

# **INSERT NAME OF CARAVAN PARK**

## **FLOOD EMERGENCY PLAN**

### WHY PLAN FOR FLOODING?

**Future flooding is inevitable.**

Although a long time may elapse between floods, prevailing weather conditions can change quickly.

**Planning for flooding saves lives and prevents injury.**

A flood can be life threatening to you, your staff and park patrons.

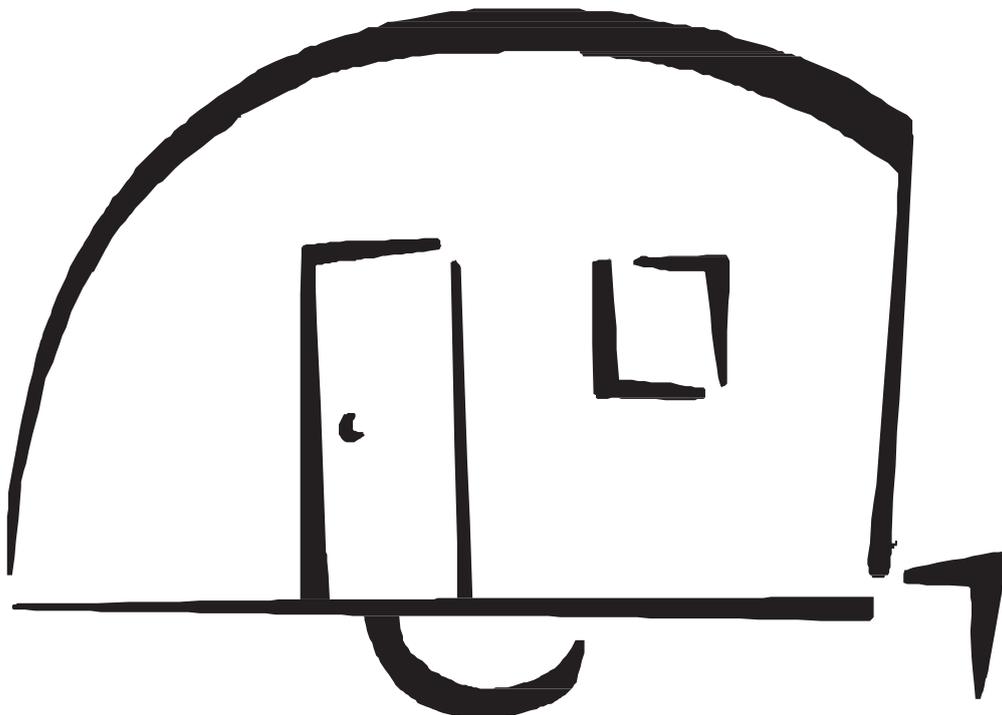
**Planning for flooding reduces damage and speeds the clean-up process.**

A flood can cause hundreds of thousands of dollars worth of damage to caravan park assets.

**To contribute towards compliance with Occupational Health and Safety standards.**

**To meet the requirements of the Approval to Operate.**

## **INSERT PHOTO OF CARAVAN PARK**



**INSERT CAPTION**

#### ACKNOWLEDGMENT AND DISCLAIMER

This flood emergency plan is based on a template prepared by Bewsher Consulting Pty Ltd for Shoalhaven City Council, and funded by the Natural Disaster Mitigation Programme 2006/07 (two-thirds) and Council (one-third). Responsibility for the contents of each plan rests with the individual caravan park. The Consultant, Council and Commonwealth accept no responsibility or liability for the implementation or effectiveness of this plan, nor for any injury, death or damage that may result from a flood.

**Supporting Document 2: Chapter G10 - Flood Emergency Management Plan Template****PART A – BACKGROUND INFORMATION**

Table 1

*This section should be completed by the park owner/manager.*

Caravan park name	
Alternative or former caravan park name	
Caravan park street address	
Caravan park postal address	
Caravan park phone no.	
Zoning	
Land tenure (e.g. Crown, freehold, leasehold)	
Name of creek/river/lake posing flood risk	

**PART B – EMERGENCY CONTACTS**

Table 2

*This section should be completed by the park owner/manager.*

	PHONE(S)
Park owner (INSERT NAME OF OWNER)	
Park manager (INSERT NAME OF MANAGER)	
SES (INSERT NAME OF LOCAL UNIT)	<b>132 500</b> (emergency help) <b>INSERT NUMBER</b>
Bureau of Meteorology NSW Flood Warning Centre	<b>1300 659 218</b> <a href="http://www.bom.gov.au/hydro/flood/nsw/">www.bom.gov.au/hydro/flood/nsw/</a>
Fire (INSERT NAME OF LOCAL UNIT)	<b>000</b> (emergency) <b>INSERT NUMBER</b>
Police (INSERT NAME OF LOCAL STATION)	<b>000</b> (emergency) <b>INSERT NUMBER</b>
Medical (INSERT NAME OF LOCAL DOCTOR)	<b>000</b> (emergency) <b>INSERT NUMBER</b>
Shoalhaven City Council	4429 3111 (office hours) 4421 3100 (after hours emergencies)
RTA traffic enquiries	<b>132 701</b> <a href="http://www.rta.nsw.gov.au/trafficreports/index.html">www.rta.nsw.gov.au/trafficreports/index.html</a>
DOCS Disaster Recovery	<b>1800 018 444</b>

**PART C – FLOOD RISK ASSESSMENT**

**1. Flood History**

Table 3

Information about flood history may be obtained from Council, flood studies and long-term residents. Flooding may include inundation by large waves and raised ocean levels. Indicate the **RECORD** flood. Rows may be added or deleted as appropriate.

DATE OF FLOOD AFFECTING CARAVAN PARK SITE <i>(most recent first)</i>	LOCAL CONSEQUENCES

**2. Flood Levels and Extents**

Table 4

Information about potential floods may be obtained from Council and flood studies. For any single park there may be a range of flood levels for the one 'design' event e.g. 2.1–2.3 m AHD.

	HISTORICAL MAXIMUM YEAR: .....	10% AEP	5% AEP	2% AEP	1% AEP*	0.5% AEP	0.2% AEP	PMF#
		10 YEAR ARI	20 YEAR ARI	50 YEAR ARI	100 YEAR ARI*	200 YEAR ARI	500 YEAR ARI	PMF#
Flood level (m AHD) ^								
Proportion of sites flooded (%)								

Source/date of flood data:	
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\* AEP = annual exceedence probability (measured as a percentage), which is a term used to describe the probability of floods occurring. Large floods occur rarely, whereas small floods occur more frequently. For example, a 1% AEP flood occurs (or is exceeded) on average once every 100 years. It has a 1% chance of occurring in any one year.

ARI = average recurrence interval (measured in years), which is a term used to describe the probability of floods occurring. Large floods occur rarely, whereas small floods occur more frequently. For example, a 100 year ARI flood occurs (or is exceeded) on average once every 100 years. It has a 1% chance of occurring in any one year.

# PMF = probable maximum flood, which is the largest flood likely to ever occur. It has a very rare chance of occurring.

^ m AHD = metres Australian Height Datum, which is common national plane of level approximately equivalent to the height above sea level.

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**3. Ground Levels, Floor Levels and Flood Depths**

*Table 5*

*Ground and floor levels may be available from survey plans prepared by a registered professional surveyor. Flood depths are calculated by subtracting ground/floor levels from flood levels. Additional rows may be inserted as required.*

FEATURE	GROUND LEVEL (m AHD)	FLOOD DEPTH OVER GROUND (M)			FLOOR LEVEL (m AHD)	FLOOD DEPTH OVER FLOOR (M)		
		20 YEAR ARI	100 YEAR ARI	PMF		20 YEAR ARI	100 YEAR ARI	PMF
Office								
Amenities block(s) (A) (B)								
Lowest site in park (INSERT SITE NUMBER)								
Highest site in park (INSERT SITE NUMBER)								
Park entrance								
Low-point on <b>access road</b>								
Low-point on <b>levee</b> (indicate "n/a" if no levee)								

Source/date of ground/floor level survey:	
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**4. Flood Hazard Classification and Flood Planning Level(s)**

*Table 6*

*Information about flood hazard classification and flood planning level(s) may be obtained from Council. For any single park there may be more than one flood hazard classification. High hazard means that the flood depths and velocities would likely be dangerous.*

Flood hazard and hydraulic categorisation:	
Flood planning level(s) (m AHD):	

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**5. Elements at Risk**

*Table 7*

*This section can be completed by the park owner/manager. The number of sites with readily moved structures refers to structures that could be moved in the often short time available after a flood warning, and should be realistic. Vans or cabins that are affixed to a rigid annexe or to services such as sewerage that are not easily detached, that have their draw-bars removed and tyres flat would not generally qualify as 'readily moved structures'. Note that the purpose of this Table is to inform emergency response, not to assess compliance with any regulation.*

TYPE OF SITE	NUMBER OF SITES	NUMBER OF SITES WITHIN 100Y ARI FLOOD EXTENT	NUMBER OF SITES WITH READILY MOVED STRUCTURES	APPROX. NUMBER OF PEOPLE (PEAK SEASON)	APPROX. NUMBER OF PEOPLE (NON-PEAK SEASON)
Long-term vans/cabins ('permanents')					
Holiday vans/cabins ('annuals')					
Park cabins (for hire)					
Park vans (for hire)					
Powered sites (for casual visitors)					
Unpowered sites (for casual visitors)					
<b>TOTAL</b>					

Other assets within 100 year ARI flood extent (e.g. manager's house, office, kiosk/shop, amenities block(s), sewage treatment plant, boats, fuel, gas)	
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**Supporting Document 2: Chapter G10 - Flood Emergency Management Plan Template****6. Flood Warning Arrangements and Constraints**

Table 8

*Information about flood warning arrangements and constraints may be obtained from the SES.*

	NAME (NUMBER)	ARE HEIGHT/TIME PREDICTIONS ISSUED? (Y/N)	AGENCY
Reference gauge			

*Flood warning time and duration*

Table 9

	TIME (DAYS/HOURS)
<b>Available flood warning time</b> , which is a broad measure of the flood warning time typically available for a given catchment. Flash flooding is often defined as flooding which peaks within six hours of the causative rain.	
<b>Effective flood warning time</b> , which is the time available after receiving advice of an impending flood and before the floodwaters prevent appropriate flood response actions (e.g. evacuation) being taken.	
Duration of the 100 year flood	

*Consequences at threshold flood levels*

Table 10

*A local description/indicator could be 'low point on internal access road' or 'site no. 25 flooded'. Note that relating consequences at a caravan park to a sometimes distant flood gauge involves uncertainty due to flood slopes. Rows may be added as appropriate.*

	LOCAL DESCRIPTION/ INDICATOR	LOCAL LEVEL (m AHD) ^ <i>(Refer to Table 5)</i>	GAUGE HEIGHT AT REFERENCE GAUGE (m) <i>(Refer to Table 8)</i>
Egress from park is cut			
Flooding commences at park			
Park entirely inundated			

<sup>^</sup> m AHD = metres Australian Height Datum, which is common national plane of level approximately equivalent to the height above sea level.

**7. Evacuation Arrangements and Constraints**

*Information about evacuation arrangements and constraints may be obtained from the SES. Note that the evacuation setting may vary with the magnitude of flooding.*

Giving thought to access and topographic setting and using the diagrams below, classify the evacuation setting represented by the caravan park for a range of floods:

*Evacuation setting*

*Table 11*

20 YEAR ARI EVACUATION SETTING	100 YEAR ARI EVACUATION SETTING	PMF EVACUATION SETTING

<p><b>LOW FLOOD ISLAND (LFI)</b> Access road cut and no overland or alternative road access possible; island below predicted flood level</p> 	<p><b>HIGH FLOOD ISLAND (HFI)</b> Access road cut and no overland or alternative road access possible; island above predicted flood level</p> 
<p><b>LOW TRAPPED PERIMETER (LTP)</b> Access road cut and no overland or alternative road access possible; site below predicted flood level</p> 	<p><b>HIGH TRAPPED PERIMETER (HTP)</b> Access road cut and no overland or alternative road access possible; site above predicted flood level</p> 
<p><b>OVERLAND ESCAPE ROUTE (OER)</b> Access road cut but overland escape/rescue possible (on foot or AWD vehicle); site below predicted flood level</p> 	<p><b>RISING ROAD ACCESS (RRA)</b> Access uninterrupted and via all-weather rising road (usual route or alternative); site below predicted flood level</p> 
<p><b>INDIRECTLY AFFECTED AREA (IAA)</b> Access uninterrupted and via all-weather rising road (usual route or alternative); site above predicted flood level; one or more services failed</p> 	

Key evacuation information

Table 12

	DESCRIPTION
Assembly area	
Evacuation route	
Evacuation centre (people)	
Mobile caravan, vehicle, boat storage area	
Hazardous substances storage area	

**8. Summary of flood risk**

*This section should consist of a short, simple statement about flood risk at your caravan park. In addition to the previous material, Indicate how fast floodwaters are expected to be, whether the park is at risk of flooding from raised ocean levels, and what level of protection, if any, is afforded by a levee.*

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**PART D – KEY PRIORITIES AND TRIGGERS**

*This section should be completed with assistance from the SES. The key priorities in any flood emergency are **ENSURING SAFETY** and **REDUCING PROPERTY DAMAGE**.*

*If you are in an area with a flood height prediction system, use river height predictions to trigger action. You should commence actions even when a Flood Watch is issued.*

*If you are in an area without a flood height prediction system, you will have to use other triggers (e.g. Severe Weather Warning, Severe Thunderstorm Warning, heavy rain, rising water).*

*If you are in an area adjacent to a coastal lake or estuary you may be subject to flooding from high ocean levels. The Bureau of Meteorology may issue a Severe Weather Warning for such events.*

*Refer to Table 10 to identify threshold flood levels. Refer to Table 14 for the detailed actions for each trigger. For this exercise, **assume peak occupancy**. Note that **the time allowed for the key responses such as evacuation must be less than the effective warning time** (Table 9). This can be achieved by using an earlier trigger (e.g., a Flood Watch instead of a Flood Warning) and/or by increasing resources.*

Examples of triggers

*Flood height prediction system*

- Flood Watch issued
- Flood Warning issued – predicted ..... m at ..... gauge within ..... hours' time

*No flood height prediction system*

- Severe Weather Warning issued
- Severe Thunderstorm Warning issued
- Based on heavy rain/river levels/predicted tides, evacuation route anticipated to close within ..... hours' time
- Based on heavy rain/river levels/predicted tides, lowest sites anticipated to flood within ..... hours' time

Examples of key actions

*(Note that not all examples will suit a particular park)*

- Monitor the threat of flooding via [www.bom.gov.au/hydro/flood/nsw/](http://www.bom.gov.au/hydro/flood/nsw/) and own observations
- Advise park occupants
- Self-evacuation of park occupants
- Assist any occupants with special needs
- Move any mobile vans and vehicles to storage area(s) *(note that prior approval may be required to move privately-owned assets)*
- In the case of 'annuals' with absent owners, lift property from annexes to vans *(note that prior approval may be required)*

*Key triggers initiating main responses*

*Table 13*

TRIGGER	KEY ACTION	RESOURCES	TIME NEEDED

**PART E – FLOOD ACTION**

Table 14

*This section should be completed by the park owner/manager. Rows may be added, deleted or modified as appropriate.*

PREPARE – BEFORE THE FLOOD				
ACTION	WHEN	WHO	HOW (e.g. Resources)	COMPLETED
Maintain a flood emergency kit (e.g. first aid kit, portable radio, torch, waterproof bags, etc)	Always	Manager		
Back up records, accounts and computer files and store off site and out of floodplain		Manager		
Document OH&S procedures for a flood (see NSW SES Business FloodSafe toolkit for ideas)*		Manager		
Display evacuation procedures in office, amenities block(s), park-owned dwellings		Manager		
Check that vans/cabins are tied down to prevent their being blown or washed away		Manager, owners of permanents and holiday vans	Inspections	
Check that moveable dwellings intended to be shifted before a flood retain their mobile status		Manager, owners of permanents and holiday vans	Inspections	
Anchor any fuel tanks located below the 100 year ARI flood level		Manager		
Investigate possibility of obtaining flood insurance for park-owned dwellings		Owner		
				

\* Business FloodSafe Toolkit and Home FloodSafe Toolkit may be downloaded from [www.ses.nsw.gov.au](http://www.ses.nsw.gov.au)

**RESPOND – FLOOD POSSIBLE**

ACTION	WHEN <i>(see Table 13)</i>	WHO	HOW (e.g. Resources)	COMPLETED
Obtain information about flooding via <a href="http://www.bom.gov.au">www.bom.gov.au</a> , SES, radio station (INSERT NAME/FREQUENCY)	e.g. Flood Watch issued/local conditions	Manager		
Check availability of staff and others to assist in emergency		Manager		
Check availability of equipment (e.g. trucks) to assist with evacuating people and relocating property		Manager		
Advise park occupants of possible flood, assembly areas, evacuation routes, evacuation centres		Manager/staff	Door-knock, loud-speaker, notice board	
Notify any advance bookings or prospective visitors of situation		Staff	Phone	
If isolation is likely, ensure sufficient non-perishable food and other necessities to last a week		Staff		
				

<b>RESPOND – DURING A RISING FLOOD</b>				
ACTION	WHEN <i>(see Table 13)</i>	WHO	HOW (e.g. Resources)	COMPLETED
Obtain information about flooding via <a href="http://www.bom.gov.au">www.bom.gov.au</a> , SES, radio station (INSERT NAME/FREQUENCY)	e.g. Flood Warning issued/local conditions	Manager		
Warn park occupants of flood and request they vacate park via evacuation route or wait for assistance (if without private transport)		Manager/staff		
Arrange transport to evacuation centre for any people without private transport		Staff (possibly with SES assistance)		
Maintain a register of departing park occupants (see Appendix) and make available to Police or SES upon request		Manager/staff	Registration form (see Appendix)	
Notify any advance bookings or prospective visitors of situation		Staff	Phone	
Use safe manual handling procedures (for moving assets and equipment); wear protective clothing (including non-slip footwear and puncture-resistant gloves)		Staff		
Relocate any mobile vans and vehicles to storage area(s) (if prior approval given, for privately-owned vans)		Staff (possibly with SES assistance)		
Relocate or tie down any unattended boats (if prior approval given, for privately-owned boats)		Staff (possibly with SES assistance)		
Lift items from annexes to vans for absentee 'annuals' (if prior approval given)		Staff (possibly with SES assistance)		
Secure objects that are likely to float or cause damage (including gas bottles)		Staff (possibly with SES assistance)		
Block toilets, sinks and floor wastes with sand bags		Staff (possibly with SES assistance)		
Relocate chemicals/poisons above potential flood level		Staff (possibly with SES assistance)		
Turn off electricity, gas and water at sites and to park when required		Manager/staff		
				

RECOVER – AFTER THE FLOOD				
ACTION	WHEN	WHO	HOW (e.g. Resources)	COMPLETED
Check with SES and Police before allowing people back into flooded area	Flood receded and warning lifted	Manager		
Have electric and gas fixtures checked by qualified personnel		Manager		
Never use matches, cigarette lights or any other naked flame since flammable gas may be trapped inside		Manager/staff/occupants		
Beware of sharp debris, snakes and spiders, and wading in contaminated water; wear protective clothing (including non-slip footwear and puncture-resistant gloves)		Manager/staff/occupants		
Boil all water supplies until declared fit to drink		Manager/staff/occupants		
Dispose of any food or medication contacted by floodwater		Manager/staff/occupants		
Remove debris and clean, repair and disinfect premises		Manager/staff/occupants		
Salvage, clean and dry as much as possible		Manager/staff/occupants		
Replace any lost furniture, fittings and floor coverings with more flood resistant products		Owner, owners of 'permanents' and 'annuals'		
Return any vans/vehicles/boats that were moved off site		Staff (possibly with SES assistance)		
Implement strategies for winning back customers		Regional tourism body, owner/manager		
				

**Supporting Document 2: Chapter G10 - Flood Emergency Management Plan Template****PART F – OTHER RESOURCES**

Other resources available to caravan park owners/managers to assist in planning for flood and other hazards such as bushfire are listed below:

RESOURCE	PUBLISHER	WEB-SITE
FloodSafe Caravan Parks (Flood Protection Advice for Caravan Park Managers)	NSW SES	<a href="http://www.ses.nsw.gov.au/infopages/6631.html">www.ses.nsw.gov.au/infopages/6631.html</a>
Riverine and Flash Flood Business FloodSafe Toolkits (including 'Don't let your business go under' poster)	NSW SES	<a href="http://www.ses.nsw.gov.au/infopages/3129.html">www.ses.nsw.gov.au/infopages/3129.html</a>
NSW Flood Warning Centre	Bureau of Meteorology	<a href="http://www.bom.gov.au/hydro/flood/nsw/">www.bom.gov.au/hydro/flood/nsw/</a>
Bushfire Safety	NSW RFS	<a href="http://www.rfs.nsw.gov.au">www.rfs.nsw.gov.au</a>
Caravan Park Fire Safety Guideline (Jul 2006)	Victorian CFA	<a href="http://www.cfa.vic.gov.au/documents/guidelines_caravan_parks.pdf">www.cfa.vic.gov.au/documents/guidelines_caravan_parks.pdf</a>
Local Government (Manufactured Home Estates, Caravan Parks, Camping Grounds and Moveable Dwellings) Regulation 2005	NSW Government	<a href="http://www.legislation.nsw.gov.au">www.legislation.nsw.gov.au</a>

## **PART G – FLOOD RISK MAP**

The map should show on an aerial photograph or site plan base (to scale):

- the level/extent of the 100 year ARI flood (see Table 4);
- the ground/floor levels of key 'elements at risk' (see Table 5);
- the location of levees (where applicable);
- the assembly point(s) and the evacuation route (see Table 12);
- local flood gauge post (where applicable); and
- any other distinctive features influencing flood risk and response.

Any copies of a coloured map should be made in colour to preserve clarity.

Should any modifications to the map be required in the future, the background layers (excluding aerial photography), together with a list of organisations and persons qualified to update the map using a Geographical Information System (GIS), may be available from Council.

**APPENDIX: CARAVAN PARK EVACUATION REGISTRATION FORM**

**DISTRIBUTION:**

Retain original  
 Fax one copy to SES and/or Police upon request

**Caravan Park:**  
**Date/Time:**

GIVEN NAME/SURNAME	USUAL ADDRESS	CONTACT DETAILS/ MOBILE PHONE NO	AUTHORITY TO RELEASE UPON PUBLIC ENQUIRY
			Yes / No
			Yes / No