience

My name is , in 2013 my wife and I moved from Melbourne to Lismore seeking a more rewarding lifestyle in a smaller community and to establish and build a small business.

With this goal we purchased a small food manufacturing business within three weeks of arriving in Lismore.

As a career cook/chef with a solid background in quality establishments in Australia and Europe I was keen to expand the scope of the business and immediately set about transforming the little shop we occupied under lease into an operational café. I also developed completely new recipes for the sauces, curry pastes, harissa and conserves which we made.

We have worked hard, diligently and with great focus to build our little business to the point where we have an extremely good reputation for our food and service.

We are the preferred caterers for many businesses and tertiary departments and also had numerous bookings for weddings, private parties and functions in the future.

We were not afraid to work hard and I can say in honesty that with a routine working day which commenced at 04:00hrs and would generally cease at 20:00hrs both and I have averaged a working week of between 90 and 100 hours per week over the last 10 years.

We have funnelled the majority of what we have earned, along with our previous savings into building and expanding our little business to best serve and provide for our community and the future.

Since this flood event we have discarded in excess of $60,000 worth of food and ingredients and in the vicinity of $500,000 worth of high end catering equipment.

We have developed the business to a point where we were employing 9 locals and were also employing a number of juniors who were still at school.

I have been fortunate enough to have worked in establishments and for employers who were able to provide excellent training which has imparted upon me an understanding of what well performed and delivered hospitality is.

Over the last two and a half years we have been working with Transport for N.S.W., Heritage N.S.W., Aldersons Planning & Civil Engineering and our Architect Scott Davis to realise the disused Railway Station as an exciting community hub centred around a family focussed Café, Restaurant and Bar with an entertainment element and a representation of the historical significance of the station to the local community.

In total we have expended a sum in the vicinity of $200k on planning the development of this building which has been abandoned since 2003. In the aftermath of this recent flood event and with a view to the likelihood of future flood events I believe we have probably lost this investment.

The Flow of Waters From The Hill and Creek, and the subsequent Flood Event The Lived Experience

Throughout the day on Sunday 27th of February with the assistance of friends we spent the day moving everything which was valuable, movable and justifiable up to the living area of our home.

This meant that these items were sitting fifteen feet above ground level where we live.

Through the early hours of the morning on Monday 28th of February 2022 Lismore waited in nervous anticipation for the Wilson River to rise and burst its banks and levees.

All indications were that the coming deluge would be similar in depth/height to the flood of 2017 which meant that we felt safe and secure in the upper living areas of our home which had not been breached in the 2017 or 1974 floods.

Throughout the night and into the morning of Monday 28th February we slept little and were constantly vigilant of the water flowing down our street from Girards Hill. We watched for rises from the stormwater flow of the drainage creek which runs below Junction Street just down the road from our home.

At around 2:30am we could see that water was flowing across the road at the drainage creek and was starting to creep up the incline towards our neighbour's home. By 3:30am there was water in our next door neighbours home/shed however the ground at the front of our home was still above the water.

By 4am water was starting to make its way over our front lawn and into our garage and by 4:30am was up to the third step on our side stairway. At this time all emergency messages were still indicating that "the Wilson River may reach around 12.1meters late morning."

Over the next 40 minutes the water rose around five and a half meters coming up through the floor of our homes living spaces and causing us to take emergency actions and evacuate.

We had heard cupboards and large items which had been left downstairs falling over and floating into walls and the floor below us and the constant roar of the rain on the tin roof mingled with the sounds of clattering and banging from floating items in our home is not something that will be easily erased from my memory. The scene was very surreal and not dissimilar to being in a sinking ship.

Our fuse box is located quite high within the house so even though the water had risen to a depth of 1.5 meters within the living areas our lights were on but were starting to flicker in and out.

As the water rose items of furniture, personal belongings and other household objects were starting to float, while larger furnishings like wardrobes, sideboards etc were falling over and making loud noises. Fridges were floating and banging into walls a beautiful chest of drawers what had been hand made by my great Grandfather toppled over with a resounding splash and bang and it was time to seek refuge on a higher point.

The most confronting, frightening and vulnerable moment I have perhaps ever experienced is that moment when I had to wade back through the water which was chest high in our home hold my wife r by her shoulders and gently tell her " , I want you to take off your shoes and socks. We might have to try and swim out of here if it keeps getting much higher!" I was truly in fear for our lives and terrified that we were going to die in the fast flowing waters that had engulfed our home.

To illustrate the power of the flow of these waters consider this; in our back yard we had a 40,000 litre water tank and a 20,000 litre water tank. The 20,000 litre tank was an overflow tank for the larger tank and as such was buried 1.5 meters deep in the ground. Both tanks were completely full so one weighed just over 4 tonnes and the other just over 2 tonnes. Both tanks were plumbed in and attached to a water pump. In the course of the flood both tanks were swept away, and broken free of their plumbing by the force of the water.

All indications and communications from Lismore City Council and the SES were that, and I quote directly from the official warning sent out at 01:27am the "Wilson River was expected to exceed 9.70meters around 2am and likely to overtop levee at 10.6meters around 3am, may reach around 12.1meters late morning."

The next update from Lismore City Council and SES at 06:20 states

"Levee has been overtopped Wilson River reached 12.5 meters at 5am and possible rise to 14 meters by Monday Afternoon"

Of course in the aftermath of this event we now know that the level of the river in the February 2022 floods rose to 14.6 meters eclipsing by 2.5 meters the previous record highs of the 12.11 meters set by the 1954 and 1974 floods.

A Vision Looking Forward to Lismore's Regional Future

Many will be of the tacit opinion that we must as soon as possible reopen, reactivate and revitalise Lismores small business sector to stimulate local economy and bring a semblance of normalcy back to the daily lives of our community.

Whilst this seems like a sensible and positive endeavour as a short term remedy to the current problems facing Lismore, history shows us that it is indeed an initiative fraught with very real dangers that the Lismore business community will again settle into a malaise founded on a familiar, easy and comfortable way of operating and failing to address the realities which have dogged and detracted from Lismore as a positive and growing regional hub for too many years.

The perception of Lismore as city which suffers from regular serious flooding is neither foolish nor without historical foundation. The graph below shows only those floods recorded between 1917 and 2022 though records began in 1870 and show a regular occurrence of flooding throughout.

It is of grave concern to be speaking to local business operators and who four weeks ago were adamant that "This (flood) event was too much for them and they were looking at moving (their business) to Goonellabah or Alstonville to reopen their business". Now stating that "No, we're just going to reopen where we are, people know that's where we are so we'll just stay where we've always been". Whilst it is essential for Lismores businesses to get themselves up and operational in as short a time frame as is possible it is equally imperative that we as a community envisage, form plans for and initiate a move towards a new, safer and better Lismore.

Those of us who have lived through the bitter experiences of this devastating flood have a solemn duty to ensure that the future citizens of Lismore and the greater Northern Rivers Region must never again be placed in the position of peril and loss that have been wrought upon this current populace.

To this end it must be recognised as a priority of State and Federal governments that plans be enacted for the full relocation of the Lismore CBD and all housing which currently occupies the low lying flood areas of South, North and East Lismore.
The purchase of 1,000 plus acres of land upon the Alphadale plateau between Goonellabah, Tregeagle and Wollongbar would provide ample space for the relocation of a well-planned, laid out and aesthetically beautiful city centre.

To simply reoccupy and re-invigorate the existing city centre would be the easy option out of this situation, however it fails on every level to recognise and address the reality of Lismore's geographic placement at the bottom of a bowl on a recognised and proven flood plain.
To this end if we do not become harbingers for change and seek to relocate or protect our community and our city, then we are all of us guilty of constant repetition of the same pattern of behaviour that has been in part the cause of this flood with the bizarre expectation of a different outcome.
If history has shown us anything it is that Lismore will flood again, and again, and again.

I advocate strongly for the planning, staging and gradual establishment of a new Lismore C.B.D.
Let the word go forth from Lismore that we are holding a global competition open to all city planners, architects, engineers and the like, offering them the opportunity to submit their designs for a new Lismore. A city with broad thoroughfares, a city with many trees and open parks interspersed throughout. A city with plenty of free parking and plenty of parking for the vehicles which deliver to the shops and businesses throughout. A modern city which might retain some of the architectural features of the current Lismore but which speaks with beauty and functionality of a new and exciting chapter in the history and growth of Lismore.

This will not happen overnight, nor will it be realistically achievable in a period of five years. This is a program requiring a long term process to be executed over a period of 20 to 25 years.

There are understandably those who will rail against these suggestions as they call for extreme and radical change. Change as we all know is that instance which most challenges, disorients and confronts us. Change makes us uncomfortable and uneasy. However it must be remembered that it was the advent of uncontrollable change wrought by these floods that has left us now in this position

where we must develop and enact change for the betterment, growth and survival of this city and this community which we love.

Many have suggested that we should be looking at building substantially higher levy's to protect Lismore. This is an ill-considered idea which fails to take into account or acknowledge the damages which would be wrought on communities downstream (Coraki, Woodburn etc) as a result of intensified redirected waters. If Lismore is to regain and retain its former position as the heart and hub of the Northern Rivers Region then we must acknowledge and be cognoscente of those surrounding townships and hamlets that lie down river and are largely influenced by the actions which Lismore takes in its food mitigation plans.

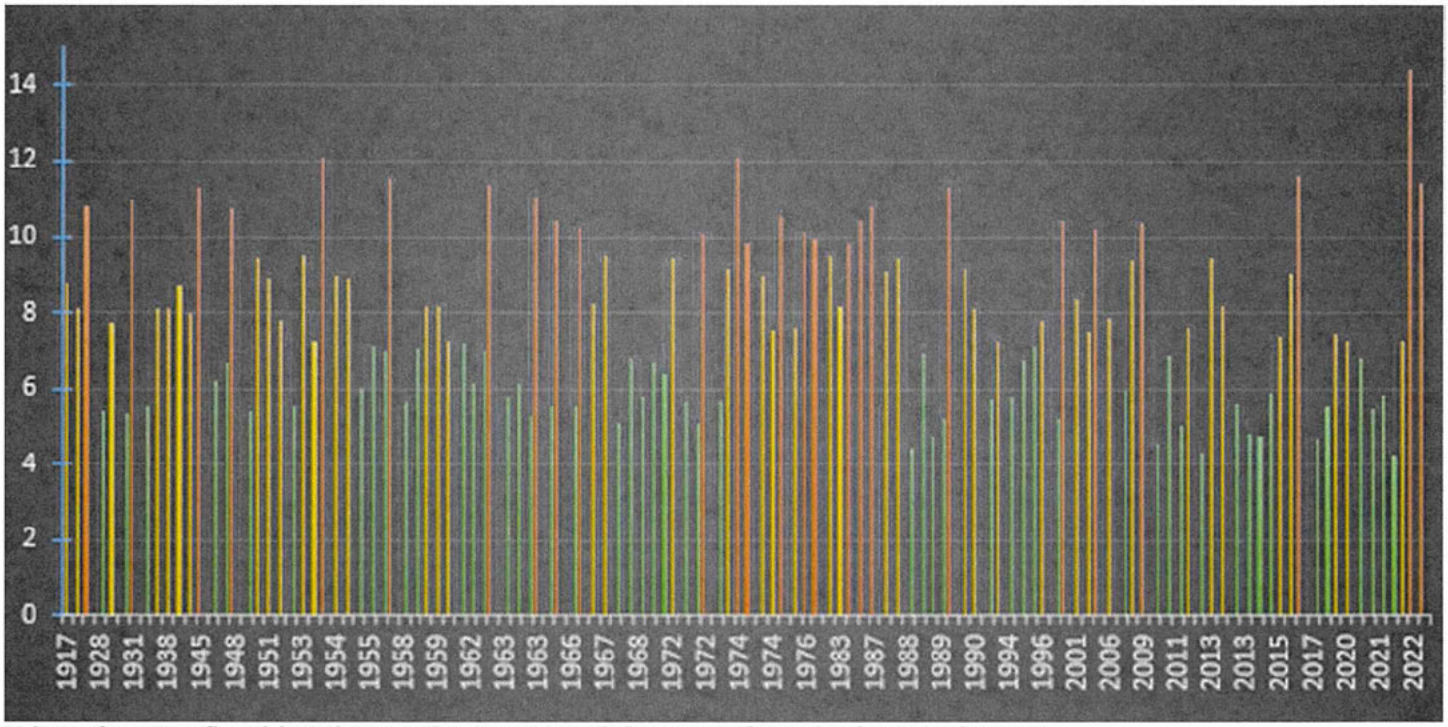
It is I believe imperative that a Reconstruction Commission be established by State Government with the full support and backing of the Federal Government. This body must work in concert with consultation and accountability to the Lismore regional community.
Lismore as a community must find a cohesive commonality which can reach in principal agreement on a long term plan and vision which will prepare, safeguard and respond to all future flood events.
If we fail to recognise and grasp this moment that demands change then we consign our community and our city to a slow and gradual death through an ongoing attrition of a populace that can simply cannot tolerate or continue to exist in the face of ongoing and repeated flood catastrophes.
Whilst we as a community will have myriad thoughts and suggestions on which plan or vision of Lismores long term revival and survival serves the community best, we can and must not allow our diversification on these issues lead to fragmentation of our business or broader communities.
We must all of us be willing and prepared to hear, comprehend and if it feels right accept the thoughts and suggestions of others with regard to Lismores future.&&&&&&&&&&&

Somebody described owning a business in Lismores CBD as similar to being in an abusive relationship. You love your business and want it to succeed. However it keeps knocking your life for a six, yet you keep going back into it knowing that it's just a matter of time before you get hit again by another flood.

Our Governments at both State and Federal levels must provide NOW adequate funding for housing repairs that will see those displaced due to damage to their houses able to return to a semblance of life within their own homes.

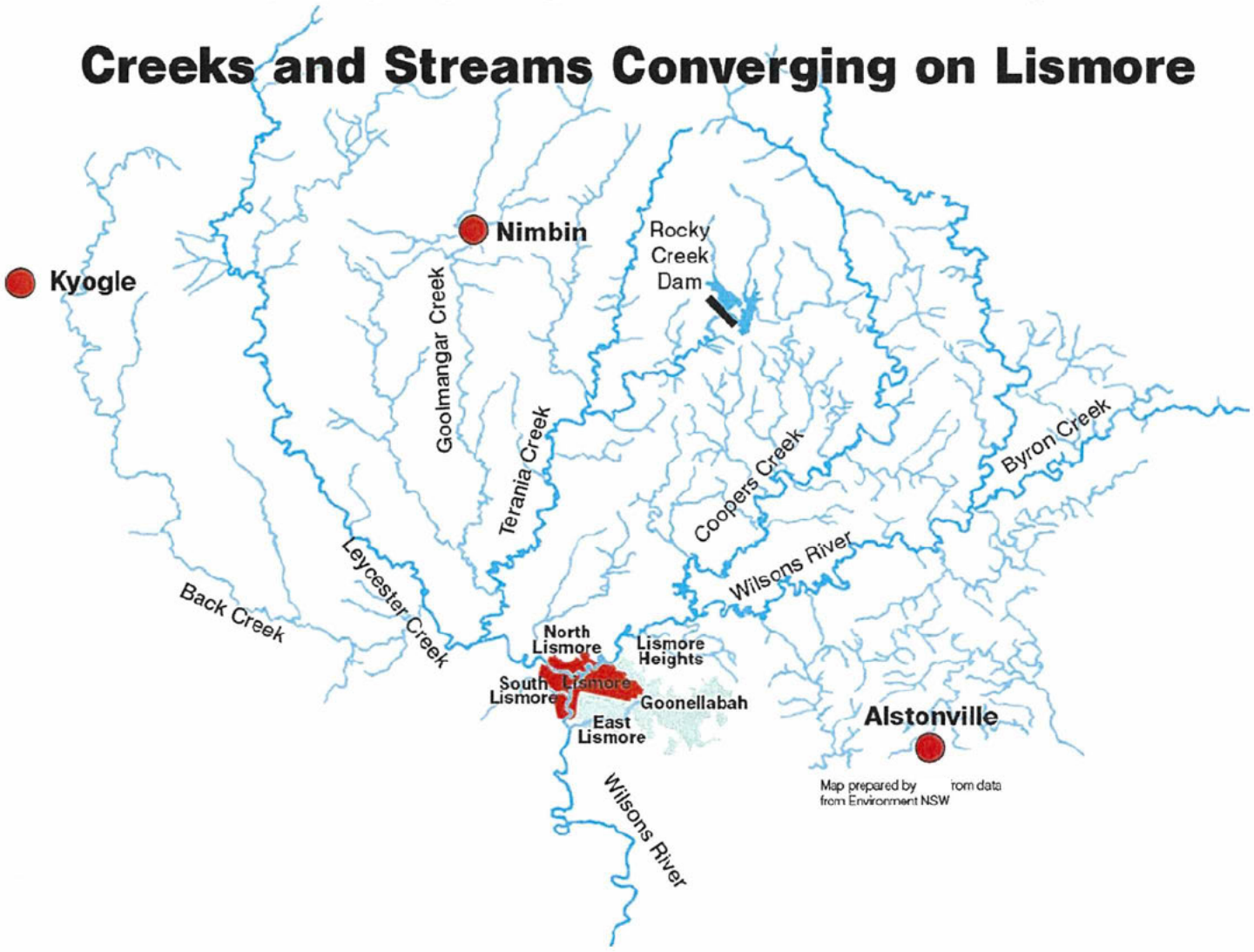
Adequate business grants need to be made available to facilitate the return to operation of those businesses which have forced into closure resultant from these floods.
Likewise a Jobkeeper package must be made available to assist these businesses to retain their employees.

A redressing of the insurance system that has been applied to Lismores/Northern Rivers homes and businesses with a view to making proper coverage for flood and disasters affordable for all. I would expect that this will require/involve government intervention and possibly financial assistance/Backing.



Y list of major flood heights at the Rowing Club gauge from highest to lowest.

* Other is some discrepancy regarding the heights of the 1954 and 1974 Lismore flood peaks. Historic in



The responses and Cohesion of Emergency and Rescue Services

The Lived Experience

Dressed in just shorts and t-shirts we didn't know whether we would have any choice but to attempt to swim through the torrent that had engulfed our home. I had instructed my wife to remove her shoes in case we were forced into the water to swim.

We stood on the top rail of our stair bannisters for two and a half hours holding onto the guttering on the roof while the water swept around our waists and chests.

I was in very real fear for the safety of both my wife and myself. The water flowing between our home and our neighbours house towards the river was moving very rapidly and I doubt that we could have successfully swum to safety through it.

When the water rose high enough we floated up onto the roof where we were able to cling until we raised the attention of a civilian piloted boat. I had taken an umpires whistle on a lanyard with me and was able to attract the attention of a boat by blowing the whistle.

We were saturated, we were in shock, we were lost and disconnected in every way from our senses and the world which we thought we knew.
Our rescuers plucked us from our precarious position on the roof and dropped us on the nearest dry land.
We are forever grateful to those citizens who took to the water in boats and saved so many lives in the course of the days that followed this catastrophic event.
Once dropped on dry land in the pouring rain we were faced with a new dilemma, we were barefoot, wet and in shock. The geography of our town once so familiar, was now submerged with cars and debris floating around and to our muddled brains was almost a foreign and threatening place.
We had no contact with the outside world through media and no indication or direction of where we should be heading to find shelter or repose from the horrors we had experienced.
We wandered around through the day and slept that night on the street sleeping under someone's four wheel drive just to be out of the rain.
The following morning we were told that a flood recovery centre had been established at the Southern Cross University campus and so we determined to make our way there.
In our bare feet and wet clothing we set off up and along the walking track across Girards Hill and across the top of Lismore Golf Course. This was the only route option as Wyrallah Road was flooded and a direct route impassable.
By the time we arrived at the flood recovery centre our feet were cut and sore, we were dirty and dishevelled, we were desperately shocked and displaced and ravenously hungry.
When we arrived and were greeted warmly and told that "we would be ok now" and that there would be "a place to stay and be safe" we both just broke down in uncontrollable sobbing and tears".

One of the issues of contention which I have is that whilst the actions of the civilian "Tinnie Navy" were both necessary and admirable there was no cohesive system of command or operation in place.
It would have been a much better situation if all those operating boats and running "rescue missions" had known that whoever they picked up were to be dropped at designated points A, B, C, D, E, F or G where they could be met and funnelled into the recovery centre efforts.

I am generally considered a strong and stoic individual. I have worked in a high pressure and demanding job for 45 years and have experienced and seen horrific sights as both a long term volunteer firefighter and an active search and rescue diver. I have always considered myself to be a calmly brave and capable individual. I will admit here and now that this experience and its aftermath have broken me and left me rudderless and without direction in my life moving forward.

Recommendations

Our volunteer emergency response organisations need to perform better and in my experience would be better being run and operated along similar guidelines to the Victorian model of the CFA (Country Fire Authority).
Many have suggested that we should be paying volunteers, however I do and would not advocate this as a wise move.
If you endeavour to create a situation where volunteers are paid then you will have too many people volunteering based on pecuniary as opposed to community motivations. I'm sorry if some people find this suggestion offensive, but it's simply true.
This will then become such a massive body that training, structured command and equipping the group will become an impediment beyond the capacity of local support and affordability at which time it becomes run and controlled by government from a centralised control point somewhere else.

We need to be willing to give our time as community members to the training and duties required to serve and protect our community and it's most valuable asset; its people.

Well trained, controlled and equipped personnel on the ground under one cohesive LOCALLY based command point staffed by a team of people qualified, knowledgeable and capable of constantly assessing, updating and controlling the evolving situation. This team must have sufficient members to be able to operate on an ongoing 24 hour basis with proper and detailed handovers to oncoming command staff by those stepping down for mandatory rest and recuperation periods.
Locally based and run operations of response will always be more effective and able to recognise and appreciate the requirements and responses of local community needs.

Our emergency services MUST learn and be open to working as a cohesive single body straddling across all the various services.
Are people aware that local and regional fire brigades were stood down during the flood being told that "this is an SES controlled situation" and that they "would be informed when they were able to help and are required"?

Now my issues with this are that in a major emergency situation, and let's not consider this flood as anything less, it is imperative that our whole spectrum of emergency response organisations Police, Medical, SES, Fire & Rescue, Recovery Centres, Resilience Organisations and ADF (if locally deployed) must be willing and capable of responding under the direction on one unified control centre to work cohesively alongside each other for the safety, rescue and recovery of our broader community. ALL trained and certified Emergency Service personnel must be recognised, utilised and put into whatever efforts are required to protect and serve the broader community.
All respondents must fall under the directions of this control centre.
As with command staff themselves our response teams on the ground must be subject to being stood down and replaced by fresh teams through a rotating roster in order to ensure the best and most effective outcomes.

The establishment of a Lismore Volunteer Marine Rescue (VMR) organisation is imperative...
Though the contributions and importance of the "tinnie army" of citizens who came out in force for this event cannot and must not be denied there are too many stories of mishaps and dangerous events as a result of untrained responses to undirected situations. It is mere good fortune that we did not lose people as a result of the multiple boat failures and mishaps that have been reported. A well trained and organised VMR unit of volunteers and their craft (which must meet specifications perfunctory to their needs in an emergency situation) would be a vastly more effective and expedient in the execution of these actions.
In the same way we need to establish good controls over the distribution of essential staple food and beverage items to outlying communities such as Coraki, Broadwater, and Wardell etc. If Lismore is going to be the "Hub of the Northern Rivers" then it is essential that it take on the responsibilities and conduct itself in the appropriate manner.
Lismore as a cohesive community must be prepared and Lismore as a cohesive community must respond whenever and whatever the threat of the emergency that arises.

These situations must be assessed, addressed and responded to on local ground by local personnel with local knowledge. Not by people in a control room in Newcastle or Sydney. This and their refusal to work in concert with other emergency response organisations (in particular Fire & Rescue) is a major factor as to why the SES though present have been largely under effective, ill equipped and poorly organised at the most important time in this catastrophe. Considering all the hyperbole and

posturing which took place after the 2017 floods it would appear that no lessons were learned and no actions taken or implemented.
Lismore has a right to expect better and Lismore deserves better, however the answer ultimately lies with the community of Lismore.
If we cannot and do not, if we fail now to come together and work as a cohesive community and address the issues which now confront and challenge us as a community then sadly we will fail to evolve a feasible and practical strategy that will see Lismore move forward and evolve as a strong vibrant and inclusive community to which people will want to belong. A community where people will want to raise and educate their children, establish businesses and live their lives.

Now is the time when the Lismore community must come together and form a united and cohesive voice... We must serve ourselves firstly as a community, and secondly as individuals... Now is the time for us to stand united... Now is the time we must be heard...

The Impact of the 28 February 2022 on Business

The Lived Experience

Over the past nine years my wife and I have owned and operated ". Initially the business which we purchased was simply a manufacturing and wholesaling business which produced a line of Curry Pastes, Chilli Sauces, Harissa, Chutney and Conserves.

We have worked hard, diligently and with great focus to build our little business to the point where we have an extremely good reputation for our food and service. Even throughout these past three years of the Covid19 pandemic our business, though altered in its format, has continued to grow and expand.

We are the preferred caterers for many businesses and tertiary departments and also had numerous bookings for weddings, private parties and functions in the future.

We were not afraid to work hard and pushed ourselves to do so in order to build and grow our fledgling business. I can say in honesty that with a routine working day which commenced at 04:00hrs and would generally cease at 20:00hrs both and I have averaged a working week of between 90 and 100 hours per week over the last 9 years. It has not been easy, it has not perhaps been wise, nor has it necessarily been the best decision for our relationship or our health. However we are committed and focussed on our business have a strong love and respect for each other and are fortunate enough to rarely fall ill.

We have funnelled the majority of what we have earned, along with our previous savings into building and expanding our little business to best serve and provide for our community and the future.

We have developed the business to a point where we were employing 9 locals and were also employing a number of juniors who were still at school.

I have been fortunate enough to have worked in establishments and for employers who were able to provide excellent training which has imparted upon me an understanding of what well performed and delivered hospitality is.

Over the last two and a half years we have been working with Transport for N.S.W., Heritage N.S.W., Aldersons Planning & Civil Engineering and our Architect Scott Davis to realise the disused Railway Station as an exciting community hub centred around a family focussed Café, Restaurant and Bar with an entertainment element and a representation of the historical significance of the station to the local community.

The aftermath and effects of this flood event upon our business has been dire and catastrophic.

Our commercial kitchen was completely submerged for three days with all equipment, tools, chattels and fittings subjected to the silt and sewerage that were elemental to the floodwaters as the city's sewerage treatment plant had backed up and was flowing directly into the waters.

This of course includes all of our major cooking, processing, refridgeration, freezing, dishwashing and cleaning machinery. As well as pots, pans, cake tins, baking trays, pie trays, quiche moulds, pudding moulds, pastry cutters, kitchen spoons, cooks knives, micro planes, pepper mills, crockery, cutlery etc, etc.

I would conservatively estimate that I have lost or thrown away in the vicinity of $500,000 worth of high end catering equipment.

Similarly the loss of food and product from our coolroom, fridges and freezers after three days submerged in the floodwaters has seen us discard in excess of $60,000 worth of food, ingredients and finished product both in bulk 20 litre containers and bottled, labelled and boxed for shipping.

In total we have expended a sum in the vicinity of $200k on planning the development of this building which has been abandoned since 2003. In the aftermath of this recent flood event I believe we have probably lost this investment.

The Political Aspect

On Friday March 18th at 1:54pm Page Federal MP Kevin Hogan posted his declaration that "The debates on flood mitigation are over." This decree and its accompanying diatribe coming just 18 days after the devastating flood event which decimated the City of Lismore and its residents, illustrates a contemptable lack of regard, respect, connection and concern for the constituents of his ward the majority of whom apparently voted him to represent them in the federal parliament.

Mr Hogan's deeply concerning and blatant failure to meet with, interact, engage or to hear the thoughts, concerns and ideas of the communities of the city of Lismore and surrounding areas which have been so savagely ravaged by the recent flood disaster indicate a parliamentary representative more prone to following directives from his political leaders than interested in hearing, understanding and serving his constituents and the community within which he lives and works.

Let us not forget that it was Kevin Hogan who lobbied for $8.4 million of tax payer's money through the State Government to fund the South Lismore flood mitigation channel which in the instance of this flood became a raging torrent which wreaked massive destruction at considerable expense across the South Lismore industrial estates, airport and Lismore Lake Holiday Park and Motel. Many businesses had parked their trucks and transport vehicles at the airport and surrounds which has always been safe ground. However the flood mitigation channel served to channel an excess of water out onto the ground which created a raging torrential flow which can be traced back in a wide arc l a destructive demonstration that water will always find its way back to the lowest point of land. In this instance that point was Lismore Lake, Lismore Lake Caravan Park and Lakeside Lodge Motel all of which sustained extreme damage.

Following the devastating flood of February 28 in which my wife and I lost both our home and contents and our entire business we were billeted for four nights at the emergency recovery centre situated at Southern Cross University. On our second evening when A.D.F. personnel first arrived in the town a group of five Australian Army Soldiers appeared and stood in a line as some 150 flood survivors were having their evening meal. Our local member Mr Kevin Hogan then appeared and as three photographers positioned themselves Mr Hogan himself stood in the centre of the military line up and striking several poses (Thumbs Up, Fist of Strength etc) ensured that he had a great photo opportunity. Now once this was over you would expect (Or at least I did) that our local Federal Government Member would take the time to talk and hear the very raw and real stories of his constituents experiences, survival and projected future outlooks in the wake of this catastrophic event. These are after all the people who have voted him into office to represent them at the highest level of government and are the community of the city in which his office is located. It would be fair and reasonable to assume that these would be the very people with whom he would seek to confer, converse and learn experiences from. Mr Kevin Hogan the second the last shutter had clicked for his photo opportunity immediately turned on his heel and left without addressing, greeting, or acknowledging a single one of the people he is elected to serve and represent. All of us there were it is fair to say shocked and a little stunned by this blatant refusal to engage with a group so devastated and in need of some glimmer of hope. My wife was so disgusted and appalled by what she witnessed that she stated that "If I were to come home and tell her what had just happened, she wouldn't have believed me". This was such a despicable act of betrayal that it can only be seen as abhorrent.

Let us also not forget that it was Kevin Hogan who lobbied and gave $14million of taxpayers money to a large Lismore based corporation which is situated right on the banks of the Wilson river in flood for upgrades to their mechanical infrastructure. One wonders whether it will be the taxpayers who will pay for the refit and refurbishment of this factory following these floods.

When will such monies be made available and put into community initiatives to find viable long term solutions to the undeniable fact that many of the communities throughout the Northern Rivers are built upon flood plains and need a sustainable plan for the future that ensures the safety, growth and wellbeing of their people?

We must also ensure that our Emergency Response Services can work cohesively and effectively to address and cope this the massive scope of these natural disasters and to

It is time for our governments at all levels (Local, State and Federal) to recognise and respond with vigour to the real needs and requirements of the communities which have been so severely affected by this ongoing crises.

It is becoming increasingly and embarrassingly apparent that the considerable financial and media support provided by the National Party to float Lismore City Mayor Steve Krieg's election onto council and into the mayoral role, may have at the same time purchased Mr Krieg's complicity and relative silence at a time when strong, decisive and forward thinking leadership is required to support, guide and rebuild the future prospects of our devastated communities.

Whilst I recognise, empathise and sympathise with Mayor Krieg's circumstances in that he like so many of us has lost both his business/income stream and his home, he is not alone in this dilemma and an incalculable many of us are in precisely the same predicament.

After the floods of 2017 Mr Krieg was extremely vocal, visible and present in stating his expectations of local, state and federal governments with regard to assistance and funding for the communities and businesses of the Northern Rivers Region.

Who can forget his face to face with then Prime Minister Malcolm Turnbull where he demanded vehemently that Federal government needed to address the needs of local communities and businesses? Yet this time around Mayor Krieg is unusually placid and quiet on the matters of financial and practical aid and assistance for a region which is suffering a far greater degree of pain and loss than the 2017 floods metered out.

Now Mayor Krieg is the time for action. Now Mayor Krieg is the time to rally your courage and make well considered and planned requests/demands of state and federal governments regarding proper and appropriate aid for the community and businesses of Lismore, a buy back scheme for those homes damaged to the point of condemnation or prone to repeated re-flooding and a well-developed and strategic plan for the relocation of Lismores CBD. Which seems a necessary imperative.

It would be expected of a Mayor under the present circumstances, that he be daily requesting/ demanding across all media streams that government at both the state and federal levels take all possible action to declare this region a "National Disaster" and ensure that the optimum levels of care and financial aid be made available to those who have lost homes, businesses or both within the quickest possible time frames. Our children need a safe and expedient return to studies already too long disrupted by the years of Covid 19 limitations and we as a community need to know what changes this catastrophic event will have upon us all moving forward. Are there going to be changes to building codes resulting from this event? What do these changes (if any) mean to existing homes and businesses? How will they impact planning for future businesses and homes? Is it safe, viable and/or wise to simply refit and open the Lismore CBD?

Only now in the aftermath of this crippling disaster do we clearly see that a local council with ties or affiliations to any political party is a weakened and watered down representative of the community who elected it to civic governance.

An independent council free to serve the community by which it was elected without debts of gratitude or ties to any political parties is the strongest and most capable voice for any community... Let us not forget what was achieved by community with the Bentleigh Blockade and the Lock the Gate campaigns.

Moving forward it is imperative that all tiers of government come together to establish and develop as soon as practicable a program of broad community consultation focused on seeing Lismore re-located out of the bottom of the flood plain bowl which it currently occupies and re-established on a higher ground location which will allow the city to be reborn and flourish as a destination where people will want to purchase and build homes, will feel secure to raise their children and families and

a place where people can feel confidently safe about establishing businesses and commercial ventures without the fear of seeing the fruits of their hard work and toil washed away in the all too regular deluges which Lismores current site guarantees.

History records 90 significant floods in the Lismore CBD and if we are to consider ourselves a smart and forward thinking community we must make our plans for the future based upon this knowledge and with a desire to build a thriving and safe city which will attract newcomers and sustain a community to inhabit.

In my humble and uneducated opinion the existing Lismore CBD should be levelled and realised as beautifully laid out park lands with bicycle, horse and running/walking trails, playing fields and an amphitheatre. All horticulture should be planned and planted to ensure its ability to withstand future floods and when they occur we clean it up, mow it, give it a trim and off we go without this ongoing cycle of traumatic destruction and recovery which has sadly become a defining element of Lismore.

If our community continues to loose families because they don't want to bring their children up in a city which floods every 5 or 10 years then there will be less need for teachers. Then we lose a couple of the smaller schools. So then there are less people going out to buy a new set of tyres for their car, or a present for their partner's birthday? Suddenly there's 60 less teachers buying morning coffees around town and not needing a shirt or groceries. They've moved away so they don't need their lawns mowed and aren't buying tickets to local theatre or movie events so they're not going out to dinner with their friends... This is how the slow death of a town snow balls, and frankly I'm concerned that I've been watching it happen in Lismore for too many years now.

Our council need to understand implicitly and accept that they are voted to a position which requires of them integrity, responsibility and accountability to the community which they have chosen by nominating for their position on council to serve. Likewise our General Manager is hired by our councillors and should be of a character and integrity that has been investigated and found to be above and beyond reproach. I question heavily the character and integrity of Lismore City Councils "new" GM and ask seriously whether he is a suitable person to be steering our city and community into the long term future?

We as a community cannot allow or accept our council or members thereof to imperil and misrepresent us as we saw last year when the two Lismore councillors who were our representatives on Rouse County Council voted for Rouse Water to relocate to Ballina. That's 140 jobs taken out of the Lismore economy. Apply that figure to the scenario in the above paragraph.

Our council must exist as a healthily unified body who are able to debate and discuss differences of perspective and opinion in an objective and constructive manner which serves and enhances the Lismore LGA community without creating a fractured and broken leadership or inflicting such separatist and destructive actions upon the community. The councillors should govern without affiliations to or direction from any political parties or entities. Local council should exist as that tier of government which exists to serve and represent the community. It should be a buffer between the community and state and federal governments and at the same time a strong voice of advocacy and representation to those governments for the community.

The council cannot achieve these objectives if it owes or registers any tangible allegiance with any political party or entity. The council should be that conduit which brings together and unites our community in the same manner that the "Bentleigh Blockade" and "Lock the Gate" movements did in the past. Our council must not only hear but must amplify with clarity the voice of the community.

As a community we have been through and are currently experiencing the ravages of an extreme and crippling natural disaster. Our council need now more than ever to be listening, hearing and understanding the community with regard to what and how Lismore should be structured, laid out and planned for the future. Our council needs to be actively moving and delivering to that same community strong and sound leadership in pressing and liaising with state and federal governments to secure funding and assistance that will assist home owners and businesses to evolve and relocate out of the floodplain to secure a long and prosperous growth pattern for our city as the hub of the region.

A Summary of Lismores flooding History

A Full version of this report can be accessed at;

http://australiasevereweather.com/floods/lismore_flood_pictures_reports.htm

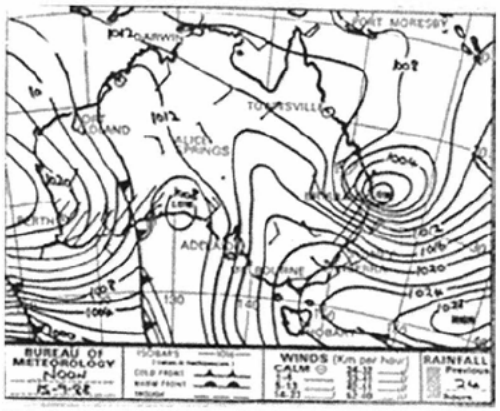
Lismore Floods: Wilsons River Flood Heights and Lismore Flood Pictures
Richmond River Catchment Northeast NSW

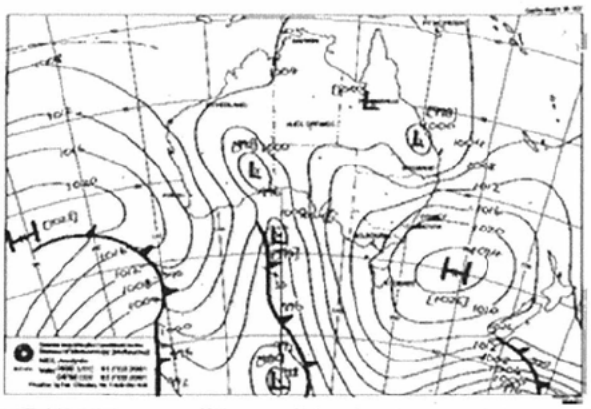
Report and all photos by Michael Bath
Facebook page: www.facebook.com/nnswweather
For current rainfall and river height information refer to the North Coast Rainfall and River Conditions page.
For help during a flood event visit the Lismore City Council pages.
Updated: 4 April 2022

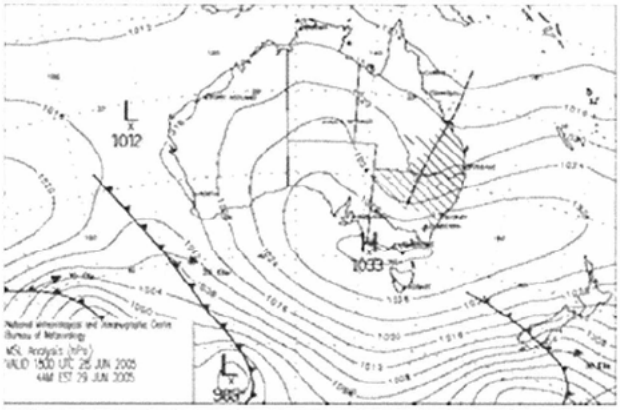
Lismore Flooding

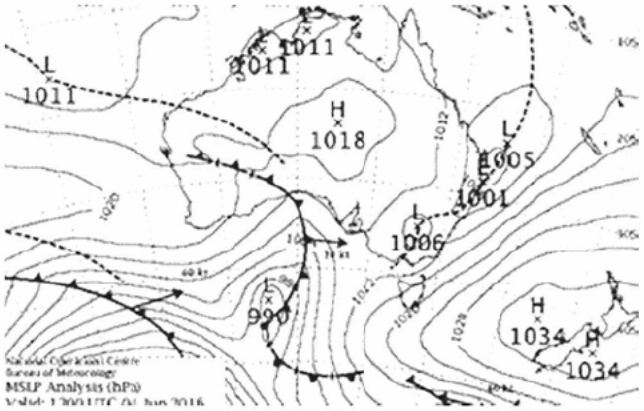
The Northern Rivers district of NSW, Australia is one of the most flood prone areas of the country outside of the tropics. With Lismore at the junction of two major streams - Leycester Creek and Wilsons River - it is often subject to significant flooding.

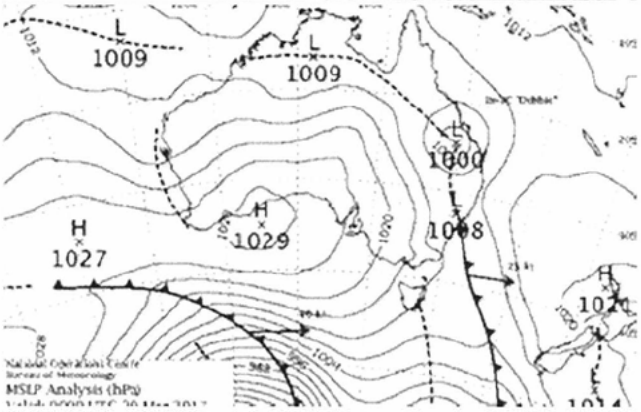
Topography and the alignment of the Northern NSW coast relative to prevailing weather patterns allows for prolonged orographically enhanced rainfall events from time to time - particularly during late Summer, Autumn and early Winter. During those months large slow-moving (blocking) high pressure systems are often positioned around 40 degrees south and provide a long fetch of moisture-laden southeast to easterly winds onto the North Coast. Flood producing heavy rainfall can occur if the high combines with a trough, low pressure system, tropical cyclone, upper trough / cold pool and even the monsoon trough. It is not essential for a strong 'blocking' high pressure system to help cause a flood, but it is nearly always present for the major events - as it keeps the rain producing systems in the same area longer. Some examples of flood producing weather patterns:











Lismore location maps from Google Maps. Click for larger view.

Richmond River Flood Plain and Catchment Maps

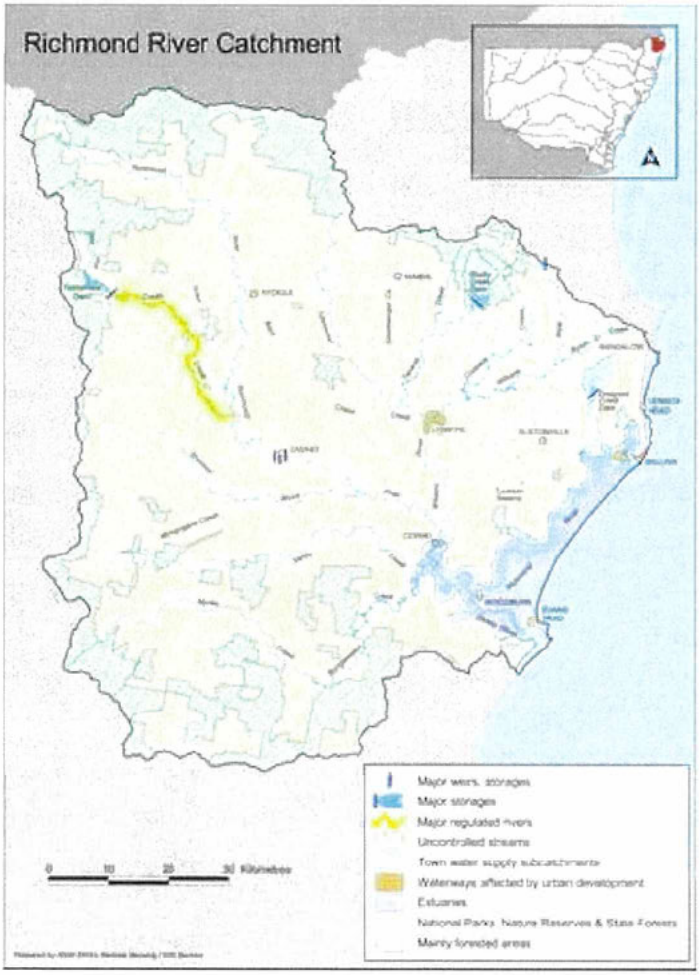
The Wilsons River at Eltham, Leycester Creek at Rock Valley, Coopers Creek at Corndale and Terrania Creek upstream from Lismore represent only about one-quarter of the Richmond River catchment, however the majority of flooding occurs in this area and through to Coraki. The Nightcap Range to the north of Lismore, and hills extending through Bangalow to near Alstonville often receive much higher rainfall than the rest of the region due to orographic effects and because it is closer to the coast and the source of rain-bearing clouds. The floodplain is also narrower due to hilly terrain. South and west of Lismore the terrain is quite flat and the floodplain very wide in comparison.

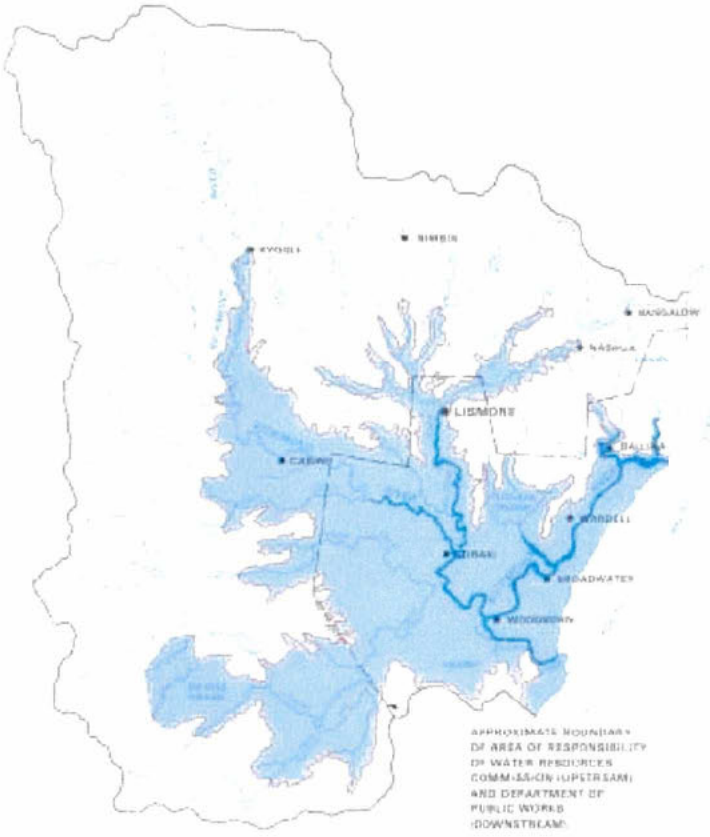
Major flooding of the Richmond River upstream from Coraki requires heavy rainfall west of the Nightcap and Border Ranges and into the eastern parts of the Richmond Range. This occurs far less frequently than Lismore flooding, with February 1954 and January 2008 the stand-out events for Casino, Kyogle and Wiangaree.

Heavy rainfall occurring over the generally flat country and eastern parts of the Richmond Range in the southwest of the catchment contributes to flooding at Coraki, Woodburn and downstream. Heavy rainfall on the southern side of the Alstonville Plateau also affects the Lower Richmond River.

Another part of the catchment is the Teven Valley and North Creek northwest and north of Ballina. Flooding can occur in this area during very heavy rainfall although those waters quickly enter the Richmond River.

Richmond River catchment map source

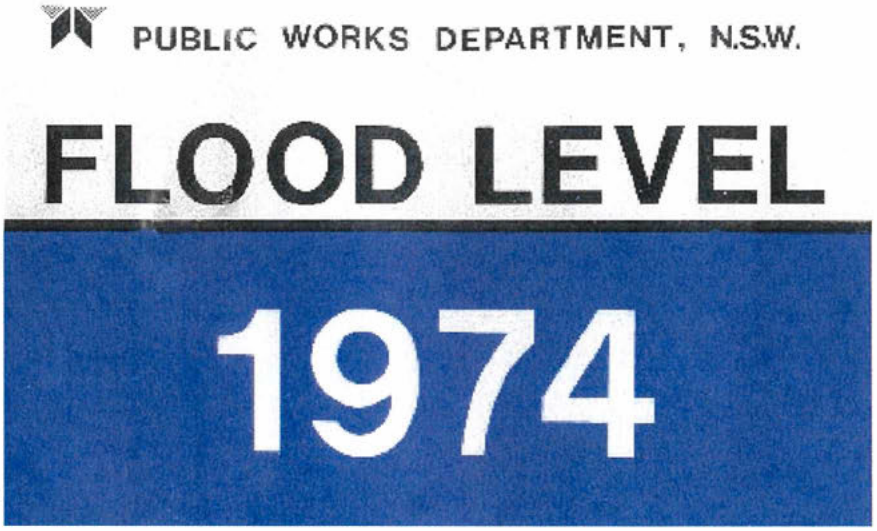

Richmond River Catchment
Major weirs, storages
Major storages
Major regulated rivers
Uncontrolled streams
Town water supply subcatchments
Waterways affected by urban development
Estuaries
National Parks, Nature Reserves & State Forests
Mainly forested areas
0
10
20
30 Kilometres



RICHMOND RIVER FLOOD PLAIN

Lismore Flood Heights

The Lismore flood gauge is on the rowing club building at the western end of Magellan Street (red dot on the Lismore Map) and became operational in 1917. River heights since the November 1917 flood are all taken from that point. Prior to 1917 the flood gauge was on Fawcetts Bridge, where Woodlark Street crosses the Wilsons River. Flood heights prior to 1917 cannot be relied on for the purposes of present-day comparisons.



Australian Height Datum (AHD) was introduced in the late 1990s. AHD flood height measurements are 0.78 metres lower than the old gauge readings that many readers may recall. Flood heights in other parts of Lismore vary depending on a number of factors including the volume and speed of water coming down the Wilsons River and Leycester Creeks, the amount of local flooding due to heavy rain in Lismore, whether the Browns Creek pump is operational and whether levees have or are being overtopped.

The Lismore central business district used to begin flooding when the Wilsons River reached 9.42m AHD. Water would flow into the streets near the old Post Office at the corner of Molesworth and Magellan streets. Major flows into the city would occur by 9.72m AHD with most of the CBD inundated when the river level reached 10.22m AHD.

A concrete wall flood levee was constructed over a couple of years and finished in March 2005. It protects the CBD from floods up to about 10.65m AHD. Flood waters during major events will still top the levee but will start to enter streets at the Browns Creek spillway on Molesworth Street between Woodlark and Zadoc streets. A long established earthen levee protects South Lismore from all but major floods exceeding 10.95m AHD. North Lismore has no flood protection and is the first area to be cut off.

Prior to February 2022, the highest recorded Lismore flood levels were on 21st February 1954 and 11th March 1974. Signs such as this one are displayed on power poles throughout the city to mark the highest level floodwaters reached. The record flood height was comprehensively broken by more than 2 metres on 28th February 2022.

Daily rainfall data from all sites in the Northern Rivers and eastern parts of the Northern Tablelands are included for each flood event.

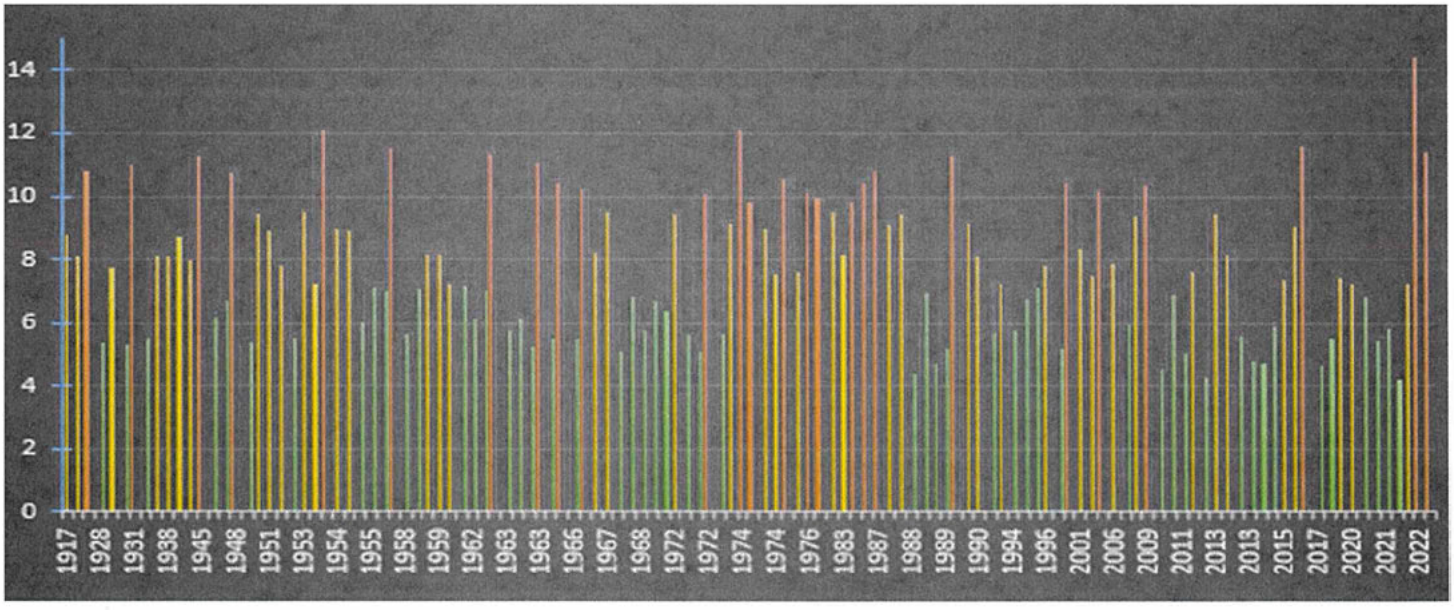
Tropical cyclone tracking map links are listed where it is known they directly or indirectly contributed to a flood event. Infrared satellite picture loops are available for flood events since 1983.

Bureau of Meterology flood levels (metres AHD) for the Wilsons River at Lismore	Minor: 4.2	Moderate: 7.2	Major: 9.7

This table includes all known floods that reached at least the minor flood classification level at the official Lismore gauge. There have been many other significant rain and flood events in the Northern Rivers region which have not reached the minor flood level in Lismore. For the early years (pre 1920s) many minor flood events were not logged in the historic records.

Flood levels listed prior to 1917 are incomplete and cannot be directly compared to heights at the Rowing Club gauge in Magellan Street.

See also: Wilsons River at Eltham Flood Heights | Coopers Creek at Corndale Flood Heights | Leycester Creek at Rock Valley Flood Heights



Early Years		Minor	Moderate	Major	Notes, links and synoptic situation	Rainfall, Weather Maps, Satellite Photos
21-22nd January	1887			11.58	Flood height was an estimate of 38 feet.	Rain: Northern Rivers | Northern Tablelands
8th March	1890			12.46	Flood height was an estimate of 40 feet.	Rain: Northern Rivers | Northern Tablelands
2-3rd April	1892			10.59	First flood height measurement using the Fawcetts Bridge (Woodlark Street) gauge. All previous heights were estimates.	Rain: Northern Rivers | Northern Tablelands
22nd January	1893		8.30			Rain: Northern Rivers | Northern Tablelands
11th February	1893			10.43	February 1893 was Lismore's wettest month with 799mm on 27 raindays for well over a century, only exceeded during March 2017 with 806.8mm. Flood peaks were likely 11-12 Feb and also 16-18 Feb. Some publications have the 1893 flood occurring in March 1893 but the rainfall figures show it was February 1893.	Rain: Northern Rivers | Northern Tablelands
31st March	1904	n/a			Rainfall data shows a significant flood occurred 31st March - 1st April though no height is available.	Rain: Northern Rivers | Northern Tablelands
8-10th November	1917		8.77		First flood height using the Rowing Club gauge at the end of Magellan Street. All flood heights from this date forward can be compared.	Rain: Northern Rivers | Northern Tablelands

15-17th May	1921		8.13		Rainfall data suggests the May 1921 flood may have peaked higher than this.	Rain: Northern Rivers | Northern Tablelands
23rd July	1921			10.79		Rain: Northern Rivers | Northern Tablelands
5-18th March	1925	n/a			Prolonged flooding with possible multiple peaks in the moderate range.	Rain: Northern Rivers | Northern Tablelands
24-28th January	1927	n/a			Possible minor flood on the 11th with moderate flooding from the 24th.	Rain: Northern Rivers | Northern Tablelands
6-16th February	1928	5.42				Rain: Northern Rivers | Northern Tablelands
1-2nd March	1929		7.75			Rain: Northern Rivers | Northern Tablelands
30th June	1929	5.32				Rain: Northern Rivers | Northern Tablelands
6th February	1931			10.96		Rain: Northern Rivers | Northern Tablelands
9th May	1934	n/a			This event is not listed in the archives. Rainfall figures suggest a moderate flood was likely.	Rain: Northern Rivers | Northern Tablelands
8-17th March	1937	5.53			Probably two peaks: 10th and 17th.	Rain: Northern Rivers | Northern Tablelands
17-21st January	1938		8.07			Rain: Northern Rivers | Northern Tablelands
10-12th April	1938		8.09			Rain: Northern Rivers | Northern Tablelands
22-27th May	1938		8.71			Rain: Northern Rivers | Northern Tablelands
4-6th March	1939		7.96			Rain: Northern Rivers | Northern Tablelands
1940s		**Minor**	**Moderate**	**Major**	**Notes, links and synoptic situation**	**Rainfall, Weather Maps, Satellite Photos**

2-3rd December	1940	n/a				Rain: Northern Rivers | Northern Tablelands
31st December	1943	n/a			Flood peak may have been 1st January 1944.	Rain: Northern Rivers | Northern Tablelands
26-29th January	1944	n/a				Rain: Northern Rivers | Northern Tablelands
11th June	1945			11.29	Mostly likely an East Coast Low. Rain stopped 6pm Monday. Worst in history. Browns Creek raging torrent over Spinks Bridge. River peak may be higher than this.	Rain: Northern Rivers | Northern Tablelands
25th March	1946	6.18				Rain: Northern Rivers | Northern Tablelands
2nd May	1948	6.69				Rain: Northern Rivers | Northern Tablelands Surface Reanalysis | 500 hPa Thickness
16th June	1948			10.74	Peak most likely evening of 16th.	Rain: Northern Rivers | Northern Tablelands Surface Reanalysis | 500 hPa Thickness
1950s		**Minor**	**Moderate**	**Major**	**Notes, links and synoptic situation**	**Rainfall, Weather Maps, Satellite Photos**
28th February	1950	5.37			Prolonged period of wet weather which eventually led to a minor flood peak.	Rain: Northern Rivers | Northern Tablelands Surface Reanalysis | 500 hPa Thickness
24th June	1950		9.48			Rain: Northern Rivers | Northern Tablelands Surface Reanalysis | 500 hPa Thickness
27th January	1951		8.87			Rain: Northern Rivers | Northern Tablelands Surface Reanalysis | 500 hPa Thickness
18-20th March	1951		7.81			Rain: Northern Rivers | Northern Tablelands

						Surface Reanalysis | 500 hPa Thickness
8th June	1951	5.54				Rain: Northern Rivers | Northern Tablelands Surface Reanalysis | 500 hPa Thickness
21st February	1953		9.51		Creeping flood from a prolonged period of very wet weather.	Rain: Northern Rivers | Northern Tablelands Surface Reanalysis | 500 hPa Thickness
20-24th March	1953		7.21			Rain: Northern Rivers | Northern Tablelands Surface Reanalysis | 500 hPa Thickness
5am 21st February	1954			12.11 *	Rain depression from ex TC on 9-11th, then Tropical Cyclone 195303 from midday Friday to early Sunday morning. '54 Flood Disaster. Clear skies Sunday. All communications failed. Highest ever peak Lismore (maybe 12.63m), Kyogle, Casino, Nimbin and Murwillumbah. Some locations had over 1,000mm of rain in 12 days. Detailed report available: Hydrological features of the 1954 North Coast Floods	Rain: Northern Rivers | Northern Tablelands Surface Reanalysis | 500 hPa Thickness
14th July	1954		8.95			Rain: Northern Rivers | Northern Tablelands Surface Reanalysis | 500 hPa Thickness
29th March	1955		8.92			Rain: Northern Rivers | Northern Tablelands Surface Reanalysis | 500 hPa Thickness
5-6th April	1955	6.02			Low presure system that caused the previous flood a week ago returned.	Rain: Northern Rivers | Northern Tablelands

						Surface Reanalysis | 500 hPa Thickness
1st May	1955	7.14				Rain: Northern Rivers | Northern Tablelands Surface Reanalysis | 500 hPa Thickness
11-13th December	1955	6.98				Rain: Northern Rivers | Northern Tablelands Surface Reanalysis | 500 hPa Thickness
11pm 18th February	1956			11.54	Rain event earlier in the month then a tropical low moving S-SW. Robert White bridge collapsed. Sudden stop to rain Saturday afternoon. Sensational rise in creek levels at Nimbin.	Rain: Northern Rivers | Northern Tablelands Surface Reanalysis | 500 hPa Thickness
19-20th June	1958	5.67			Rainfall data suggests flooding around the 11th as well - perhaps two peaks occurred.	Rain: Northern Rivers | Northern Tablelands Surface Reanalysis | 500 hPa Thickness
6-7th August	1958	7.07				Rain: Northern Rivers | Northern Tablelands Surface Reanalysis | 500 hPa Thickness
21-24th January	1959		8.14		Caused by Tropical Cyclone Beatrice	Rain: Northern Rivers | Northern Tablelands Surface Reanalysis | 500 hPa Thickness
17-20th February	1959		8.15			Rain: Northern Rivers | Northern Tablelands Surface Reanalysis | 500 hPa Thickness
18-29th March	1959	n/a				Rain: Northern Rivers | Northern Tablelands Surface Reanalysis | 500 hPa Thickness
9-13th November	1959		7.22			Rain: Northern Rivers | Northern Tablelands Surface Reanalysis | 500 hPa Thickness

1960s		Minor	Moderate	Major	Notes, links and synoptic situation	Rainfall, Weather Maps, Satellite Photos
18-20th February	1961	7.17				Rain: Northern Rivers | Northern Tablelands Surface Reanalysis | 500 hPa Thickness
6-8th January	1962	6.13			Rainfall data indicates another minor flood peak was likely on the 15th.	Rain: Northern Rivers | Northern Tablelands Surface Reanalysis | 500 hPa Thickness
7-9th April	1962	7.02				Rain: Northern Rivers | Northern Tablelands Surface Reanalysis | 500 hPa Thickness
11am 11th July	1962			11.36	Cyclonic depression off Gold Coast. Highest ever peak Repentance Ck, The Channon, Bentley. Flood firsts - NRTV, Northern Star uninterrupted production.	Rain: Northern Rivers | Northern Tablelands Surface Reanalysis | 500 hPa Thickness
1-2nd January	1963	5.74				Rain: Northern Rivers | Northern Tablelands Surface Reanalysis | 500 hPa Thickness
15-18th March	1963	6.11				Rain: Northern Rivers | Northern Tablelands Surface Reanalysis | 500 hPa Thickness
26-28th April	1963	5.29				Rain: Northern Rivers | Northern Tablelands Surface Reanalysis | 500 hPa Thickness
7pm 8th May	1963			11.06	Trough in central western districts. Upper low then surface low off Cape Byron Tuesday night. All North Coast flooded. Equal highest peak Bentley. This flood followed a minor flood just 10 days earlier.	Rain: Northern Rivers | Northern Tablelands Surface Reanalysis | 500 hPa Thickness

26-27th March	1964	5.51			Some heavy rainfalls also occurred between the 8th and 10th March.	Rain: Northern Rivers | Northern Tablelands Surface Reanalysis | 500 hPa Thickness
1am 21st July	1965			10.43	Very cold southerly then rain depression moving south. Possibly similar to September 1988. Only 6 raindays in whole month. Worst drought in years. Deepfreeze over state. Snow in Sydney. 1st flood for the Tuckombil Flood Canal. Waterspout off Cape Byron.	Rain: Northern Rivers | Northern Tablelands Surface Reanalysis | 500 hPa Thickness
9-11th June	1966	5.51				Rain: Northern Rivers | Northern Tablelands Surface Reanalysis | 500 hPa Thickness
11am 19th March	1967			10.27	Tropical Cyclone Elaine and another tropical low operationally classified tropical cyclone "Dulcie" combined. Record floods in north Queensland.	Rain: Northern Rivers | Northern Tablelands Surface Reanalysis | 500 hPa Thickness
3am 13th June	1967		8.20		1st peak.	
4pm 14th June	1967		9.49		Lows off SE Queensland coast. 1030hp high. Worst flooding on the Gold Coast in 25yrs. Grafton badly hit. 2nd peak in Lismore.	Rain: Northern Rivers | Northern Tablelands Surface Reanalysis | 500 hPa Thickness
11am 23rd June	1967	5.09			Another low off the coast moving quickly south.	Rain: Northern Rivers | Northern Tablelands Surface Reanalysis | 500 hPa Thickness
2am 28th June	1967	6.79			Complex trough and depression off coast near Cape Byron. 1030hp high. Seas batter coast. 4th June flood peak.	Rain: Northern Rivers | Northern Tablelands Surface Reanalysis | 500 hPa Thickness

10-13th January	1968	5.75				Rain: Northern Rivers | Northern Tablelands Surface Reanalysis | 500 hPa Thickness
1970s		**Minor**	**Moderate**	**Major**	**Notes, links and synoptic situation**	**Rainfall, Weather Maps, Satellite Photos**
8-10th December	1970	6.69				Rain: Northern Rivers | Northern Tablelands Surface Reanalysis | 500 hPa Thickness
17-19th February	1971	6.41				Rain: Northern Rivers | Northern Tablelands Surface Reanalysis | 500 hPa Thickness
6pm 13th February	1972		9.43		Tropical Cyclone Daisy and Tropical Cyclone Wendy. 1036hp high. Severe beach erosion. 1st test for Browns Creek Pump which cut the flood peak by feet.	Rain: Northern Rivers | Northern Tablelands Surface Reanalysis | 500 hPa Thickness
8-9th March	1972	5.67				Rain: Northern Rivers | Northern Tablelands Surface Reanalysis | 500 hPa Thickness
3-4th April	1972	5.07			Tropical Cyclone Emily	Rain: Northern Rivers | Northern Tablelands Surface Reanalysis | 500 hPa Thickness
6am 29th October	1972			10.09	Upper disturbance then a low in north of state. 1030hp high. First October flood. Browns Ck Pump kept water 1m lower in basin. Record rainfalls for year and month.	Rain: Northern Rivers | Northern Tablelands Surface Reanalysis | 500 hPa Thickness
14-17th February	1973	5.62				Rain: Northern Rivers | Northern Tablelands Surface Reanalysis | 500 hPa Thickness

6pm 27th January	1974		9.13		Tropical Cyclone Wanda and intense rain depression moving SE from NW Queensland. Australia Day Flood. Massive flooding in Brisbane - worst of the century.	Rain: Northern Rivers | Northern Tablelands Surface Reanalysis | 500 hPa Thickness
am 11th March	1974			12.11 *	Upper disturbance and very small localised low pressure. 1028hp high. South Lismore levee breached. Shock flood worst ever. Highest ever peaks Wyrallah, Tuckarimba, Coraki, Woodburn, Bungawalbyn. Brisbane 2nd Flood.	Rain: Northern Rivers | Northern Tablelands Surface Reanalysis | 500 hPa Thickness
am 13th March	1974			9.81	2nd peak due to Ex-Tropical Cyclone Zoe moving rapidly south. '74 Flood - second hit.	Rain: Northern Rivers | Northern Tablelands Surface Reanalysis | 500 hPa Thickness
3pm 23rd April	1974		8.97		Upper disturbances in north of state. 1030hp high.	Rain: Northern Rivers | Northern Tablelands Surface Reanalysis | 500 hPa Thickness
4pm 3rd June	1974		7.52		1030hp high. Small low off border. Flood peril returns. 10 years to recover.	Rain: Northern Rivers | Northern Tablelands Surface Reanalysis | 500 hPa Thickness
12pm 3rd March	1975			10.53	Upper disturbance then surface low off the coast. 1030hp high. SES spot on with predictions. Waterspout or tornado Lennox Head.	Rain: Northern Rivers | Northern Tablelands Surface Reanalysis | 500 hPa Thickness
6am 12th February	1976		7.62		Tropical depression moving across country. ex TC. Weak high. Tabulam devastated - worst flood ever.	Rain: Northern Rivers | Northern Tablelands Surface Reanalysis | 500 hPa Thickness
9am 29th February	1976			10.14	Upper disturbances. NE winds from weak high then Tropical Cyclone Colin. Leap year flood.	Rain: Northern Rivers | Northern Tablelands

					Wilsons river currents - 4ft/hr rise. Sirens used. Teven devastated. Highest ever peak Nashua, Eltham, Tatham. Federal recorded 290mm of rain in just 4 hours.	Surface Reanalysis | 500 hPa Thickness
3rd March	1977	n/a			Significant falls in the Wilsons River catchment with a near major flood in the Eltham Valley. No flood level available for Lismore but suspect minor flooding ocurred late on the 3rd.	Rain: Northern Rivers
12pm 19th March	1978			9.97	1034hp high cradling deepening low moving SW. Mt Nardi Deluge - 660mm.	Rain: Northern Rivers | Northern Tablelands Surface Reanalysis | 500 hPa Thickness
1980s		**Minor**	**Moderate**	**Major**	**Notes, links and synoptic situation**	**Rainfall, Weather Maps, Satellite Photos**
7am 10th May	1980		9.53		Strengthening high and small low moving south. Rain a boost to district - a lot more needed though.	Rain: Northern Rivers | Northern Tablelands Surface Reanalysis | 500 hPa Thickness
4pm 23rd June	1983		8.18		1028hp high, upper disturbance and small low moving south. 1st satellite photos in paper.	Rain: Northern Rivers | Northern Tablelands Satellite |Surface Reanalysis | 500 hPa Thickness
1am 10th April	1984			9.84	Ex-Tropical Cyclone Lance and northern NSW low. 1030hp high. Gales. Major flood a close thing. House With No Steps losses great.	Rain: Northern Rivers | Northern Tablelands Satellite | Surface Reanalysis | 500 hPa Thickness
1st November	1984	n/a			Significant falls in the Wilsons River catchment with a near major flood in the Eltham Valley. No flood level available for Lismore but suspect minor flooding ocurred late on the 1st.	Rain: Northern Rivers

9th July	1985	n/a			Significant falls in the Wilsons River catchment (> 200mm in 24 hours) with a major flood in the Eltham Valley. No flood level available for Lismore but suspect minor flooding ocurred late on 9th or early 10th.	Rain: Northern Rivers | Northern Tablelands
8am 6th March	1987			10.43	Small low off Tweed Heads which formed from Ex-Tropical Cyclone Elsie after it crossed country. 1030hp high. Lismore ready for major flood. Worst since 74. Rocky Ck dam full. Drought preceded flood - especially on Gold Coast.	Rain: Northern Rivers | Northern Tablelands Satellite | MSL Charts | Surface Reanalysis | 500 hPa Thickness
8am 11th May	1987			10.78	Slow moving 1037hp high and upper air disturbance. Mothers Day Flood. 2nd major CBD inundation in 2 months - only year to have two major floods. Flood Pictures: 11th May 1987	Rain: Northern Rivers | Northern Tablelands Satellite | MSL Charts | Surface Reanalysis | 500 hPa Thickness
10am 7th April	1988		9.10		Tropical low moving across country and upper disturbances and lows off SE Queensland. Easter Flood. Floods in red centre, NSW and QLD.	Rain: Northern Rivers | Northern Tablelands Satellite | Surface Reanalysis | 500 hPa Thickness
5pm 12th April	1988		9.46		Small low and upper disturbance. 1038hp high. Longest flood. Woodburns worst - not highest. 2nd peak in Lismore in a week.	Rain: Northern Rivers | Northern Tablelands Satellite | Surface Reanalysis | 500 hPa Thickness
6th June	1988	4.42				Rain: Northern Rivers | Northern Tablelands Satellite | Surface Reanalysis | 500 hPa Thickness
11pm 16th September	1988	6.94			Deepening low moving down coast. 1030hp ridging high. Rain stopped	Rain: Northern Rivers | Northern Tablelands

					just in time. First September flood.	Satellite | Surface Reanalysis | 500 hPa Thickness
19th December	1988	4.72				Rain: Northern Rivers | Northern Tablelands Satellite | Surface Reanalysis | 500 hPa Thickness
29th January	1989	5.22			Two weak lows moving down coast. 1020hp high.	Rain: Northern Rivers | Northern Tablelands Satellite | Surface Reanalysis | 500 hPa Thickness
11am 2nd April	1989			11.28	Multiple upper disturbances. Slow moving 1037hp high. April Fools Day Flood. Leycester Ck pushed back Wilsons. Incredible rise of river. South Lismore levee breached. Oil flood. Tropical Cyclone Aivu North QLD.	Rain: Northern Rivers | Northern Tablelands Satellite | Surface Reanalysis | 500 hPa Thickness
6am 27th April	1989		9.15		Upper low then deepening surface low moving down coast. 1034hp high weakening. 2nd flood in a month. Cyclonic wind - Easterly then calm then Westerly. Flood Pictures: 27th April 1989	Rain: Northern Rivers | Northern Tablelands Satellite | Surface Reanalysis | 500 hPa Thickness
1990s		**Minor**	**Moderate**	**Major**	**Notes, links and synoptic situation**	**Rainfall, Weather Maps, Satellite Photos**
pm 3rd February	1990		8.10		Tropical Cyclone Nancy with well developed upper trough extending to Victoria along the East Coast. 1026hp high over NZ and 1034hp high over Bight. Major flooding in Sydney and Hunter Valley. Eye of tropical cyclone crossed Cape Byron - winds were calm for a short time.	Rain: Northern Rivers | Northern Tablelands Satellite | Surface Reanalysis | 500 hPa Thickness

am 7th April	1990	5.72			Upper air disturbance from ex TC Ivor, and 1036hp high centred in the Tasman Sea. Minor flooding in Lismore but moderate flooding on the Clarence River. The remains of TC Ivor as an upper low, continued for two more weeks and caused the worst flooding ever for western NSW and Qld.	Rain: Northern Rivers | Northern Tablelands Satellite | Surface Reanalysis | 500 hPa Thickness
2pm 13th December	1991		7.27		Slow moving front and upper air disturbance combined to form an east coast low, which then moved south. 1026hp high in the Tasman Sea. Moderate flooding in Lismore and Murwillumbah. Two deaths. Heavy rain for only 24 hours. Severe flooding at Nimbin with 300mm in one night caused some of the worst flooding ever there.	Rain: Northern Rivers | Northern Tablelands Satellite | Surface Reanalysis | 500 hPa Thickness
4th March	1994	5.75				Rain: Northern Rivers | Northern Tablelands Satellite | Surface Reanalysis | 500 hPa Thickness
16th February	1995	6.76				Rain: Northern Rivers | Northern Tablelands Satellite | Surface Reanalysis | 500 hPa Thickness
9pm 3rd May	1996	7.12			A few locations along the Border Ranges received around 1,000mm of rain in a week.	Rain: Northern Rivers | Northern Tablelands Satellite | MSL Charts | 500 hPa Thickness
11am 7th May	1996		7.78		2nd peak at Lismore. Rainfall figures reveal another rainfall event around 17th May but it was fairly coastal in extent.	Rain: Northern Rivers | Northern Tablelands Satellite | MSL Charts | 500 hPa Thickness

2000s		Minor	Moderate	Major	Notes, links and synoptic situation	Rainfall, Weather Maps, Satellite Photos
11pm 14th January	2000	5.20				Rain: Northern Rivers | Northern Tablelands Satellite | MSL Charts | 500 hPa Thickness
6pm 2nd February	2001			10.42	First major flood in Lismore for 12 years - this was the last straw in getting the flood levee constructed. Many locations received over 400mm of rain in 36 hours. Details here: Major Flooding in Lismore Report Flood Pictures: 1st Feb 2001 | 2nd Feb 2001	Rain: Northern Rivers | Northern Tablelands Satellite | MSL Charts | 500 hPa Thickness
10th March	2001		8.34		Flood pictures: 9th Mar 2001 | 10th Mar 2001	Rain: Northern Rivers | Northern Tablelands Satellite | MSL Charts | 500 hPa Thickness
12pm 6th March	2004		7.50			Rain: Northern Rivers | Northern Tablelands Satellite | MSL Charts | 500 hPa Thickness
10pm 30th June	2005			10.20	Details here: Major Flooding of the Wilsons River Lismore Report Flood pictures: 29th Jun 2005 | 30th Jun 2005 | 1st Jul 2005	Rain: Northern Rivers | Northern Tablelands Satellite | MSL Charts | 500 hPa Thickness
12pm 20th January	2006		7.85		Flood pictures: 19th Jan 2006 | 20th Jan 2006 | 21st Jan 2006	Rain: Northern Rivers | Northern Tablelands Satellite | MSL Charts | 500 hPa Thickness
1pm 6th March	2006	5.95			Flood Pictures: 4th March 2006	Rain: Northern Rivers | Northern Tablelands Satellite | MSL Charts | 500 hPa Thickness
6pm 5th January	2008		9.40		Although the river peak in Lismore failed to reach the major level, elsewhere in the district it was the	Rain: Northern Rivers | Northern Tablelands

					and Brunswick Valley not as badly hit. Flood Pictures: 21st May 2009 | 22nd May 2009	
2010s		**Minor**	**Moderate**	**Major**	**Notes, links and synoptic situation**	**Rainfall, Weather Maps, Satellite Photos**
6am 12th October	2010	4.57			Heavy falls in the eastern part of the catchment on 3rd and 4th of October were followed by a second rain event less than a week later. A strong high pressure was anchored in the Tasman Sea. A mid level trough in the southern Coral Sea tracked westward and crossed the coast during the morning of the 11th. This time the heaviest falls were in SE QLD however local rainfall was enough to push the Wilsons River in Lismore to minor flood levels. Flood Pictures: 4th October 2010	Rain: Northern Rivers | Northern Tablelands Satellite | MSL Charts
5am 26th December	2010	4.91			First peak.	
noon 28th December	2010	6.89			A prolonged period of moderate to heavy rainfalls across the region due to the influence of the monsoon trough. Many centres received 250mm to 300mm between the afternoon of 24th December and the afternoon of the 27th though Boxing Day did see lighter rain until later in the day. An unusual aspect of this system was that most rainfall streamed down from the northwest from mid to upper level cloud rather than from the usual low-	Rain: Northern Rivers | Northern Tablelands Satellite | MSL Charts

					level onshore flow. The upper Richmond River went into major flood with parts of the Kyogle CBD inundated from late evening 27/12 with a peak of 15.94m at 4am 28/12. Flood Pictures: 25th December 2010 | 27th December 2010 | 28th December 2010	
8.30pm 11th January	2011	5.05			Another prolonged period of moderate to heavy rainfalls across parts of the region from 5th to 11th January due to a slow moving upper low and the monsoon trough. Extreme flash flooding occured in Toowoomba and the Lockyer Valley (in SE QLD) on 10/1 with major river flooding through greater Brisbane 11-13 Jan - the worst since 1974. Most of the Northern Rivers did not receive heavy falls, only the northwest parts and adjacent Northern Tablelands - parts of which had record flooding as well. Tenterfield, the MacIntyre River Basin (Bonshaw, Ashford) and the Clarence River (Tabulam, Grafton and lower river) all had major flooding. The several days of moderate rainfalls eventually pushed the Wilsons River at Lismore to minor flood levels.	Rain: Northern Rivers | Northern Tablelands Satellite | MSL Charts
12.20pm 26th January	2012		7.58		A persistent upper level low over western NSW and southern QLD combined with a high pressure system in the Tasman sea (and a	Rain: Northern Rivers | Northern Tablelands Satellite | MSL Charts

					second quickly replacing it) to deliver a deep E-NE flow and resultant prolonged rain event for NE NSW and SE QLD. A number of surface troughs near and on the coast during the week contributed to some flash flooding too. The hardest hit areas were the Tweed, Bellingen and Sunshine Coast areas though flooding occurred in most regions between Taree and Noosa Heads. The heaviest rainfalls in the Wilsons River catchment occurred between midnight and 3pm 25th January. Flood pictures: 26th Jan 2012	
8.40pm 29th June	2012	4.31			A fairly strong high pressure system moving across SE Australia and the South Tasman Sea directed moisture into a surface and upper trough just off the SE QLD / NE NSW coast. A low pressure system formed off the SE Queensland coast overnight 27/28th June though with the high weakening it was not enough to result in massive rainfalls. However there were extensive rainfalls in the 100mm to 150mm range across the coastal Northern Rivers district - most of which fell between late on the 27th through to early on 29th. It was the second flood in a month for the Wilsons River upsteam of Lismore though the earlier event (11-12th) failed to reach	Rain: Northern Rivers | Northern Tablelands Satellite | MSL Charts

					minor flood levels at the official Lismore gauge. The Eltham gauge peaked at 6.95m at 1pm on 29th June, and at 7.24m at 12.10am on 12th June.	
10.30am 29th January	2013		9.43		Ex-Tropical Cyclone Oswald took an extraordinary track down the East Coast (over land) after being a category one system for a few hours in the Gulf of Carpentaria. A strong blocking high over New Zealand helped steer the tropical low and monsoon trough slowly along the entire length of QLD and into NSW over a week. Record heavy rainfalls hit many areas but one of the stand-out features was the destructive winds (of category one strength) and numerous embedded tornado reports along the coast. Lismore managed to avoid a major flood and the levee again saved parts of the CBD from inundation - thanks to lower rainfall totals in the western part of the catchment. Parts of the Tweed, Lower Richmond and Clarence endured major flooding, with Grafton recording its highest ever level of 8.09m - just centimetres below the top of the levee wall. Track of Ex-TC Oswald Flood pictures: 28th Jan 2013 | 29th Jan 2013	Rain: Northern Rivers | Northern Tablelands Satellite | MSL Charts
6.30pm 23rd February	2013		8.18		A prolonged period of wet weather occurred from the 13th as a result of an upper trough and a strong	Rain: Northern Rivers | Northern Tablelands Satellite | MSL Charts

					blocking high pressure system directing a deep moist layer into northern NSW and QLD. A surface trough developed off the coast on the 17th followed by a low off Central QLD late on the 18th. This low tracked SSE parallel to the coastline then did a loop in the North Tasman Sea before slamming into the Northern Rivers coastline during the 22nd Feb as the equivalent of a category one tropical cyclone with regards to wind speeds. Ballina and surrounds bore the brunt of the wind damage. Rainfall accumulations were substantial over the many days of this event but increased sufficiently 21-22 Feb to result in moderate flooding in Lismore. The Low was also responsible for major flooding in southern parts of the Northern Rivers and throughout the Mid North Coast. Flood pictures: 22nd Feb 2013 | 23rd Feb 2013	
7.30pm 3rd March	2013	5.56			The lower Richmond River had only just dropped below minor flood levels when an upper trough delivered further heavy falls to the Northern Rivers. This system had brought widespread rainfall across most of NSW before combining with an onshore flow and focusing on the North Coast and Southeast QLD. Rainfall accumulations were mainly less than 150mm in the Northern Rivers for the event but	Rain: Northern Rivers | Northern Tablelands Satellite | MSL Charts

					with a saturated catchment the Wilsons and Richmond rivers again went into flood. Flood pictures: 3rd Mar 2013	
11pm 2nd July	2013	4.79			An East Coast Low formed off the SE Queensland coast in response to an upper trough passing over the region, and a pre-existing coastal trough. Gale force southerly winds and widespread rain fell across the northern two-thirds of the Northern Rivers district particularly during Monday 1st July and early Tuesday. Rainfall accumulations reached 150 to 200mm over 36 hours in some locations and this was enough to push the Wilsons and Lower Richmond River into minor flood.	Rain: Northern Rivers | Northern Tablelands Satellite | MSL Charts
2pm 28th August	2014	4.70			A strong blocking high pressure system in the Tasman Sea combined with a series of upper troughs to deliver two weeks of wet weather culminating in an East Coast Low on the 27th. Significant falls fell across parts of the Northern Rivers during the 27th quickly clearing pre-dawn on 28th. Unusually the Nightcap Ranges and Tweed region missed out on the heavy rainfalls. The lack of heavy rain to the north of Lismore limited the flooding to minor.	Rain: Northern Rivers | Northern Tablelands Satellite | MSL Charts

9pm 21st February	2015	5.88			The weather patterns had the potential to produce major flooding in the Northern Rivers district with a strong high in the southern Tasman Sea, coastal trough and a tropical low moving towards the southern half of the QLD coast. However the Coral Sea low far exceeded all modelling and became category 5 Tropical Cyclone Marcia. This intensity change resulted in the trough largely remaining offshore instead of over the Northern Rivers and reduced the rainfall potential. Regardless there was still widespread falls of 150 to 300mm over 36-48 hours for the Northern Rivers and north-eastern Northern Tablelands to late evening on the 20th, with minor to moderate flooding in some streams. Flood pictures: 21st February 2015	Rain: Northern Rivers | Northern Tablelands Satellite | MSL Charts
7pm 2nd May	2015		7.36		A strong high pressure system crossing southern Australian into the southern Tasman Sea directed a humid easterly air mass onto the NSW and southern QLD coastline for a number of days. Combining with an unusually strong upper trough passing over NSW into SE QLD, this helped induce surface troughs inland and along the coastline by Wednesday 29 April. The resulting instability led to a number of days of patchy heavy	Rain: Northern Rivers | Northern Tablelands Satellite | MSL Charts

					thunderstorm/rain events culminating in the development of an East Coast Low on Friday 1st May. Widespread rain and embedded thunder occurred on this day, peaking during the afternoon and early evening, before a fairly rapid clearing as the low moved over SEQ and started to weaken, although some narrow convergence lines persisted in the region until late on the 2nd. The western half of the Wilsons catchment received less than half the falls over the east, with the highest totals in the eastern parts of the Alstonville Plateau. Flood pictures: 1st May 2015 | 2nd May 2015	
5pm 5th June	2016		9.04		A well forecast event by weather modelling which was showing up nearly a week ahead. A sharp upper trough which evolved into a cut off upper low moved northeast across NSW into SE Queensland. A surface trough was present along most of the East Coast with a large blocking high over New Zealand feeding in rich Coral Sea moisture. The upper low induced a surface low drawing in the existing trough. A convergence line edged across SE QLD and Northern NSW during Saturday, peaking during the evening on the Northern Rivers. An east coast low developed early Sunday along the Coffs	Rain: Northern Rivers | Northern Tablelands Satellite | MSL Charts

					Coast. This was a massive system bringing flooding rains from the Sunshine Coast to Tasmania over several days. The bulk of the rainfall in the Northern Rivers occurred between 6pm Friday and the AM hours of Sunday. Flood pictures: 5th June 2016	
11am 31st March	2017			11.59	Exceptional rainfalls fell across parts of SE Queensland and NE NSW as a result of Ex-Tropical Cyclone Debbie tracking into SE QLD after crossing the Whitsunday Coast as a category 4 system two days prior. For the Northern Rivers almost all the extreme rainfall fell in a 24 hour period from 1am Thursday 30th March until 1am 31st, ahead of the low moving off the Gold Coast and contracting the rainfall away, though still delivering a blast of damaging winds. The heaviest rainfall fell across the western two-thirds of the Wilsons River catchment with some locations receiving around 700mm in 24 hours. The eastern part of the catchment (upstream of Eltham) received a lot less, though the outcome of a massive flood event was set. Record flooding occurred along the Tweed River and major flooding along the Richmond River. This was the first flood to breach the Lismore CBD flood levee (completed in March 2005) and the highest flood peak since	Rain: Northern Rivers | Northern Tablelands Satellite | MSL Charts

					the record floods of March 1974. A very wet March leading up this event also played a role. Flood pictures: 30th March 2017 | 31st March 2017 | 1st April 2017	
3am 12th June	2017	4.68			First peak.	
1.15am 14th June	2017	5.50			A blocked weather pattern with a large high stalled over southern Australia, coastal troughs and a series of upper level troughs over NSW. This event began as a weak east coast low near Sydney before weakening into a coastal trough which moved to the Far North Coast during Friday 10th. Over a number of days heavy rainfalls occurred but not all in the same areas or continuously. The highest rainfall totals occurred along the coastal fringe with the hinterland receiving less though still substantial accumulations. The transient nature of the falls resulted in only minor flooding in the Wilson/Richmond and Brunswick rivers, but with two peaks. During the evening of the 12th an ECL formed off the SE QLD coast but contracted the heaviest rain away Tuesday morning and weakened. Flood pictures: 11th June 2017 | 12th June 2017	Rain: Northern Rivers | Northern Tablelands Satellite | MSL Charts
2020s		**Minor**	**Moderate**	**Major**	**Notes, links and synoptic situation**	**Rainfall, Weather Maps, Satellite Photos**

1.15pm 14th February	2020		7.44		A 10-day period of wet weather across large parts of eastern NSW and SE Queensland eventually resulted in a moderate flood for Lismore. A meandering upper low over NSW and a series of surface troughs combined with Coral Sea moisture driven by a southern Tasman high delivered many days of moderate to heavy rain, though falls were not continuous or extensive in area on any given day until the 12th into 13th February. Falls during this latter period extended more inland and allowed all tributaries of the Wilsons to move into moderate flood levels. Of note the Wilsons River at Eltham also reached moderate flood levels on 7th Feb but this did not affect Lismore. Flood pictures: 7th February 2020 | 14th February 2020	Rain: Northern Rivers | Northern Tablelands
10pm 15th December	2020		7.21		A several day event for northeast NSW as a strong high pressure system moved east across Tasmania into the Tasman Sea, combining with a significant upper low which moved across NSW into SE QLD (and eventually back into northern inland NSW). A coastal trough formed in response to the upper low and generated a deep onshore flow. Significant rainfalls occurred across four days particulary overnight 12th and overnight 14th. Damaging winds also occurred in	Rain: Northern Rivers | Northern Tablelands

					coastal areas, mainly 13th into 14th. A number of rivers reached moderate flood levels, along with local flash flooding.	
6.30pm 16th December	2020	6.79			2nd peak. Exceptional rainfall fell in a narrow band due to a local convergence boundary aligned between Nimbin and Coraki. From 11am to 5pm 16th December, 200mm fell on Lismore which caused signficant flash flooding in the Basin area and a slight renewed height in the main river. The basin area ended up nearly a metre higher than the Wilsons River.	Rain: Northern Rivers | Northern Tablelands
2pm 20th February	2021	5.48			A slow-moving high pressure system across the southern Tasman Sea combined with a broad upper trough to establish a long fetch of easterlies. A surface trough developed in response and peaked locally with embedded thunderstorms on Friday 19th. Several daily totals of 25-50mm preceded the main falls, though the heaviest falls over 100mm on the 19th were largely confined to locations in the Nightcap Ranges. Rain had contracted offshore early on the 20th and an East Coast Low formed that evening. Rain focus had shifted to the Mid North Coast.	Rain: Northern Rivers | Northern Tablelands
7.30am 24th March	2021	5.85			Ongoing wet weather and saturated catchments contributed to widespread flooding across NSW and SEQ 18-26 March. A large	Rain: Northern Rivers | Northern Tablelands

					blocking high centred just east of Tasmania combined with a coastal and upper trough to deliver very heavy falls mainly Mid North Coast to Sydney, however a second system from the west helped pull the surface trough west on 21-22 March, which is when the main heavy falls occurred in the Northern Rivers and SEQ. Major flooding occurred on the Clarence.	
7pm 7th April	2021	4.26			A small low formed off the Fraser coast in a trough and combined with high pressure across Tasmania and the Tasman Sea to deliver moderate falls over a few days. Widespread accumulations of 100 - 150mm occurred. The saturated catchment from the March event helped result in some minor flooding across the region.	Rain: Northern Rivers | Northern Tablelands
7am 25th February	2022		7.21		A large slow moving upper low across northern inland NSW and southern inland QLD combined with a blocking high in the southern Tasman Sea to deliver a deep onshore flow. A coastal trough enhanced the convective rainfall across the Northern Rivers region from early Tuesday 23rd into the 24th. Widespread rainfalls of 150 to 200mm were observed which resulting in some moderate flooding. The upper low edged E-NE and affected SE QLD with	Rain: Northern Rivers | Northern Tablelands

					major flooding from the 25th onwards.	
3pm 28th February	2022			14.4	The Upper Low and coastal trough which delivered major flooding across SEQ, edged back south setting the scene for the most devastating flood in history. A coastal trough/convergence zone moved into the Northern Rivers early Sunday 27th. This surface trough/convergence area deepened in the later afternoon and continued all night and well into the 28th, dropping over 1000mm of rain north of Lismore in just 30-36 hours. Extraordinary river rises were recorded in the Coopers, Terrania and Leycester catchments culminating in the Lismore levee overtopped around 3am, followed by a peak of 14.4m around 3pm - more than 2 metres higher than 1974 and 1954. The Wilsons River upsteam of Eltham also went major but not at record levels. Flood peaks more than 2 metres higher than 1954 were then recorded at downstream locations from Coraki to Broadwater, along with record flooding Ballina.	Rain: Northern Rivers | Northern Tablelands
5pm 30th March	2022			11.4	A broad upper low and associated upper trough over the inland along with a deep easterly flow influenced the region over several days. Heavy rainfall fell during the late afternoon across parts of the Nightcap Ranges on	Rain: Northern Rivers | Northern Tablelands

					25th followed by heavy falls over the Alstonville Plateau and adjacent areas on the 26th. On the 28th, a surface trough developed off the southern QLD coastline in response to the approaching upper low. A low also formed NE of Brisbane during the evening. Heavy rain initially spread into the Tweed, then into the Wilsons River catchment by mid afternoon. The heaviest rain fell in the AM hours of the 29th, before quickly easing around sunrise. Later on the 29th the low and associated instability moved southwest and a convergence zone established across parts of the Northern Rivers. Very heavy falls up to 300-400mm fell overnight and led to a levee topping major flood in Lismore.	

Lismore Major Flood List

Summary list of major flood heights at the Rowing Club gauge from highest to lowest.

* There is some discrepancy regarding the heights of the 1954 and 1974 Lismore flood peaks. Historic information has them both at 12.11m but the BoM noted 12.27m for 1954 and 12.15m for 1974 in recent warnings for the 2022 event.

Metres	Date
14.4	28 February 2022
12.11 *	21 February 1954
12.11 *	11 March 1974
11.59	31 March 2017
11.54	18 February 1956

11.4	30 March 2022
11.36	11 July 1962
11.29	11 June 1945
11.28	2 April 1989
11.06	8 May 1963
10.96	6 February 1931
10.79	23 July 1921
10.78	11 May 1987
10.74	16 June 1948
10.53	3 March 1975
10.43	21 July 1965
10.43	6 March 1987
10.42	2 February 2001
10.38	22 May 2009
10.27	19 March 1967
10.2	30 June 2005
10.14	29 February 1976
10.09	29 October 1972
9.97	19 March 1978
9.84	10 April 1984
9.81	13 March 1974