



Flood Mapping and Information

Explore the latest flood mapping and information online

sunshinecoast.qld.gov.au/floodmapping
or email floodmapping@sunshinecoast.qld.gov.au

Living with flooding is a natural part of life on the Sunshine Coast and across much of Queensland.

We can't prevent floods from happening, but we can take steps to reduce the impact of floods by understanding our flood risk.



Introduction

- Access to flood mapping products and information enables our community and industry professionals to make informed decisions for emergency preparedness and land use planning purposes.
- On Thursday 19 August 2021 Council endorsed community engagement associated with updating flood mapping and information.



What's available

- Access to flood study and master drainage study reports
- New and updated public flood mapping

Structure:

- Emergency Preparedness
- Land Use Planning
- General Information

Why:

- Protect from flooding and stormwater hazards
- Prepare for Growth
- Aligns with State Guidance
- Responsibility to maintain current mapping
- Empowers the community to build resilience
- Queensland Floods Commission of Inquiry



Background

Queensland Floods Commission of Inquiry (2012)

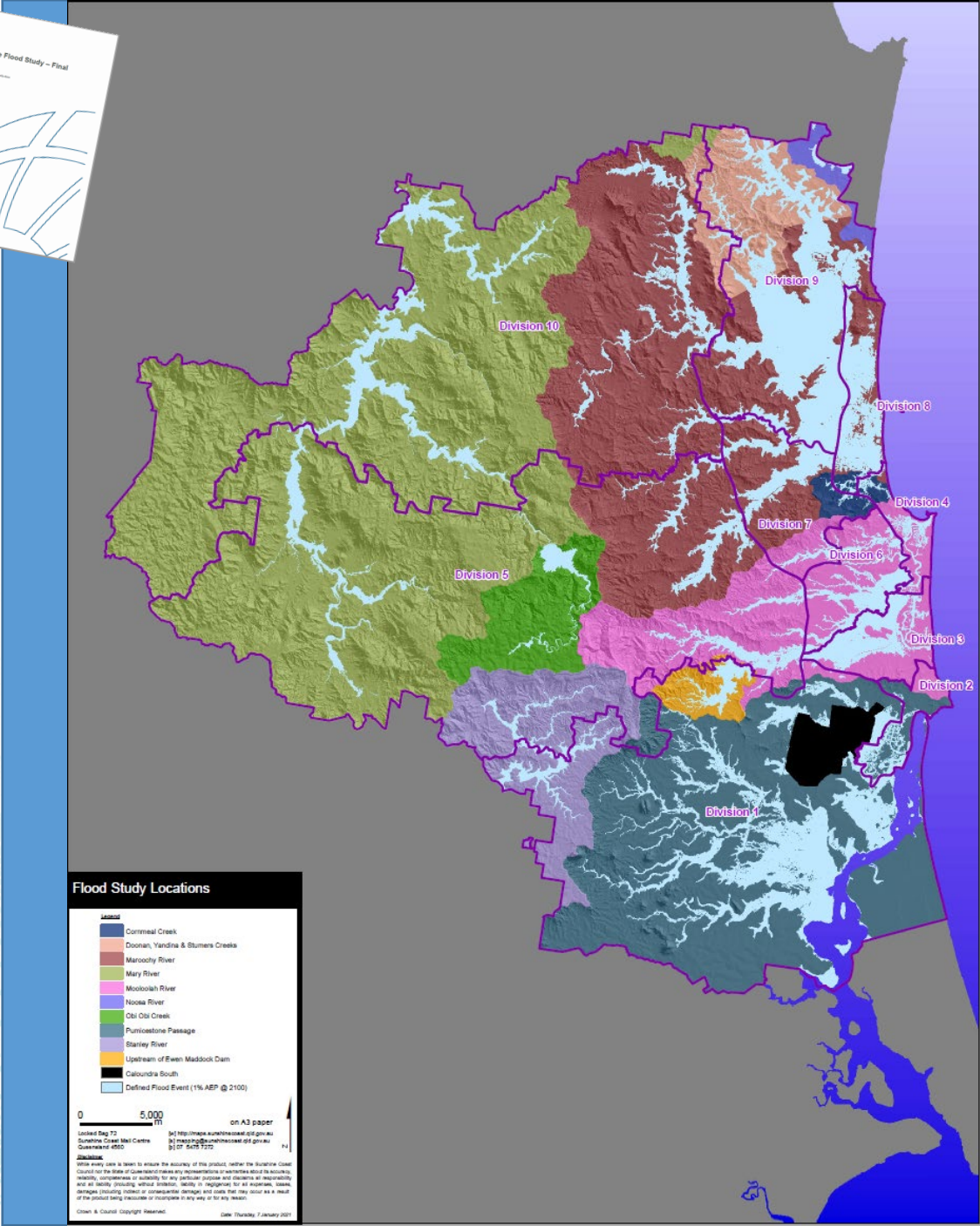
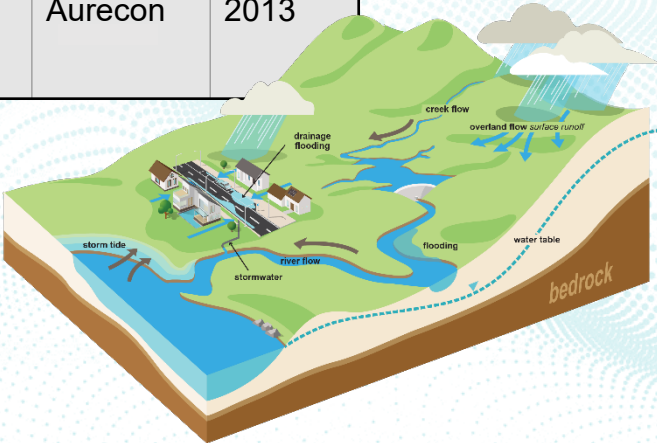
Some Key Themes

- Keep Mapping Current and Easy to Interpret
- Map Zones of Risk
- Map Overland Flow Path information

Sources of Information

Regional Catchment Flood Studies

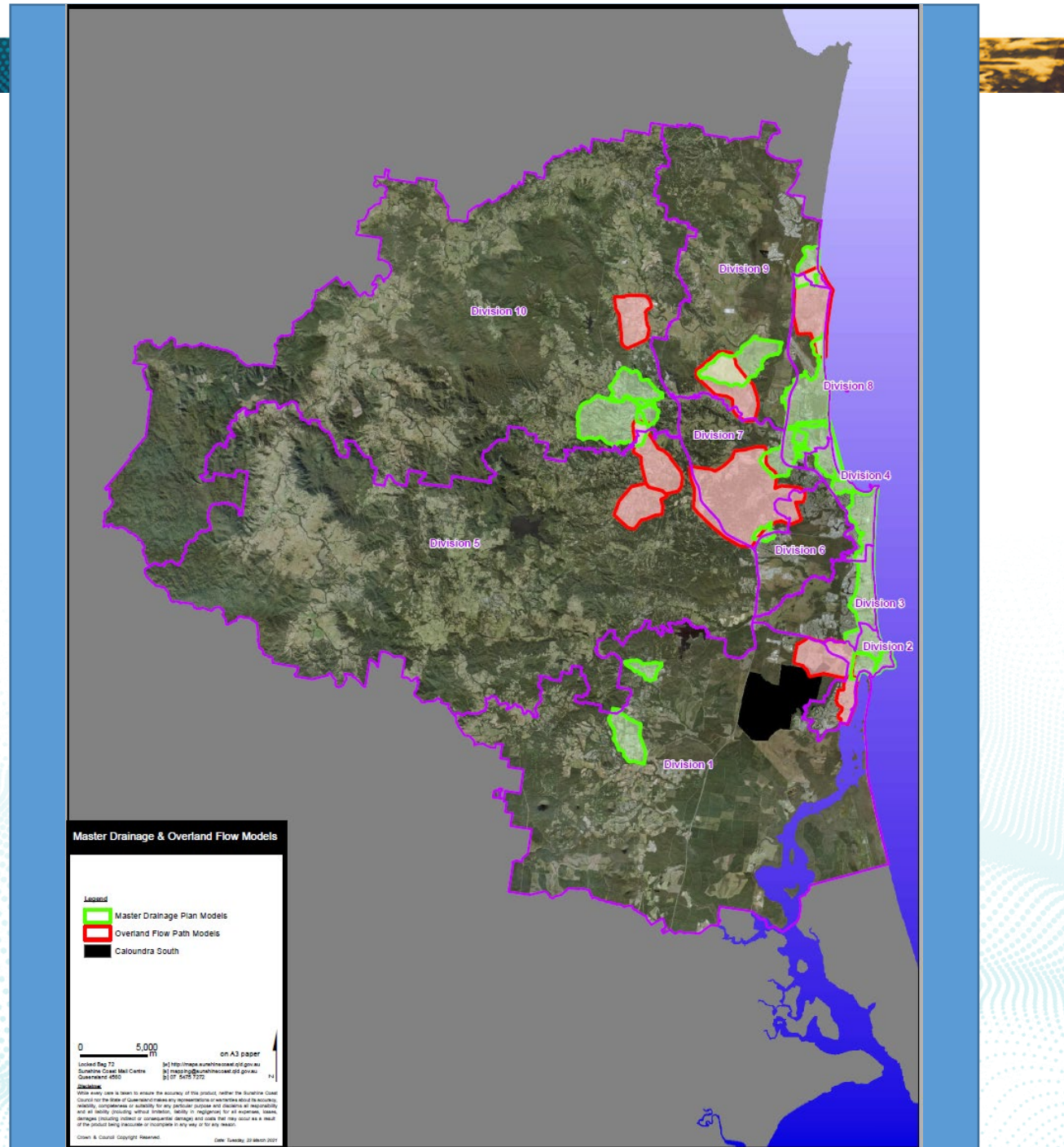
STUDY	AUTHOR	YEAR
Maroochy River Flood Study	BMT	2017
Mooloolah River Flood Study	Cardno	2015
Pumicestone Flood Study	BMT	2018
Doonan and Yandina Creek Flood Study Upgrade	HWMC	2012
Obi Obi Creek Flood Study	Engeny	2013
Mary River Flood Study	DHI	2012
Sunshine Coast Storm Tide Study	Aurecon	2013



Sources of Information

Master Drainage Planning Studies

STUDY	AUTHOR	YEAR
Alexandra Headland	SMEC	2019
Caloundra	SMEC	2019
Landsborough	WMAwater	2018
Nambour East	WMAwater	2018
School Road, Maroochydore	SMEC	2018
Cotton Tree to Picnic Point	Cardno	2020
Coolum Beach	SMEC	2020
Kings and Shelly Beach	SMEC	2020
Maroochy North Shore	SMEC	2020
Kawana	PeakUrban	2021
Maroochydore West	Cardno	2021
Nambour West	Cardno	2021
Beerwah	WaterTechnology	2021
Nambour North	WaterTechnology	2021
South Maroochy Drainage Board Drain Sizing Investigation	Pitt and Sherry	2020

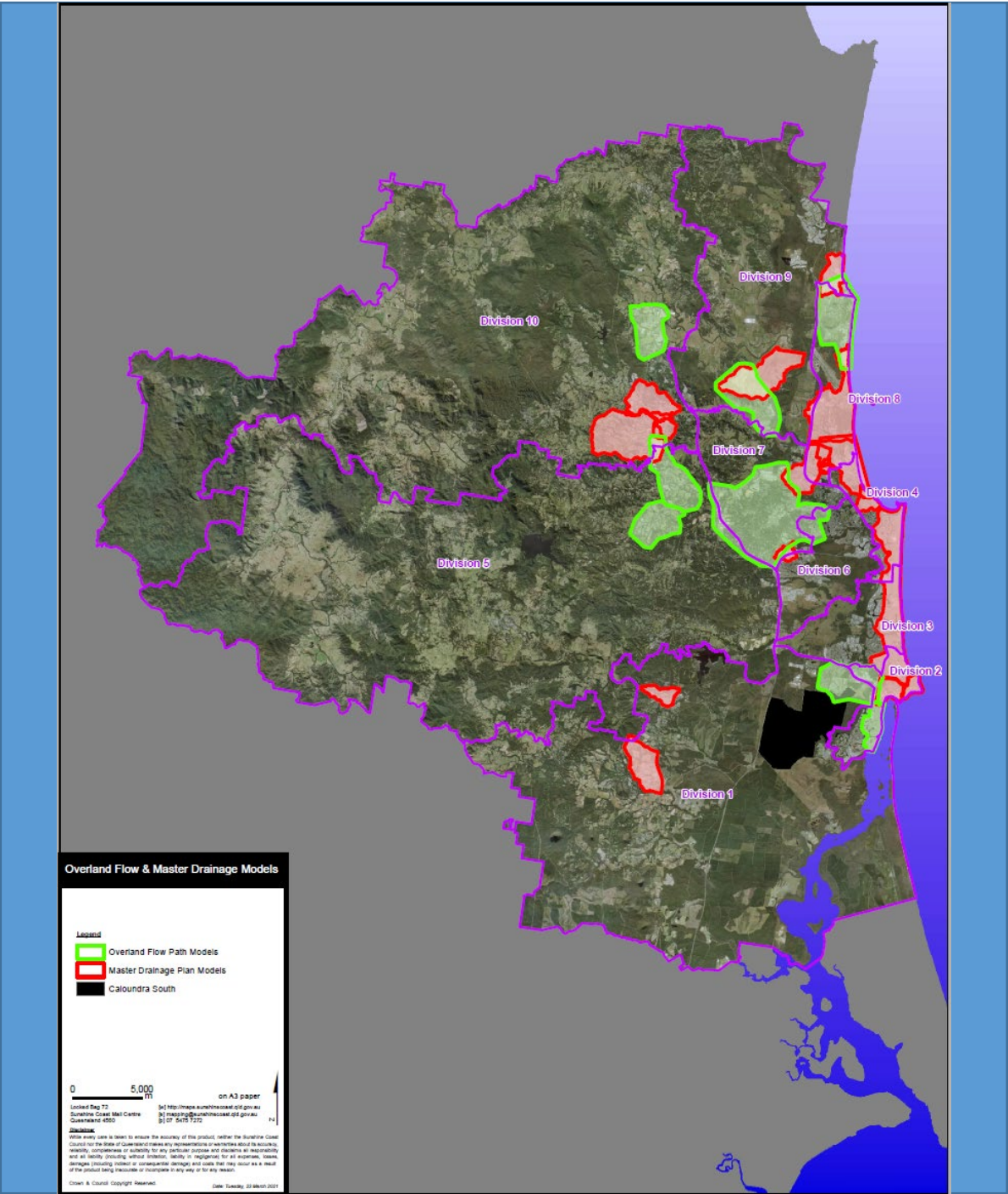
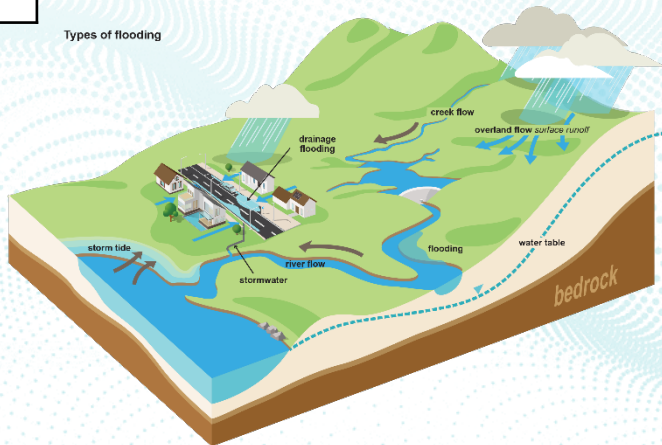


Sources of Information

Overland Flow Path Models

LOCATION
Bli Bli
Buderim – Kunda Park
Caloundra West
Golden Beach
Palmwoods
Woombye
Yandina
Yaroomba

Developed in-house



Flooding vs Overland Flow

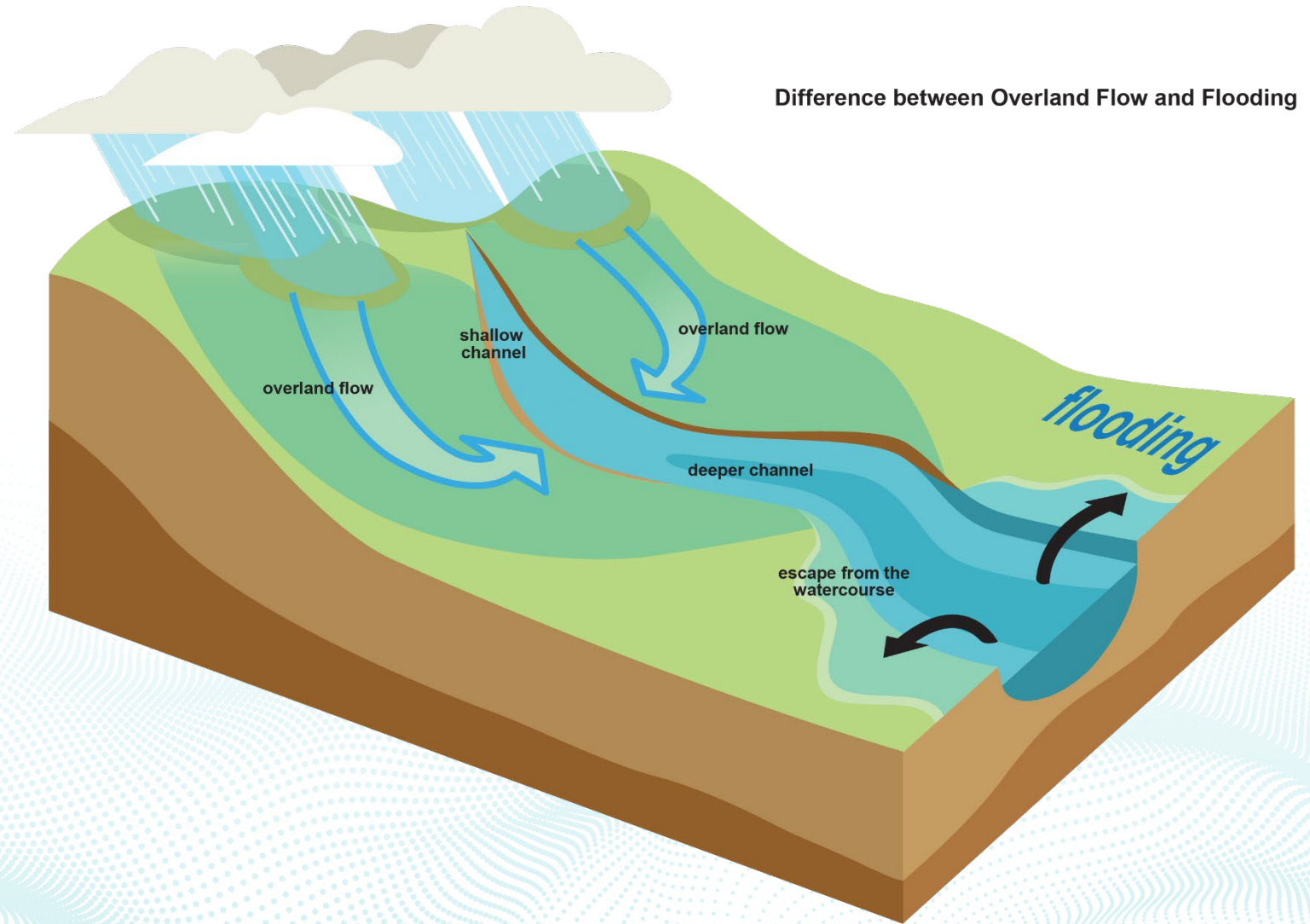
Flooding

the covering of normally dry land by water that has escaped or been released from the normal confines of: any lake, or any river, creek or other natural watercourse, whether or not altered or modified; or any reservoir, canal, or dam.

(Insurance Council of Australia)

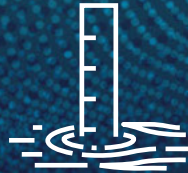
Overland Flow

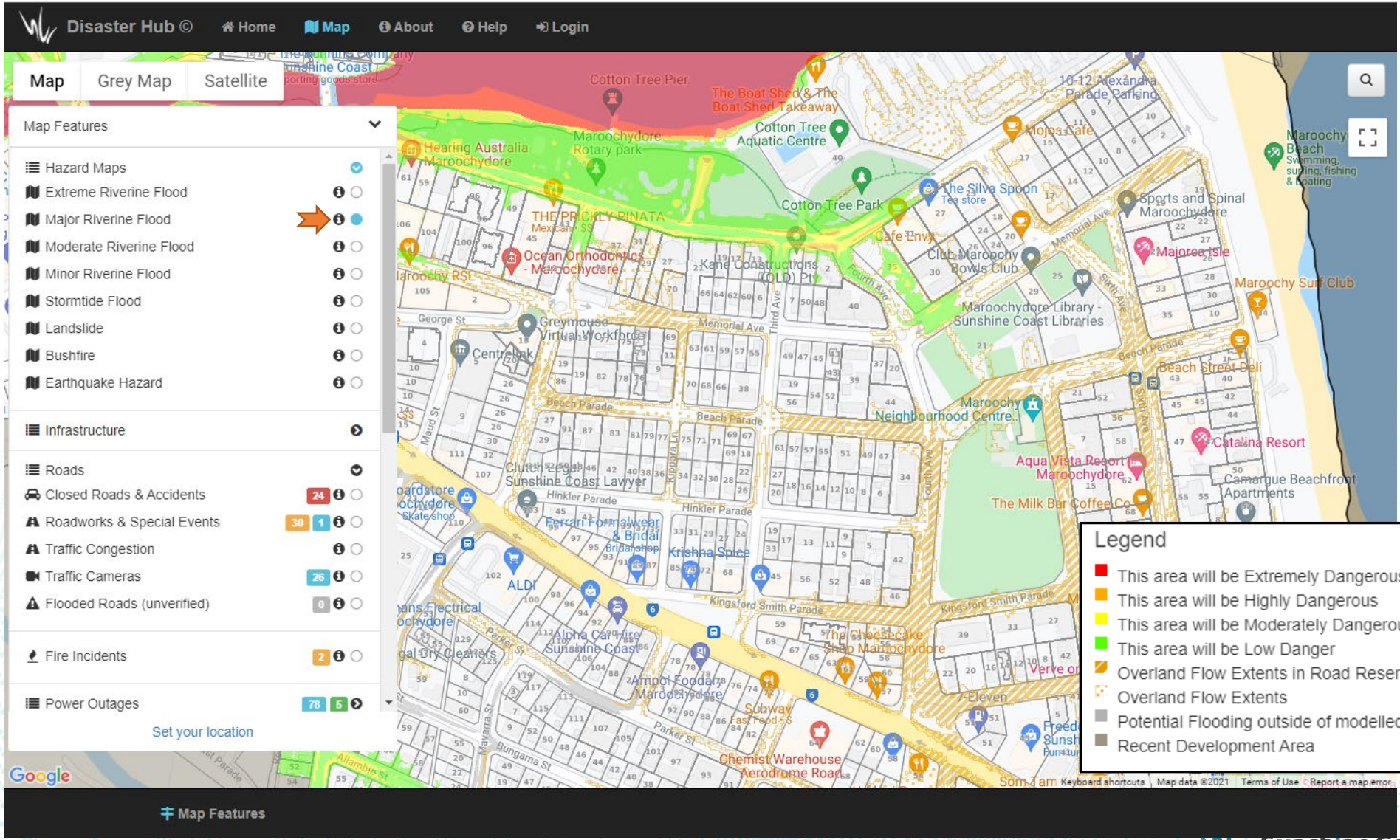
the shallow flow that occurs as run-off over land or in shallow channels following a rainfall event.



PRODUCT	PURPOSE	SOURCE	AUDIENCE	CREATED/ PUBLISHED
Riverine Flood Maps Minor, Moderate, Major, Extreme. Storm Tide Maps	Emergency Preparedness	Disaster Hub My Maps	General Public, Planners, Engineers, Consultants	2021 replacing 2013/14
Flood Risk Map	Land Use Planning <ul style="list-style-type: none"> (Potential Future) Flood Hazard Overlay Map Trigger Flood Hazard Overlay Code 	My Maps	General Public, Planners, Engineers, Consultants Building Certifiers	2021 NEW
Defined Flood Event	Land Use Planning <ul style="list-style-type: none"> Level from this event used for setting floor levels 	My Maps	General Public, Planners, Engineers, Consultants Building Certifiers	2021 replacing 2017 Public 2010 PI Scheme
Flood Storage Preservation Area	Land Use Planning <ul style="list-style-type: none"> Development Control; Clarity on position regarding filling associated with Development 	My Maps	General Public, Planners, Engineers, Consultants	2021 NEW
Flood Hazard Area of Building Regulation Purposes	Land Use Planning <ul style="list-style-type: none"> (Potential Future) Application of Building Assessment Provisions in a Flood Hazard Area; Trigger for a Flood Information Search 	Development.i Site Reports My Maps	Building Certifiers Builders	2021 replacing 2010 PI Scheme
General Information Layers <ul style="list-style-type: none"> Flood Study <ul style="list-style-type: none"> Flood Extent /Hazard Likelihoods 	Land Use Planning <ul style="list-style-type: none"> Development Services Referencing of Master Drainage Studies Provides original detail <ul style="list-style-type: none"> (lost when highest level of overlapping studies is adopted for other mapping products) 	My Maps	Planners, Engineers, Consultants Students	2021 NEW

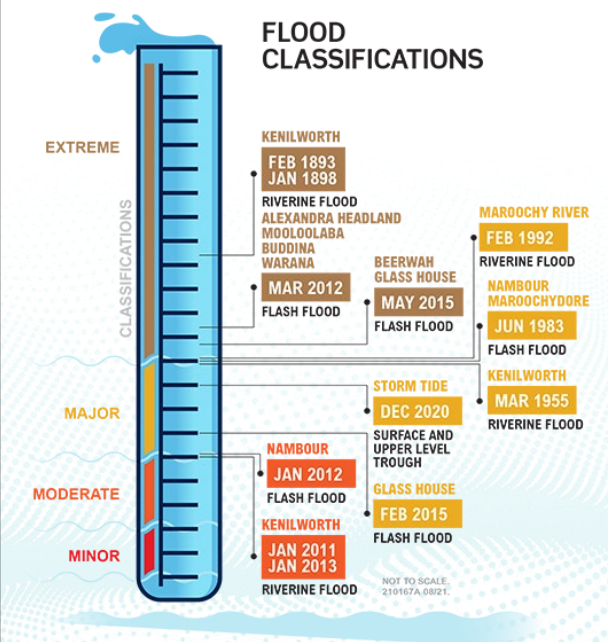
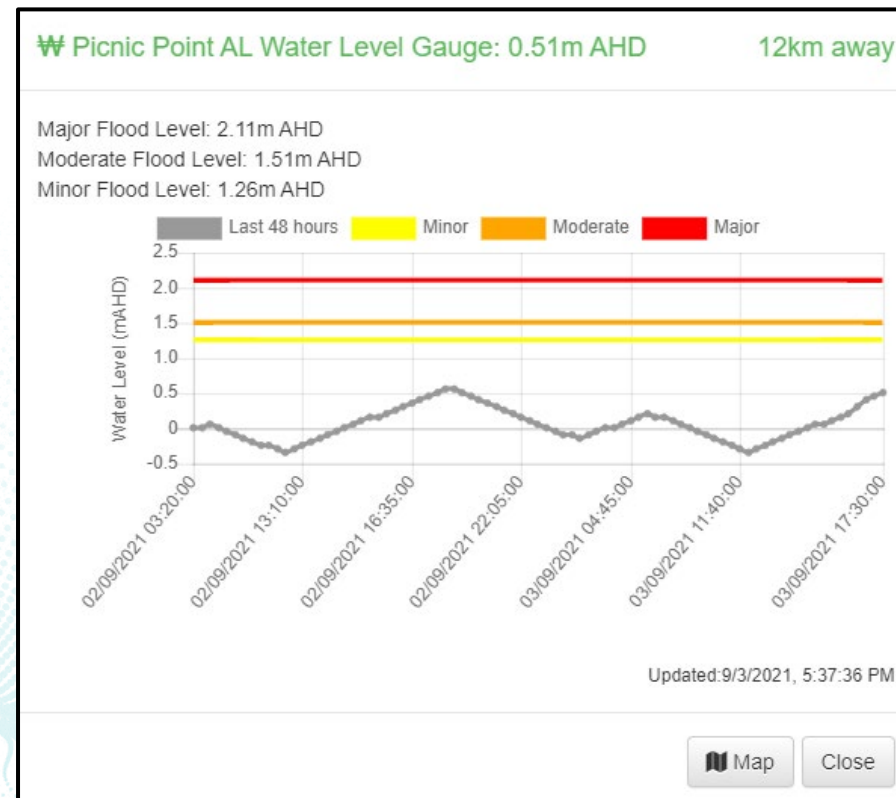
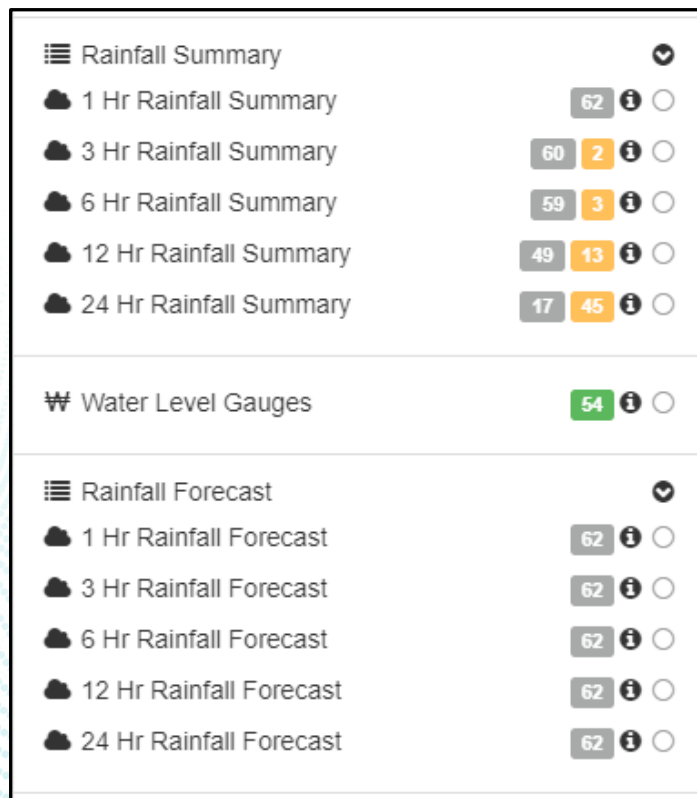
Emergency Preparedness (Disaster Hub)



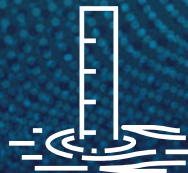


Did you know?

- Information from the Flood Warning System is also on Disaster Hub



Flood Risk

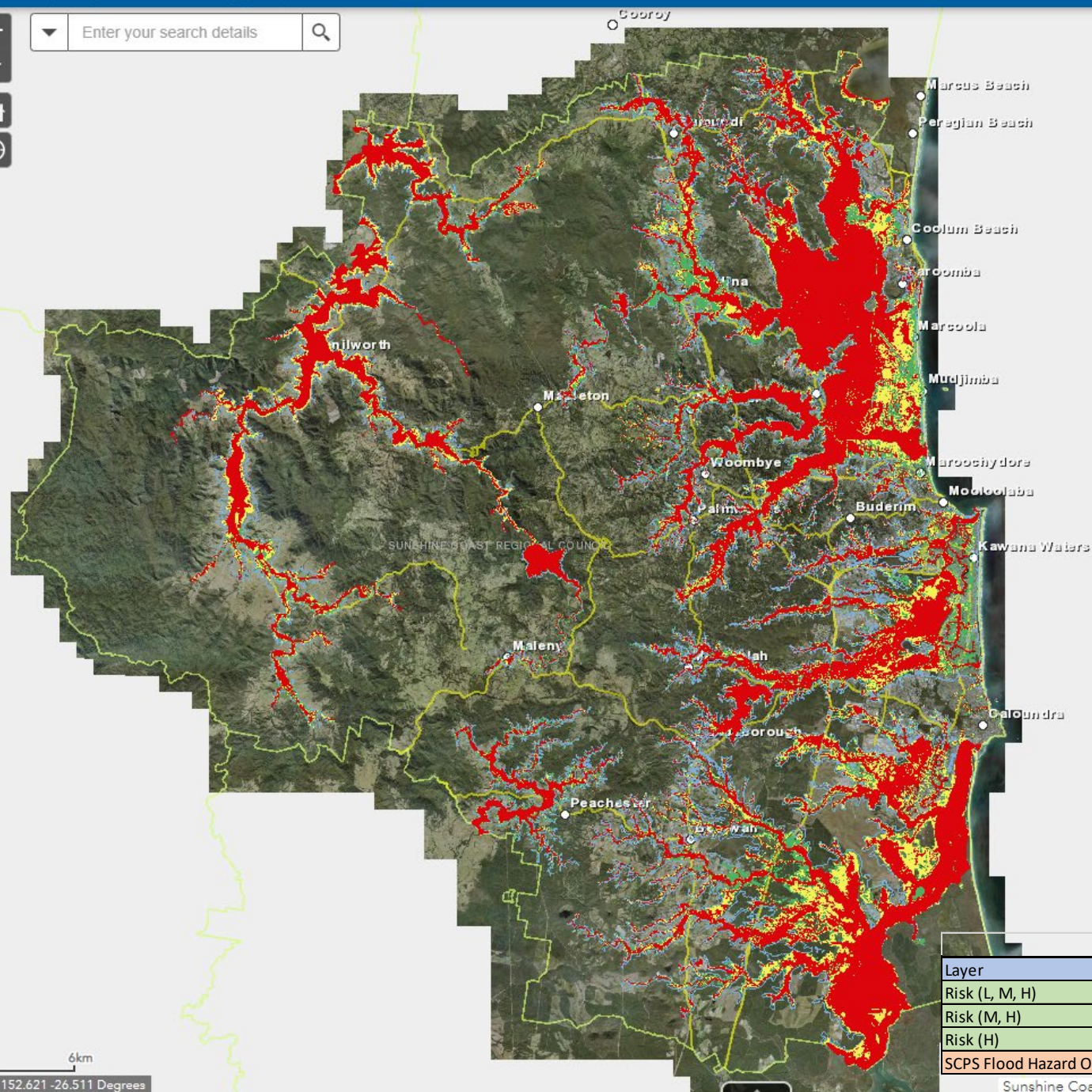


Why?

- Queensland Floods Commission of Inquiry recommended a fundamental shift in the approach to planning for floods;

“the focus on just one flood should be abandoned as floods come in all sizes. A proper approach to flood risk should consider them all”

- State Planning Policy (July 2017)
- Integrating state interests in a planning scheme – Guidance for local governments (2021)
- Single map resource that represents risk for floods of different sizes
- Compliments emergency preparedness mapping



Legend

Land Use Planning (Flood Mapping)

Flood Risk

Flood Risk

■ High Risk

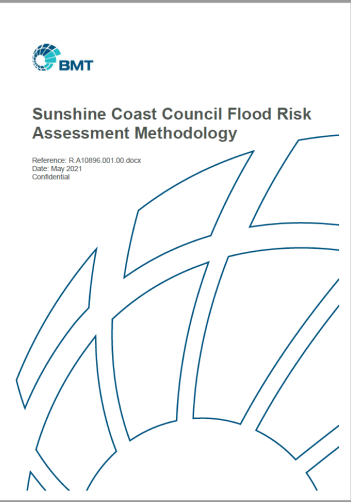
■ Medium Risk

■ Low Risk

Other areas of the floodplain

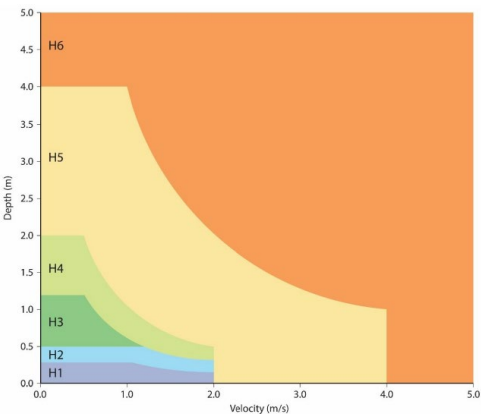


Layer	Land Use Properties		Key Land Uses				
	Total	Total%	Commercial	Industrial	Residential	Rural Res	Rural
Risk (L, M, H)	15104	13.6%	25.1%	29.3%	14.0%	5.6%	12.4%
Risk (M, H)	6162	5.6%	10.6%	3.8%	4.9%	3.5%	9.9%
Risk (H)	1789	1.6%	2.8%	1.3%	0.5%	2.1%	7.6%
SCPS Flood Hazard Overlay	17202	15.5%	24.1%	28.5%	17.4%	3.1%	10.1%



Methodology

Existing Development




		Flood Hazard Category					
		H1	H2	H3	H4	H5	H6
Likelihood	PMF						
	0.05%						
	DFE						
	10%						


Flood Hazard Category	Description
H1	Generally safe for vehicles, people and buildings
H2	Unsafe for small vehicles
H3	Unsafe for vehicles, children and the elderly
H4	Unsafe for vehicles and people
H5	Unsafe for vehicles and people All building types vulnerable to structural damage
H6	Unsafe for vehicles and people All building types considered vulnerable to failure

- High risk – individuals and society will not accept this risk
- Medium risk – individuals and society will not accept this risk and measures must be put in place to lower the risks to at least a tolerable level
- Low risk – society can live with this risk but as much as is reasonably practical should be done to reduce the risks further (note that individuals may find the risk unacceptable and choose to take steps to reduce personal risk)
- Other areas of the floodplain – individuals and society can generally live with this risk, without feeling the need to reduce the risk any further

New Development



Flooding and Stormwater Management Guidelines
Version 1 – September 2020

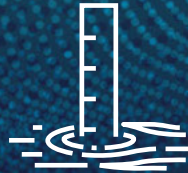


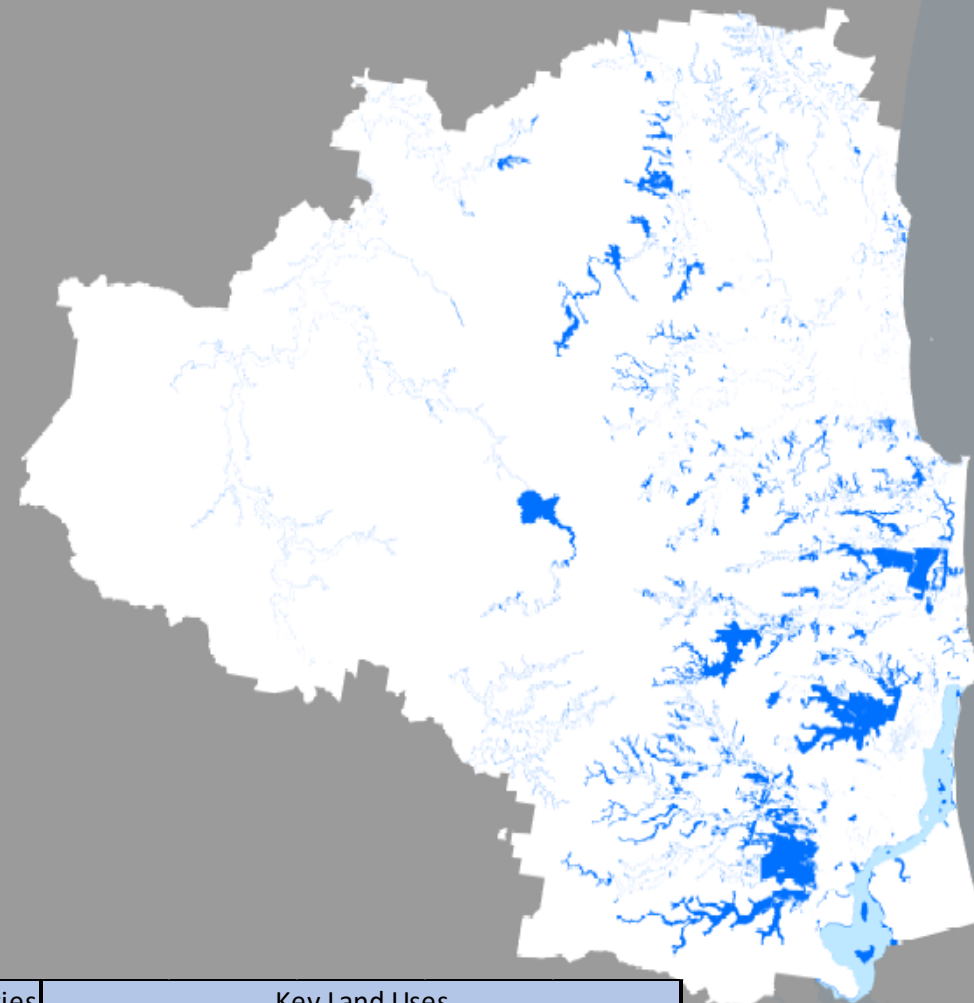
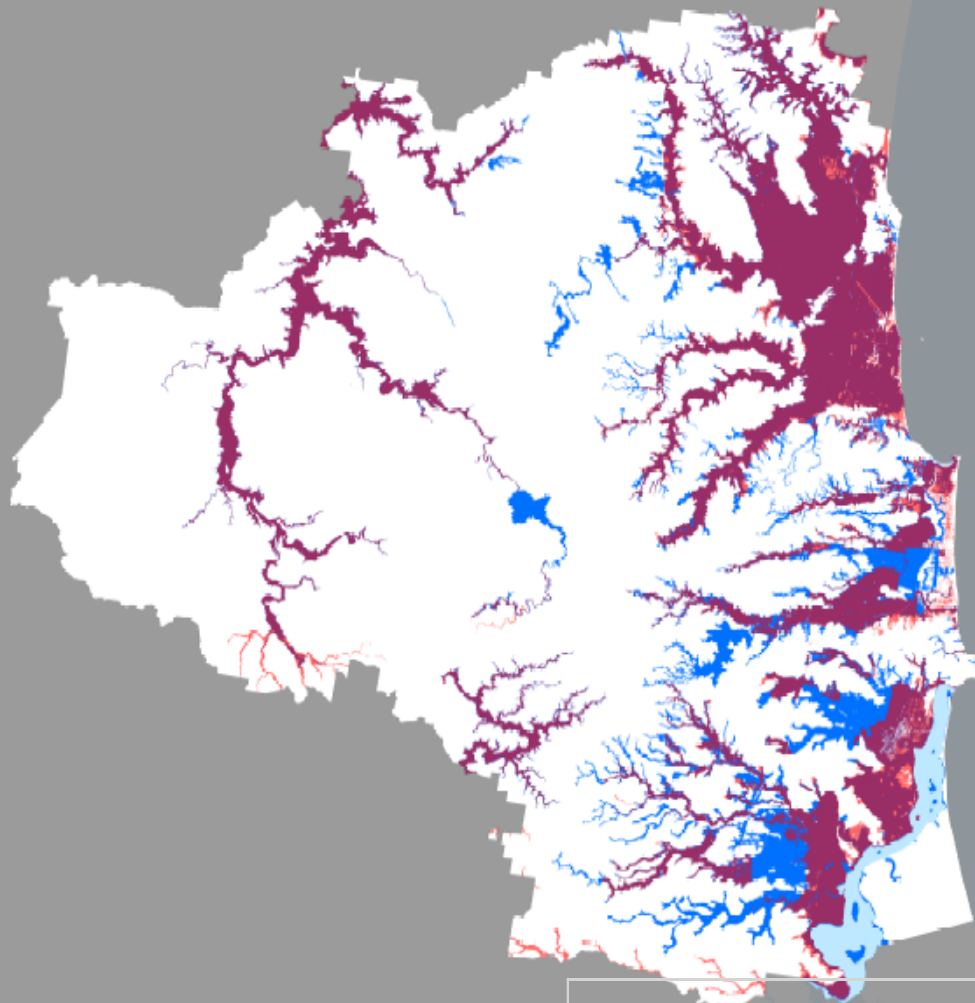
• Unacceptable Risk

• Acceptable Risk

Defined Flood Event

changes





Layer	Land Use Properties		Key Land Uses				
	Total	Total%	Commercial	Industrial	Residential	Rural Res	Rural
Defined Event Flood Hazard Area	10082	9.1%	17.5%	7.6%	9.1%	4.7%	10.7%
SCPS Flood Hazard Overlay	17202	15.5%	24.1%	28.5%	17.4%	3.1%	10.1%

Legend

- Defined Event Flood Hazard Area - Newly Added
- SCPS 2014 Flood Hazard Overlay - Removed
- Overlap of SCPS FHO and Defined Event FHA

0 5000 10000 15000 20000

Scale: 1:233,734

N



Date: Monday, 9 August 2021
A3

Legend

- Defined Event Flood Hazard Area - Newly Added

0 5000 10000 15000 20000

Scale: 1:233,734

N



Date: Monday, 9 August 2021
A3

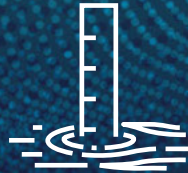
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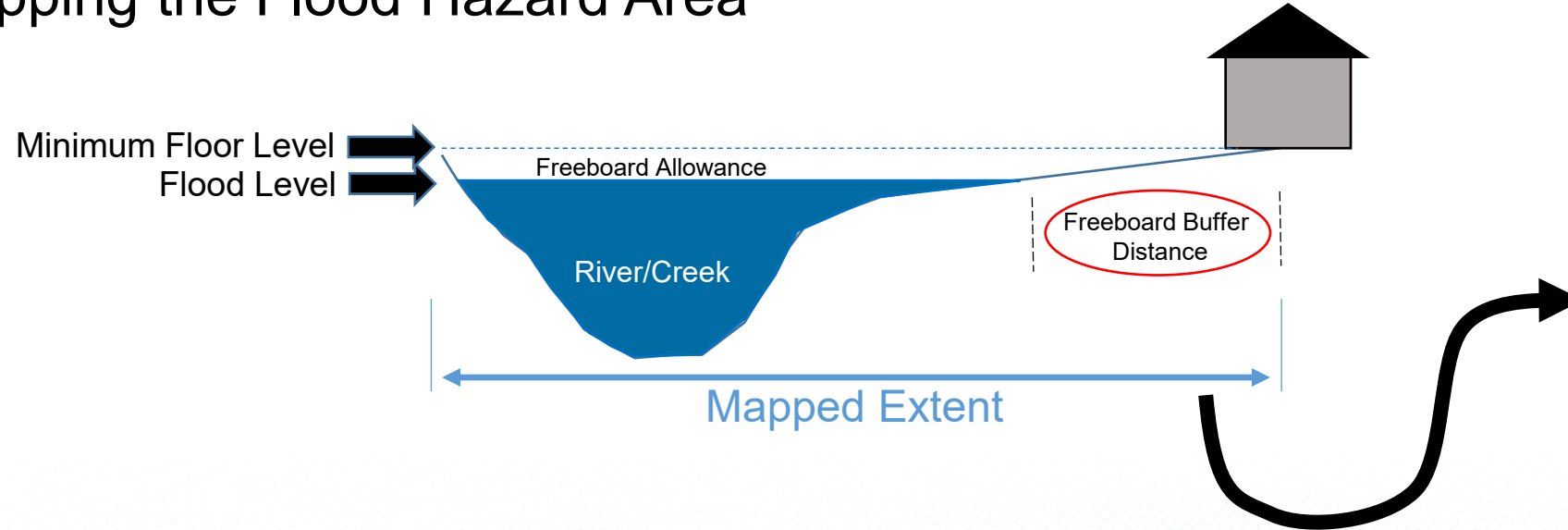
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Flood Hazard Area

for Building Regulation Purposes



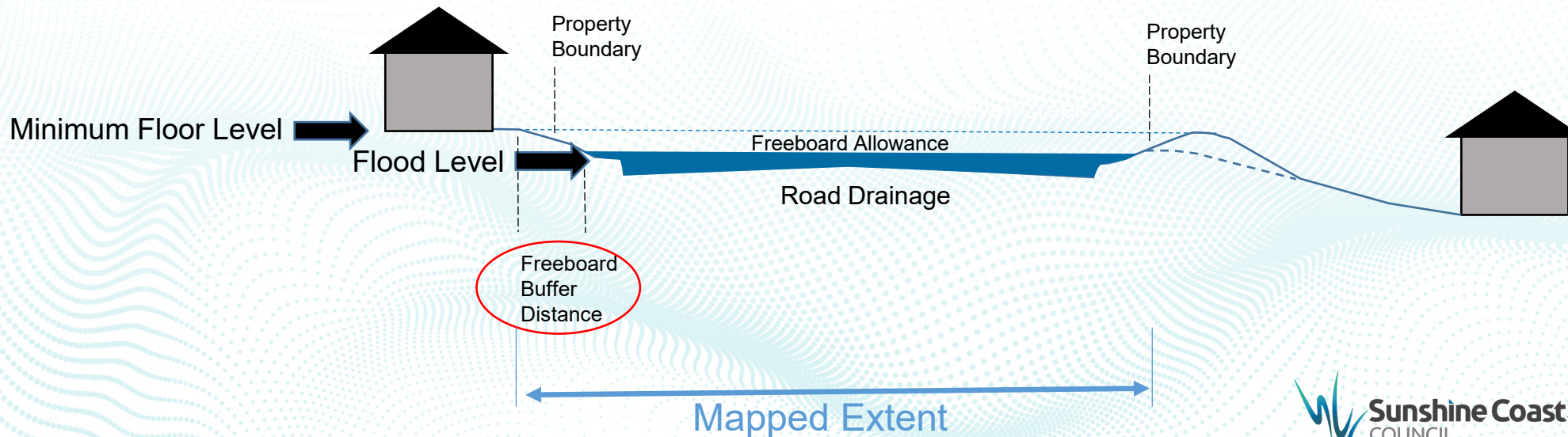
Mapping the Flood Hazard Area







Flood Information Search

- defined flood level
- maximum flow velocity
- freeboard (uncertainty allowance)
- finished floor level (flood level + freeboard)

Council Issued



Designated Flood Hazard Area for Building Regulation Purposes

Legend	
	Defined Event Flood Hazard Area
	Additional Flood Hazard Area Buffer
	Storm Tide Inundation Area
	Priority Development Areas

Designation is made under Section 13
of the Building Regulation 2006

0 5,000 m Scale: 1:225,000 on A3 paper

Located Bag 72
Sunshine Coast Mail Centre
Queensland 4500
(a) <http://mapa.sunshinecoast.qld.gov.au>
(b) mapa@sunshinecoast.qld.gov.au
(c) 07 5475 7272





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This map shows locations where minimum floor levels and building works are to be informed by flood inundation, overland flow and freeboard allowance.

Additional flood hazard area buffer extents that include overland flow and freeboard allowance are visible for scales of 1:10,000 and closer, to view at suburb and property scale when using online mapping.

Designated Flood Hazard Area for Building Regulation Purposes

Legend	
	Defined Event Flood Hazard Area
	Additional Flood Hazard Area Buffer
	Storm Tide Inundation Area
	Priority Development Areas

Designation is made under Section 13
of the Building Regulation 2006

Scale: 1:1,000 on A3 paper

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Thank you

Questions and Comments.

We want to make sure our flood mapping products are easy to use and the information is easy to understand.

Please complete our survey to provide your feedback.



sunshinecoast.qld.gov.au/floodmapping



**Our Resilient Coast.
Our Future.**

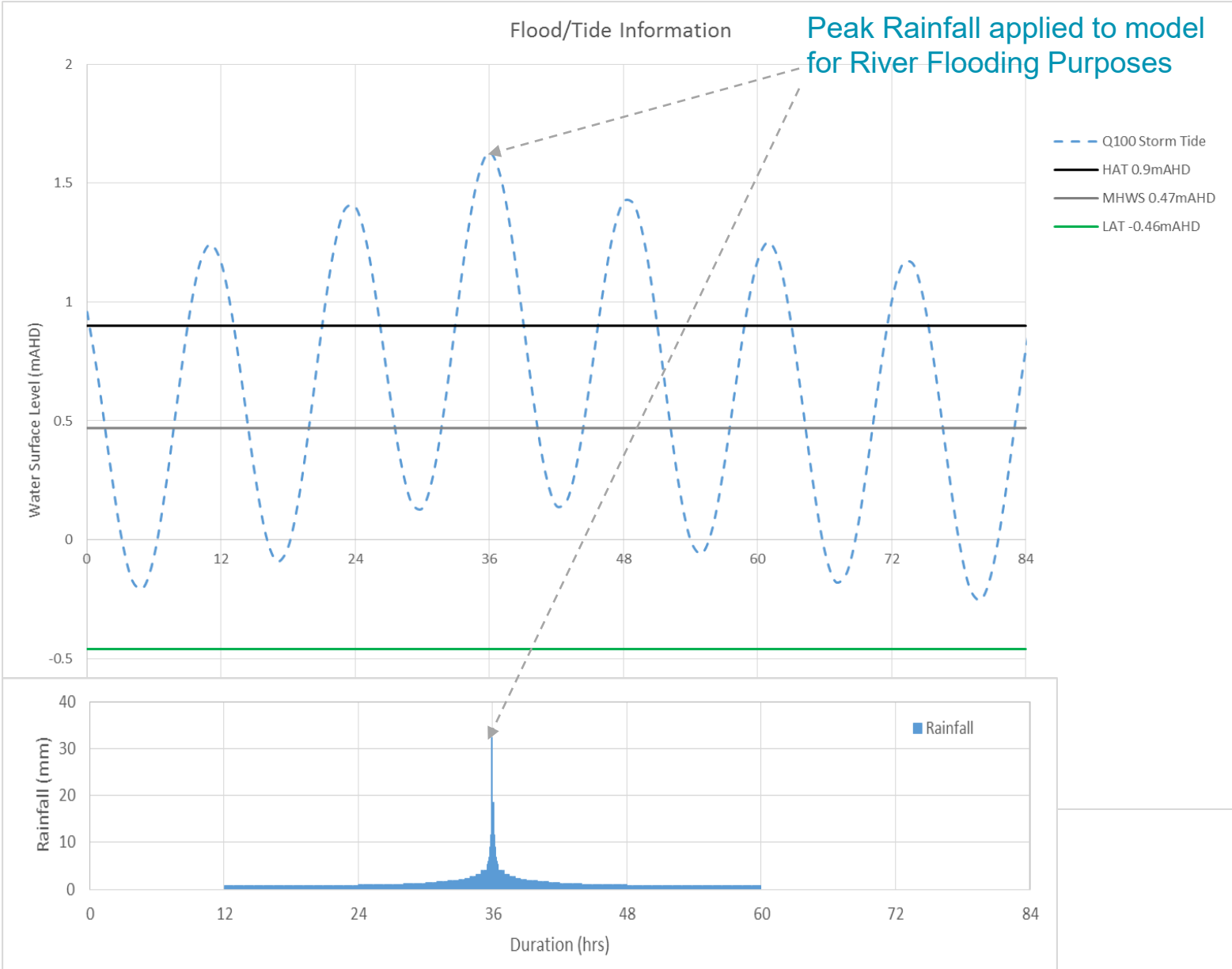
Image credit: Paciullorita

Flood Event Modelling Tidal Assumptions



Council's Current Approach

- Dynamic Boundary from 2012 Storm Tide Study
- Coincidence: Peak Storm Tide and Peak Rainfall coincide.



River with Tidal Influence

- Storm tide acts like a gate
- Storm tide delays river flood peak.

