

Shoalhaven EMPLAN

Emergency Management Plan 2021



Authorisation

The Shoalhaven Local Emergency Management Plan (EMPLAN) has been prepared by the Shoalhaven Local Emergency Management Committee in compliance with the State Emergency & Rescue Management Act 1989, Section 29 (1)

APPROVED

.....

Chair

Shoalhaven Local Emergency Management Committee

Dated:

ENDORSED

.....

Chair

Illawarra South Coast Regional Emergency Management Committee

Dated:

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Document Control

Suggested amendments or additions to the contents of this Local Emergency Management Plan are to be made in writing to

The Chairperson
Shoalhaven Local Emergency Management Committee
C/o: Shoalhaven City Council
P O Box 42
NOWRA NSW 2541

Proposed amendments or additions must be endorsed by the Shoalhaven Local Emergency Management Committee prior to inclusion.

Amendments or additions are to be certified in the following table.

| Edition | | Authority | | Details |
|---------|------|--------------|--------------|--|
| Number | Date | Approved | Endorsed | |
| 1 | 2016 | LEMC | REMC | First edition of the Shoalhaven EMPLAN |
| 2 | 2018 | LEMC | | Minor changes including administrative changes, additions to vulnerable facilities and updated Census information to reflect latest Census. Changes discussed and endorsed at the LEMC – February 2018 |
| 3 | 2019 | Not required | Not required | Minor changes to the definition of Flooding and Flash Flooding in the Risk section at the request of the SES |
| 4 | 2021 | LEMC | LEMC | Major review following Currowan Fire in 2019/2020 |

Distribution

| Role or Agency | Number of Copies |
|--|------------------|
| Shoalhaven LEMC | |
| Local Emergency Operations Controller (LEOCON) | |
| Local Emergency Management Officer (LEMO) | |
| Local Emergency Management Committee (LEMC) | |
| Local Emergency Operations Centre (LEOC) | |
| Regional Emergency Management Officer (REMO) | |
| Ambulance Service of NSW | |
| Fire & Rescue NSW (FRNSW) | |
| Marine Rescue NSW | |
| NSW Department of Primary Industries (NSW DPI) | |
| NSW Police Force | |
| Australian Federal Police | |
| NSW Rural Fire Service (RFS) Shoalhaven District | |
| NSW State Emergency Services (NSW SES) | |
| NSW Health | |
| Department of Family & Community Services | |
| Engineering Services | |
| Transport for NSW | |
| Communication Services | |
| Environmental Services | |
| Media | |
| Shoalhaven Water | |
| Defence Liaison Officer | |
| Local Land Services | |
| National Parks & Wildlife Service | |
| HMAS Creswell – Estate and Infrastructure Group | |
| HMAS Albatross – Estate and Infrastructure Group | |
| Jervis Bay Emergency Management Committee | |
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| ZNX Group – Nowra Gas Networks | |
| State Rail | |
| Country Regional Rail Network | |
| Forests NSW | |
| NSW Marine Parks Authority – Jervis Bay | |
| Parks Australia – Booderee National Park | |
| Department of Infrastructure & Regional Development - JB Territory | |

NOTE: Distribution of EMPLAN is via email. No hard copies are printed. Restricted version of the Shoalhaven EMPLAN is available on Shoalhaven City Council's website at www.council@shoalhaven.nsw.gov.au

Abbreviations

| | |
|---------------|--|
| ABS | Australian Bureau of Statistics |
| ADF | Australian Defence Force |
| CBR | Chemical, Biological or Radiological emergencies |
| COP | Common Operating Picture |
| DACC | Defence Assistance to the Civil Community |
| EMOS | Emergency Management Operating System |
| EMPLAN | State, Regional or Local Emergency Management Plan |
| EOCON | Emergency Operations Controller |
| EPA | Environmental Protection Authority |
| ERM | Emergency Risk Management |
| FACS | Family & Community Services NSW |
| FRNSW | Fire & Rescue NSW |
| HAZMAT | Hazardous Materials |
| JMIC | Joint Media Information Centre |
| LEMC | Local Emergency Management Committee |
| LEMO | Local Emergency Management Officer |
| LEOC | Local Emergency Operations Centre |
| LEOCON | Local Emergency Operations Controller |
| LEP | Local Environmental Plan |
| LLS | Local Land Services |
| LO | Liaison Officer |
| MRNSW | Marine Rescue NSW |
| NSP | Neighbourhood Safer Place |
| REMC | Regional Emergency Management Committee |
| REMO | Regional Emergency Management Officer |
| REOC | Regional Emergency Operations Centre |
| REOCON | Regional Emergency Operations Controller |
| RFS | Rural Fire Service |
| TfNSW | Transport for NSW |
| SEMC | State Emergency Management Committee |
| SEOC | State Emergency Operations Centre |
| SEOCON | State Emergency Operations Controller |
| SERCON | State Emergency Recovery Controller |

| | |
|-----------------|---|
| SERM Act | State Emergency & Rescue Management Act 1989 (as amended) |
| SES | NSW State Emergency Services |
| SITREP | Situation Report |
| SO | Standing Orders |
| SOP | Standard Operating Procedures |
| SRA | State Rail Authority |
| TMC | Transport Management Centre |
| VRA | Volunteer Rescue Association |

Part 1 - Administration

Authority

The New South Wales Government acknowledges that emergencies are inevitable and they can have potentially significant social, economic and environmental consequences. Accordingly, the State Emergency and Rescue Management Act, 1989 (as amended) was enacted in recognition of the need for appropriate and effective **Prevention, Preparation, Response** and **Recovery** measures for emergency situations.

Section 29 (1) of the State Emergency and Rescue Management Act delegates the preparation and review of Emergency Management Plans to Local Emergency Management Committees. This Local Emergency Management Plan records the agreed arrangements for the control of emergency situations and the coordination of resources during emergencies.

Purpose

This plan details arrangements for the prevention of, preparation for, response to and recovery from emergencies within the Shoalhaven Local Government Area.

It encompasses arrangements for:

- emergencies controlled by combat agencies;
- emergencies controlled by combat agencies and supported by the Local Emergency Operations Controller (LEOCON);
- emergency operations for which there is no combat agency; and
- circumstances where a combat agency has passed control to the LEOCON.

Objectives

The objectives of this plan are to:

- define participating organisation and Functional Area roles and responsibilities in preparation for, response to and recovery from emergencies;
- set out the control, co-ordination and liaison arrangements at the Local level;
- detail activation and alerting arrangements for involved agencies; and
- detail arrangements for the acquisition and co-ordination of resources.

Scope

The plan describes the arrangements at local level to prevent, prepare for, respond to and recover from emergencies and also provides policy direction for the preparation of Sub Plans and Supporting Plans:

- Arrangements detailed in this plan are based on the assumption that the resources upon which the plan relies are available when required; and

- The effectiveness of arrangements detailed in this plan are dependent upon all involved agencies preparing, testing and maintaining appropriate internal instructions, and/or standing operating procedures.

Principles

The following principles are applied in this plan:

- a) The Emergency Risk Management (ERM) process is to be used as the basis for emergency planning in New South Wales. This methodical approach to the planning process is to be applied by Emergency Management Committees at all levels.
- b) Responsibility for preparation, response and recovery rests initially at Local level. If Local agencies and available resources are not sufficient they are augmented by those at Regional level.
- c) Control of emergency response and recovery operations is conducted at the lowest effective level.
- d) Agencies may deploy their own resources from their own service from outside the affected Local area or Region if they are needed.
- e) The Local Emergency Operations Controller (LEOCON) is responsible, when requested by a combat agency, to coordinate the provision of resources support. EOCONs would not normally assume control from a combat agency unless the situation can no longer be contained. Where necessary, this should only be done after consultation with the Regional Emergency Operations Controller (REOCON) and agreement of the combat agency and the appropriate level of control.
- f) Emergency preparation, response and recovery operations should be conducted with all agencies carrying out their normal functions wherever possible.
- g) Prevention measures remain the responsibility of authorities/agencies charged by statute with the responsibility.

Test and Review Process

The Shoalhaven Local Emergency Management Committee (LEMC) will review this Plan every three (3) years, or following any:

- activation of the Plan in response to an emergency;
- legislative changes affecting the Plan; and
- exercises conducted to test all or part of the Plan;
- In the event of that deficiencies are identified; and
- as roles and responsibilities change

Security of Information

Emergency Management Plans (State, Region and Local), Sub Plans and Supporting Plans are public documents. However, they do not contain contact details or locations of operation centres, evacuation centres. This and other sensitive information is maintained separately and has a restricted and controlled distribution.

Part 2 – Community Context

Annexure A – Community Profile

General

The area was first settled by Europeans in 1822 when Alexander Berry established a settlement at Coolangatta, near the mouth of the Shoalhaven River. Much of the floodplain landscape and areas around Berry was changed from this time as the land was progressively cleared for agriculture and timber getting. By the 1850s settlements were also well established in Kangaroo Valley and Milton/Ulladulla. Again fertile lands were cleared for agricultural activities and timber getting. Early logging involved the removal of the prized rainforest species such as Red Cedar.

Shoalhaven LGA is a semi-rural municipality comprising 4660 square kilometres (453,063 hectares) and stretches from Berry to the north, the escarpment to the west and south to Durras Lake. The Shoalhaven is 160 kilometres south of Sydney. Shoalhaven City is bounded by the Wingecarribee Shire and the Municipality of Kiama in the north, the Tasman Sea and Jervis Bay Territory in the east, the Eurobodalla Shire in the south and the Queanbeyan Palerang and Goulburn Mulwaree Council areas in the west.

The City consists of 49 separate towns and villages, however most people live in the larger urban areas of Nowra/Bomaderry, Bay/Basin and Milton/Ulladulla. In the alphabetical listing below “localities” have also been included. The Estimated Resident Population as at 2020 is 107,191 with a population density of 0.24 persons per hectare. The Shoalhaven City Council population is forecast to grow to 137,673 by 2051. This increase represents a change of 35.01% growth or an annual average annual change of 0.72%.

Jervis Bay Territory – The Territory has its own emergency management arrangements that complement the arrangements in NSW. For the purposes of this Plan it is recognised that, while independent, the Jervis Bay Territory is supported by NSW arrangements and in particular the Shoalhaven Local Emergency Management Committee.

| Name | Type | Population | Name | Type | Population |
|--------------------|----------|------------|-----------------|----------|------------|
| Back Forest | Locality | 83 | Kings Point | Town | 555 |
| Bamarang | Locality | 29 | Kioloa | Town | 261 |
| Bangalee | Locality | 659 | Lake Conjola | Town | 436 |
| Barren Grounds | Locality | 0 | Lake Tabourie | Town | 649 |
| Barrengarry | Locality | 196 | Little Forest | Locality | 160 |
| Barringella | Locality | 25 | Longreach | Locality | 64 |
| Basin View | Town | 1552 | Manyana | Town | 523 |
| Bawley Point | Town | 700 | Mayfield | Locality | 37 |
| Beaumont | Locality | 127 | Meroo Meadow | Locality | 479 |
| Beecroft Peninsula | Locality | 0 | Milton | Town | 1668 |
| Bellawongarah | Locality | 124 | Mogood | Locality | 24 |
| Bendalong | Town | 90 | Mollymook | Town | 1078 |
| Berrara | Town | 300 | Mollymook Beach | Town | 2447 |
| | | | Mondayong | Locality | 0 |

| Name | Type | Population | Name | Type | Population |
|--------------------|----------|------------|----------------------|----------|------------|
| Berringer Lake | Locality | 28 | Moollattoo | Locality | 0 |
| Berry | Town | 2666 | Morton | Locality | 214 |
| Berry Mountain | Locality | 23 | Mount Kingiman | Locality | 5 |
| Bewong | Town | 78 | Mundamia | Locality | 69 |
| Bolong | Locality | 102 | Myola | Town | 109 |
| Bomaderry | Town | 6666 | Narrawallee | Town | 1245 |
| Boolijah | Locality | 0 | North Nowra | Town | 5796 |
| Bream Beach | Locality | 16 | Nowra | Town | 9193 |
| Brogers Creek | Locality | 43 | Nowra Hill | Locality | 2095 |
| Brooman | Locality | 27 | Numbaa | Locality | 117 |
| Broughton | Locality | 91 | Old Erowal Bay | Locality | 1039 |
| Broughton Vale | Locality | 165 | Orient Point | Town | 609 |
| Broughton Village | Locality | 0 | Parma | Locality | 173 |
| Browns Mountain | Locality | 20 | Pebbly Beach | Locality | 0 |
| Brundee | Locality | 49 | Pointer Mountain | Locality | 9 |
| Buangla | Locality | 0 | Porters Creek | Locality | 0 |
| Budawang | Locality | 11 | Pretty Beach | Locality | 0 |
| Budderoo | Locality | 0 | Pyree | Locality | 99 |
| Budgong | Locality | 67 | Quiera | Locality | 0 |
| Bulee | Locality | 0 | Red Rocks | Locality | 5 |
| Bundewallah | Locality | 47 | Sanctuary Point | Town | 7221 |
| Burrier | Locality | 45 | Sassafras | Locality | 32 |
| Burrill Lake | Town | 1465 | Shoalhaven Heads | Town | 3061 |
| Callala Bay | Town | 2193 | South Nowra | Town | 1929 |
| Callala Beach | Town | 805 | St George | Locality | 0 |
| Cambewarra | Locality | 239 | St Georges Basin | Town | 2913 |
| Cambewarra Village | Town | 1187 | Sussex Inlet | Town | 3576 |
| Cockwhy | Locality | 17 | Swanhaven | Town | 194 |
| Comberton | Locality | 29 | Tallowal | Locality | 0 |
| Comerong Island | Locality | 12 | Tapitallee | Locality | 610 |
| Conjola | Town | 148 | Terara | Town | 229 |
| Conjola Park | Town | 343 | Termeil | Locality | 256 |
| Coolangatta | Locality | 331 | Tianjara | Locality | 0 |
| Coolumburra | Locality | 3 | Tolwong | Locality | 0 |
| Croobyar | Locality | 158 | Tomerong | Town | 1072 |
| Cudmirrah | Town | 280 | Touga | Locality | 0 |
| Culburra Beach | Town | 2878 | Tullarwalla | Locality | 0 |
| Cunjurong Point | Locality | 72 | Twelve Mile Peg | Locality | 0 |
| Currarong | Town | 449 | Ulladulla | Town | 6615 |
| Currowan | Locality | 55 | Upper Kangaroo River | Locality | 117 |
| Depot Beach | Town | 19 | Vincentia | Town | 3291 |
| Dolphin Point | Town | 201 | Wandandian | Town | 325 |
| Durras North | Town | 27 | Watersleigh | Locality | 27 |

| Name | Type | Population | Name | Type | Population |
|---------------------|----------|------------|-----------------|----------|------------|
| East Lynne | Locality | 95 | Wattamolla | Locality | 60 |
| Endrick | Locality | 0 | West Nowra | Locality | 1410 |
| Erowal Bay | Town | 625 | Wollumboola | Locality | 28 |
| Ettrema | Locality | 0 | Woodburn | Locality | 52 |
| Falls Creek | Locality | 934 | Woodhill | Locality | 70 |
| Far Meadow | Locality | 214 | Woodstock | Locality | 252 |
| Fishermans Paradise | Town | 477 | Woollamia | Locality | 560 |
| Greenwell Point | Town | 1212 | Worrigea | Locality | 5068 |
| Huskisson | Town | 784 | Worwong Heights | Locality | 501 |
| Hyams Beach | Town | 111 | Wrights Beach | Town | 134 |
| Illaroo | Locality | 32 | Yadboro | Locality | 10 |
| Jaspers Brush | Locality | 357 | Yalwal | Locality | 7 |
| Jerrawangala | Locality | 70 | Yatte Yattah | Locality | 184 |
| Kangaroo Valley | Town | 877 | Yerriyong | Locality | 28 |
| Kinghorne | Locality | 0 | | | |

Location and Boundaries in the Shoalhaven area - Refer to Annexure H for Boundary Maps

Shoalhaven City is located on the south coast of New South Wales, about 160 kilometres south of Sydney. Shoalhaven City is bounded by the Wingecarribee Shire and the Municipality of Kiama in the north, the Tasman Sea and Jervis Bay Territory in the east, the Eurobodalla Shire in the south and the Queanbeyan Palerang and Goulburn Mulwaree Council areas in the west.

Bangalee - Cambewarra & Surrounds is bounded by the localities of Browns Mountain and Beaumont, Cambewarra Lookout Road and Cambewarra Range Nature Reserve in the north, generally by the locality of Meroo Meadow, Pestells Lane, Meroo Road, the locality of Bomaderry, Bells Lane, Moss Vale Road and Bomaderry Creek in the east, the locality of North Nowra and the Shoalhaven River in the south and the localities of Illaroo and Budgong in the west

Berry & Surrounds is bounded by the localities of Kangaroo Valley, Wattamolla and Woodhill and Barren Grounds Nature Reserve in the north, the Municipality of Kiama, Broughton Creek and the Tasman Sea in the east, the southern boundary of Seven Mile Beach National Park, the locality of Shoalhaven Heads, the Shoalhaven River and the locality of Bomaderry in the south and Meroo Road, Pestells Lane and the localities of Cambewarra and Browns Mountain in the west.

Bomaderry is bounded by the locality of Meroo Meadow in the north, the locality of Bolong and Hanigans Lane in the east, the Shoalhaven River in the south and the Princes Highway, Bomaderry Creek, Bomaderry Creek Regional Park, the locality of North Nowra, Moss Vale Road and Bells Lane in the west.

Burrill Lake - Lake Tabourie & Surrounds is bounded by the locality of Ulladulla in the north and north-east, the Tasman Sea in the south-east, Meroo National Park, the Princes Highway and Termeil State Forest in the south, and the locality of Termeil, Meroo National Park, and the localities of Woodburn and Woodstock in the west.

Callala Bay - Currarong & Surrounds is bounded by the locality of Worrigee, Currumbene State Forest, Saltwater Swamp Nature Reserve, the Crookhaven River, the locality of Culburra Beach and Lake Wollumboola in the north, the Tasman Sea in the east, Jervis Bay and Currumbene Creek in the south and Western Road, the locality of Falls Creek, the Princes Highway, Warra Warra Road South and the locality of South Nowra in the west.

Coastal Mid is bounded by the localities of Tullarwalla and Sussex Inlet in the north, The Springs Road, Goonawarra Drive, the localities of Cudmirrah and Berrara and the Tasman Sea in the east, Narrawallee Creek, Croobyar Creek and the locality of Little Forest in the south, and the locality of Pointer Mountain, Bunnair Creek, the locality of Twelve Mile Peg, the Princes Highway, Mondayong Road and Wents Road in the west.

Culburra Beach - Orient Point is bounded by the Crookhaven River in the north and west, the Tasman Sea in the east and Wollumboola Lake and the locality of Wollumboola in the south

Greenwell Point - Terara & Surrounds is bounded by the Shoalhaven River in the north, the Tasman Sea in the east, the Crookhaven River and Saltwater Swamp Nature Reserve in the south and Brundee Swamp Nature Reserve and the localities of Worrigee and Nowra in the west

Huskisson - Tomerong & Surrounds is bounded by the localities of Nowra Hill and Comberton and Currumbene Creek in the north, the Tasman Sea in the east, Moona Moona Creek, the localities of Worrowing Heights and St Georges Basin, Grange Road, the locality of Basin View, the Princes Highway and the localities of Bewong and Wandandian in the south and Cottonwood Road, Blackbutt Range Road and the localities of Yerriyong and Parma in the west.

Milton is bounded by Croobyar Creek and Narrawallee Creek in the north, the localities of Narrawallee, Mollymook Beach, Mollymook and the Princes Highway in the east, the locality of Ulladulla and Stony Creek in the south, and the localities of Woodstock and Croobyar in the west.

Mollymook - Narrawallee & Surrounds is bounded by Narrawallee Creek in the north, the Tasman Sea in the east, the Princes Highway in the south and the locality of Milton in the west.

North Nowra is bounded by the locality of Bangalee and Bomaderry Creek in the north, the locality of Bomaderry, Bomaderry Creek and the Princes Highway in the east and the Shoalhaven River in the south and west.

Nowra is bounded by the Shoalhaven River in the north, the localities of Terara and Worrigee and Old Southern Road in the east, the locality of South Nowra and Shoalhaven State Forest in the south and Albatross Road, Yalwal Road, the locality of West Nowra and Nowra Creek in the west.

Sanctuary Point is bounded by The Wool Road and Tomerong Creek in the north, St Georges Basin in the east and south and The Old Wool Road in the west.

Shoalhaven Heads is bounded by Seven Mile Beach National Park in the north, the Tasman Sea in the east, the Shoalhaven River and Comerong Island in the south and the locality of Coolangatta and Bolong Road in the west.

St Georges Basin - Basin View is bounded by the Princes Highway and the locality of Tomerong in the north, the locality of Worrowing Heights, The Wool Road and The Wool Lane in the east, St Georges Basin and Wandandian Creek in the south, and the locality of Bewong in the west.

Sussex Inlet - Cudmirrah & Surrounds is bounded by the locality of Tullarwalla and the Tullarwalla Inlet in the north, St Georges Basin and the Sussex Inlet in the east, the Tasman Sea and Berrara Creek in the south and the locality of Mondayong in the west.

Ulladulla is bounded by the locality of Mollymook and the Princes Highway in the north, the Tasman Sea in the east, the localities of Burrill Lake and Kings Point in the south and Stony Creek and the locality of Milton in the west.

Vincentia - Erowal Bay & Surrounds is bounded by the locality of Huskisson and Moona Moona Creek in the north, Jervis Bay in the east, Jervis Bay Territory, the Tasman Sea and Tomerong Creek in the south, and the localities of St Georges Basin and Tomerong in the west.

West Nowra - South Nowra & Surrounds is bounded by the Shoalhaven River in the north, Nowra Creek, the locality of Nowra, Shoalhaven State Forest, Worrigee Nature Reserve, Warra Warra Road South and the Princes Highway in the east, the locality of Falls Creek, Currumbene Creek and the locality of Parma in the south and the locality of Yerriyong and Calymea Creek in the west.

Worrigee is bounded by the locality of Terara in the north, the locality of Brundee, Brundee Swamp Nature Reserve and the locality of Pyree in the east, Currumbene State Forest and the locality of Comberton in the south and the locality of South Nowra, Old Southern Road and Westbrook Road in the west.

Landform and Topography

The geology is dominated by Permian age sandstones and siltstones. Older Ordovician age slates and shales make up the basement in the Clyde Valley with volcanic intrusions evident in the north of the City and at Milton and Bawley Point. The area is predominantly hilly or mountainous country to the west with a narrow coastal strip to the east.

Most of the soils of the area are moderately to strongly acid and due to the parent geology most are of poor nutrient status with low water holding capacity. The high nutrient status soils of volcanic origin (eg Milton Monzonite) or alluvial origin (eg Shoalhaven Floodplain) have generally been cleared and represent very good agricultural land. The past clearing of vegetation (much of it rainforest) has had significant impacts on regional wildlife.

Today eucalypt forests and woodlands dominate the area with cleared land being prevalent in the alluvial valleys and in regions closer to the coast. Various specialised flora and fauna have developed in the rainforests, wetlands, coastal sand dunes and heath areas.

Water Catchments

The Shoalhaven catchment is located in the New South Wales upper south coast and has an area of 7,300 square kilometres. The Shoalhaven River has four main tributaries, the Mongarlowe, Corang, Endrick and Kangaroo Rivers and is highly valued for its wild and scenic attributes. Other tributaries include the Ettrema, Boro, Reedy, Danjera, Yalwal, Broughton, Broughton Mill and Yarrunga Creeks. The Shoalhaven River flows through a large coastal floodplain before entering the Pacific Ocean at Shoalhaven Heads.

The Shoalhaven catchment's largest water storage is Tallowa Dam with a capacity of 110,200 megalitres. Tallowa Dam is part of the Greater Sydney water supply system owned and operated by the WaterNSW. It provides

water to Shoalhaven Water for local town water supply and is transferred to Sydney to generate hydro-electric power and supplement Sydney's water supply in times of drought.

Shoalhaven City Council operates several water storages including Danjera Dam (a tributary of the Shoalhaven River), Bamarang Dam, Flatrock Dam, (a tributary of the Shoalhaven River), Porters Creek Dam (a tributary of the Clyde River) and Cambewarra Dam.

| Site | Location | Service Area | Capacity |
|----------------------|-------------------------------------|--------------------------------|------------|
| Tallowa Dam | Mt Scanzi Rd, Kangaroo Valley | WaterNSW (Sydney) & Shoalhaven | 110,200 ML |
| Burrier Pump Station | Burrier Rd, Burrier | Shoalhaven | 90 ML/day |
| Danjera Dam | Yalwal Rd, Yalwal | Shoalhaven | 7,600 ML |
| Bamarang Dam | Yalwal Rd, Bamarang | Shoalhaven | 3,800 ML |
| Porters Creek Dam | Porters Creek Dam Rd, Porters Creek | Southern Shoalhaven | 1,900 ML |
| Flat Rock Dam | Yalwal Rd, West Nowra | Nil | 570 ML |
| Cambewarra Dam | Tannery Rd, Cambewarra | Nil | 28 ML |

Coastal waterways

The Shoalhaven LGA has a significant number of major rivers and lakes. The most significant is the Shoalhaven River which is the third largest river in New South Wales.

With 165km of open coastline, the Shoalhaven has the longest open coastline of any local government area in NSW. The area also features 40 prominent beaches, eight coastal lakes, 14 significant estuarine systems, 14 major creeks and 11 of the State's 102 Intermittently Closed and Open Lakes and Lagoons (ICOLLS).

Shoalhaven City Council has entrance management policies/plans for the Shoalhaven River entrance at Shoalhaven Heads, Currarong Creek, Swan Lake, Conjola Lake, Burrill Lake and Tabourie Lake.

The upper reaches of the Shoalhaven River catchment contribute to the Shoalhaven's drinking water catchment, flowing into Tallowa Dam. Lake Yarrunga is formed by Tallowa Dam, which is constructed immediately downstream of the confluence of the Kangaroo River and the Shoalhaven River. Tallowa Dam has a capacity of 110,200 megalitres and is the largest water storage in Shoalhaven River catchment. Aside from the Tallowa Dam system, which includes Fitzroy Falls Dam, there are no large water storages in the catchment.

Major catchments including their main tributaries are tabulated below.

| |
|--|
| Shoalhaven LGA Waterways |
| Rivers and lakes, main tributaries and major creeks |
| Shoalhaven River: Mongarlowe, Corang, Endrick, Crookhaven and Kangaroo Rivers. Nowra, Browns, Bomaderry, Ettrema, Boro, Reedy, Danjerra, Yalwal, Broughton, Broughton Mill and Yarrunga Creeks. |
| Kangaroo River (major tributary of Shoalhaven River): Barrengarry Creek, Mytrke Trubutaries, Town Tributaries, Jarrett's Lane Creek, Nugents Creek |
| Broughton Creek (tributary of the Shoalhaven River): Broughton Mill Creek, Bundewallah Creek, Connollys Creek, Town Creek, Anderson Lane Creek, Anderson Lane Tributary, Hitchcock's Lane Creek and Hitchcock's Lane Tributary. |
| Bomaderry Creek (tributary of the Shoalhaven River): Good Dog Creek, Browns Creek and Tapitallee Creek. |
| Lake Wollumboola: Coonemia Creek, Irrayadda Creek, Woolong Creek, Downs Creek, Wallte Corner Creek and Sheepwash Creek |
| Currambene Creek: Parma Creek and Georges Creek. |
| Moona Moona Creek: Duck Creek |
| St Georges Basin: Cow Creek, Tullarwalla Creek, Pats Creek, Home Creek, Tomerong Creek (also referred to as Cockrow Creek), Worrowing Waterway, Erowal Creek, Stony Creek and Sussex Inlet Creek. |
| Coastal Waterways |
| Conjola Lake: Luncheon Creek, Conjola Creek, Gooloo Creek and Bunnair Creek. |
| Burrill Lake: Stony Creek |
| Tabourie Lake: Branderee Creek, Lemon Tree Creek, Lucy Kings Creek and Munno Creek. |
| Other Coastal Waterways |
| Swan Lake, Termeil Lake, Meroo Lake, Willinga Lake and Durras Lake |
| Other Creeks |
| Callala Creek, Currarong Creek, Nerrindillah Creek, Washarwomans Creek, Berrara Creek, Narrawallee Inlet, Mollymoke Farm Creek, Blackwater Creek, Millards Creek and Racecourse Creek. |
| Dams |
| Tallowa Dam, Fitzroy Falls Dam, Danjera Dam, Flat Rock Dam, Porters Creek Dam and Cambewarra Dam |

National Parks, Nature Reserves & State Forests

Total parks and reserves covers 229,928 hectares within the Shoalhaven LGA. Note some reserves extend into adjoining LGAs but the attached figures only apply within the Shoalhaven LGA. Marine Parks are no longer managed by NPWS. Booderee NP is managed by Parks Australia and covers an area of 63.12km².

| Name | Size - Hectares | Name | Size - Hectares |
|---------------------|--------------------|------------------------|--------------------|
| Bamarang NR | 374 | Kangaroo River NR | 5269 |
| Barren Grounds NR | 976 | Meroo NP | 3846 |
| Barrengarry NR | 21 | Morton NP | 155557 |
| Belowla Island NR | 7 | Morton SCA | 1028 |
| Bimberamala NP | 4420 | Murramarang AA | 60 |
| Bomaderry Creek RP | 85 | Murramarang NP | 8639 |
| Brush Island NR | 37 | Narrawallee Creek NR | 872 |
| Brundee Swamp | 227 | Parma Creek NR | 3643 |
| Budawang NP | 19078 | Rodway NR | 85 |
| Budderoo NP | 1880 | Saltwater Swamp NR | 214 |
| Bugong NP | 1011 | Seven Mile Beach NP | 853 |
| Cambewarra Range NR | 1681 | Tapitallee NR | 94 |
| Colymea SCA | 1674 | Triplarina NR | 94 |
| Comerong Island NR | 714 | Wogamia NR | 275 |
| Conjola NP | 11603 | Woollamia NR | 453 |
| Corramy RP | 291 | Worrigee NR | 615 |
| Cullunghutti AA | 66 | Yatheyattah NR | 35 |
| Jerrawangala NP | 4031 | Jervis Bay Marine Park | 16006 |
| Jervis Bay NP | 5269 | Bateman Marine Park | 11506 |

State Forests

South of the Shoalhaven River, there are significant areas of State Forest and farmland used for forestry purposes. Several sawmills operate along the coastal areas providing employment for sawmill operators and forestry harvesting.

State Forests are available for recreational purposes and many are located in the Shoalhaven.

| Name | Size – Hectares |
|------------------|-----------------|
| Boyne | 4 |
| Clyde | 3737 |
| Currambene | 1594 |
| Currowan | 5623 |
| Flat Rock | 5231 |
| Jerrawangala | 195 |
| Kioloa | 174 |
| McDonald | 3755 |
| North Brooman | 3106 |
| Nowra | 638 |
| Shallow Crossing | 3721 |
| Shoalhaven | 105 |
| South Brooman | 5868 |
| Termeil | 699 |
| Tomerong | 213 |
| Woodburn | 10 |
| Yadboro | 10755 |
| Yerriyong | 6635 |

Climate

Temperatures are generally mild with average temperatures of 15.5°C and 26.5°C for June and January respectively. Rainfall is more pronounced during the summer/autumn months, with the least rainfall occurring in July, August and September. The average annual rainfall is 1110mm and 1270mm for Nowra and Milton respectively.

The bush fire season generally runs between September and March each year. Prevailing weather conditions associated with the bush fire season in the Shoalhaven BFMC area are North-westerly winds accompanied by high daytime temperatures and low relative humidity. There are also frequently dry lightning storms occurring during the bush fire season.

| Climate Statistics and Historical Weather Observations | | | | | |
|--|-----------------------------|-------------------------------------|--|---------------------------------------|--|
| | | Nowra RAN Air Station (1955 – 2000) | Nowra RAN Air Station AWS (2001- 2021) | Point Perpendicular AWS (2001 – 2021) | Point Perpendicular Lighthouse Comparison (Jervis Bay 1899 – 2004) |
| Temperature (oC) | Annual Mean Maximum | 21.3 | 22.5 | 20.7 | 19.9 |
| | Annual Mean Minimum | 11.3 | 11.6 | 14.3 | 13.7 |
| | Monthly Mean Maximum | 25.8 (Jan/Feb) | 27.8 (Jan) | 25.1 (Jan) | 23.9 (Feb) |
| | Monthly Mean Minimum | 6.2 (Jul) | 6.7 (Jul) | 9.9 (Jul) | 9.2 (Jul) |
| | Highest Temperature | 44.2 (1 Feb 1968) | 45.6 (21 dec 2019) | 42.1 (1 Jan 2006) | 40.6 (26 Jan 1960) |
| | Lowest Temperature | -0.8 (11 Jul 1971) | -0.9 (24 Aug 2002) | 4.7 (13 Aug 2005) | -0.5 (17 Jun 1976) |
| Rainfall (mm) | Annual Mean Total | 1112.1 | 919 | 1212.6 | 1241.8 |
| | Highest Annual | 2053.4 | 1673.2 | 1769.6 | 2493.6 |
| | Lowest Annual | 463.1 | 577.4 | 783.4 | 585.9 |
| | Highest Month | 815.3 (Oct 1959) | 473.0 (Feb 2020) | 427.6 (Jun 2013) | 667.1 (Nov 1961) |
| | Highest Daily | 245.9 (29 Apr 1963) | 208.0 (26 Aug 2015) | 178.8 (29 Jan 2013) | 316.7 (20 Mar 1961) |
| Wind (km/h) | Annual Mean 9am wind speed | 11.7 | 14.3 | No data | 15.8 |
| | Mean Highest 9am wind speed | 15.5 (Jul) | 18.1 (Aug) | No data | 19.1 (Jun) |
| | Mean Lowest 9am wind speed | 7.8 (Feb) | 11.5 (Jan) | No data | 13.5 (Mar) |
| | Annual Mean 3pm wind speed | 17.5 | 20 | No data | 20.0 |
| | Mean Highest 3pm wind speed | 20.5 (Sep) | 22.9 (Sep) | No data | 22.5 (Nov) |
| | Mean Lowest 3pm wind speed | 14.2 (May) | 16.7 (May/Jun) | No data | 17.9 (Apr/May) |

Land Use

Shoalhaven City is a regional and growing residential and tourist area, it is the most visited LGA in NSW outside of Sydney. The City encompasses a total land area of about 4,561 square kilometres, including substantial areas of national park, state forest, bushland, beaches and lakes.

Most of the population is concentrated along the coastal fringe, in major centres and numerous small settlements. The major centres are Nowra-Bomaderry, Milton-Ulladulla, Huskisson-Vincentia, St Georges Basin District, Culburra Beach and Sussex Inlet.

Rural land is used mainly for dairy farming, beef cattle, nurseries, and a growing number of more intensive agricultural activities. The area has a strong light manufacturing industrial base including goods such as starches, ethanol, cheese, boats, avionics, building products, surfboard and surf-wear. The main sectors of employment within the Shoalhaven are Manufacturing, Government (including Defence), Retail and Tourism. These sectors are supported by Building and Construction, Community Services and Education.

| Shoalhaven Land Use Zones | | | |
|------------------------------|--|------------------------------|----------|
| | Land Use Zone | Land Area (km ²) | % of LGA |
| Rural Zones | RU1 Primary Production | 325.45 | 7.14% |
| | RU2 Rural Landscape | 547.08 | 12.00% |
| | RU3 Forestry | 519.67 | 11.40% |
| | RU4 Primary Production Small Lots | 22.41 | 0.49% |
| | RU5 Village | 5.53 | 0.12% |
| Residential Zones | R1 General Residential | 15.31 | 0.34% |
| | R2 Low Density Residential | 40.20 | 0.88% |
| | R3 Medium Density Residential | 2.40 | 0.05% |
| | R5 Large Lot Residential | 29.91 | 0.66% |
| Business Zones | B1 Neighbourhood Centre | 0.19 | 0.00% |
| | B2 Local Centre | 0.63 | 0.01% |
| | B3 Commercial Core | 0.46 | 0.01% |
| | B4 Mixed Use | 1.67 | 0.04% |
| | B5 Business Development | 1.57 | 0.03% |
| | B7 Business Park | 0.49 | 0.01% |
| Industrial Zones | IN1 General Industrial | 5.83 | 0.13% |
| | IN2 Light Industrial | 0.78 | 0.02% |
| | IN4 Working Waterfront | 0.04 | 0.00% |
| Special Purpose Zones | SP1 Special Activities | 44.16 | 0.97% |
| | SP2 Infrastructure | 45.23 | 0.99% |
| | SP3 Tourist | 1.97 | 0.04% |
| Recreation Zones | RE1 Public Recreation | 25.45 | 0.56% |
| | RE2 Private Recreation | 2.46 | 0.05% |
| Environment Protection Zones | E1 National Parks and Nature Reserves | 2314.41 | 50.78% |
| | E2 Environmental Conservation | 252.39 | 5.54% |
| | E3 Environmental Management | 243.06 | 5.33% |
| | E4 Environmental Living | 5.80 | 0.13% |
| Waterway Zones | W1 Natural Waterways | 25.49 | 0.56% |
| | W2 Recreational Waterways | 58.61 | 1.29% |
| | W3 Working Waterways | 0.13 | 0.00% |
| Other | DM Deferred Matters | 17.97 | 0.39% |
| | JE Shoalhaven LEP (Jerberra Estate) 2014 | 0.79 | 0.02% |
| Total | | 4557.50 | 100.00 |

Population and People

The Estimated Resident Population as at 2020 is 107,191 with a population density of 0.24 persons per hectare. The Shoalhaven City Council population is forecast to grow to 137,673 by 2051. This increase represents a change of 35.01% growth or an annual average annual change of 0.72%.

| Shoalhaven City – Total Persons (Usual Residence) | | | | | | |
|---|----------------|--------------|-------------------------------------|--------------|--------------|--------------|
| | Shoalhaven LGA | | Nowra Bomaderry Structure Plan Area | | Ulladulla | |
| Five year age groups (years) | Number | % | Number | % | Number | % |
| 0 to 4 | 5,122 | 5.1 | 2,233 | 6.4 | 321 | 4.8 |
| 5 to 9 | 5,659 | 5.7 | 2,300 | 6.6 | 354 | 5.3 |
| 10 to 14 | 5,534 | 5.6 | 2,109 | 6.0 | 378 | 5.7 |
| 15 to 19 | 5,309 | 5.3 | 2,117 | 6.1 | 362 | 5.4 |
| 20 to 24 | 4,622 | 4.6 | 2,282 | 6.5 | 260 | 3.9 |
| 25 to 29 | 4,579 | 4.6 | 2,246 | 6.4 | 240 | 3.6 |
| 30 to 34 | 4,736 | 4.8 | 2,149 | 6.2 | 260 | 3.9 |
| 35 to 39 | 4,710 | 4.7 | 1,962 | 5.6 | 291 | 4.4 |
| 40 to 44 | 5,381 | 5.4 | 2,010 | 5.8 | 354 | 5.3 |
| 45 to 49 | 5,791 | 5.8 | 2,151 | 6.2 | 383 | 5.8 |
| 50 to 54 | 6,507 | 6.5 | 2,057 | 5.9 | 437 | 6.6 |
| 55 to 59 | 7,560 | 7.6 | 2,285 | 6.5 | 469 | 7.0 |
| 60 to 64 | 7,786 | 7.8 | 2,210 | 6.3 | 520 | 7.8 |
| 65 to 69 | 8,375 | 8.4 | 2,172 | 6.2 | 597 | 9.0 |
| 70 to 74 | 6,603 | 6.6 | 1,631 | 4.7 | 499 | 7.5 |
| 75 to 79 | 4,907 | 4.9 | 1,226 | 3.5 | 394 | 5.9 |
| 80 to 84 | 3,302 | 3.3 | 883 | 2.5 | 299 | 4.5 |
| 85 and over | 3,160 | 3.2 | 896 | 2.6 | 237 | 3.6 |
| Total population | 99,643 | 100.0 | 34,930 | 100.0 | 6,655 | 100.0 |

Source: Australian Bureau of Statistics Census of Population and Housing 2016. Compiled and presented by .id the population experts.

Between 2011 and 2036 the population for Shoalhaven is forecast to increase by 23,211 persons.

However tourism has a significant impact on population. Tourism is the Shoalhaven's fifth largest employing industry. The peak tourist period coincides with summer and during this time the Shoalhaven population can triple. The Shoalhaven contains 49 towns and villages; many of which experience large influxes of tourists over the summer months.

The following residents and households are identified as being more vulnerable to emergency events, due to their circumstances. Some of the vulnerabilities identified could impact emergency operations, communications, evacuation management and response and recovery requirements.

| Communities defined by 2016 Census | Land Area (km2) | Total Population (Usual Resident Population) | | | | | | | | | | | | |
|--|-----------------|--|-----------|------|---------|------|-----------------|------|---------------|------|-----------------|------|--|--|
| | | | Residents | | | | Households | | | | | | | |
| | | | 0-19 | | Over 65 | | Need Assistance | | Sole Occupant | | Without Vehicle | | | |
| | | | No. | % | No. | % | No. | % | No. | % | No. | % | | |
| Bangalee - Cambewarra and Surrounds | 50 | 3027 | 826 | 27.4 | 523 | 17.6 | 98 | 3.3 | 142 | 14.3 | 2 | 0.3 | | |
| Berry and Surrounds | 215 | 4798 | 878 | 19.0 | 1492 | 33.5 | 294 | 6.5 | 395 | 23.5 | 46 | 2.6 | | |
| Bomaderry | 8 | 6866 | 1,560 | 22.7 | 1604 | 24.0 | 589 | 8.8 | 918 | 34.3 | 217 | 7.6 | | |
| Burrill Lake - Lake Tabourie and Surrounds | 13 | 2463 | 506 | 22.3 | 580 | 26.4 | 155 | 7 | 235 | 27 | 21 | 2.2 | | |
| Callala Bay - Currarong and Surrounds | 167 | 3736 | 767 | 20.6 | 1012 | 28.0 | 245 | 6.8 | 352 | 25.9 | 39 | 2.7 | | |
| Coastal Mid | 191 | 2544 | 420 | 18.0 | 688 | 30.4 | 140 | 6.1 | 298 | 31.3 | 16 | 1.5 | | |
| Coastal South | 256 | 2731 | 534 | 21.3 | 625 | 25.1 | 122 | 5 | 263 | 27 | 15 | 1.5 | | |
| Culburra Beach - Orient Point | 15 | 3673 | 696 | 19.5 | 1086 | 31.0 | 299 | 8.5 | 430 | 31.3 | 76 | 5.1 | | |
| Greenwell Point - Terara and Surrounds | 78 | 1880 | 294 | 16.3 | 561 | 30.6 | 129 | 7.1 | 253 | 32.6 | 38 | 4.6 | | |
| Huskisson - Tomerong and Surrounds | 111 | 3555 | 716 | 20.8 | 755 | 22.6 | 194 | 5.8 | 313 | 25.1 | 50 | 3.6 | | |
| Milton - Mollymook - Narrawallee and Surrounds | 25 | 7060 | 1,311 | 19.9 | 2142 | 33.4 | 464 | 8.8 | 697 | 27.5 | 89 | 3.2 | | |
| North Nowra | 10 | 5929 | 1,567 | 26.3 | 1211 | 20.9 | 487 | 8.4 | 545 | 26.3 | 100 | 4.5 | | |
| Nowra | 9 | 9957 | 2,352 | 24.9 | 2165 | 23.7 | 1041 | 11.4 | 1351 | 37.5 | 479 | 12.2 | | |
| Rural Balance | 3164 | 2917 | 600 | 21.0 | 673 | 24.8 | 102 | 3.7 | 193 | 20.7 | 1 | 0.2 | | |
| Sanctuary Point | 6 | 7776 | 1,732 | 23.5 | 1976 | 27.4 | 710 | 9.8 | 843 | 29.2 | 118 | 3.9 | | |
| Shoalhaven Heads | 4 | 3247 | 562 | 18.0 | 1088 | 35.2 | 214 | 7 | 508 | 37 | 78 | 5.3 | | |
| St Georges Basin - Basin View | 16 | 4822 | 1,068 | 23.5 | 1252 | 28.3 | 392 | 8.8 | 429 | 26 | 57 | 3.2 | | |
| Sussex Inlet - Cudmirrah and Surrounds | 40 | 4532 | 659 | 15.0 | 1751 | 40.0 | 483 | 11.1 | 661 | 34.7 | 109 | 5.4 | | |
| Ulladulla | 14 | 7342 | 1,467 | 21.7 | 2026 | 30.4 | 514 | 7.8 | 874 | 31.3 | 173 | 6 | | |
| Vincentia - Erowal Bay and Surrounds | 37 | 6371 | 1,161 | 19.9 | 1791 | 31.2 | 429 | 7.5 | 674 | 29 | 79 | 3.2 | | |
| West Nowra - South Nowra and Surrounds | 86 | 6370 | 1,378 | 24.0 | 712 | 12.6 | 292 | 5.1 | 289 | 18.3 | 41 | 2.4 | | |
| Worrigea | 17 | 5646 | 1,706 | 32.7 | 649 | 12.8 | 326 | 6.4 | 245 | 14.9 | 41 | 2.4 | | |

Source: Australian Bureau of Statistics, Census of Population and Housing 2016. Compiled and presented by .id the population experts.

Transport Routes and Facilities

Road Network

The Shoalhaven LGA is located on the South Coast of NSW approximately 2 hours south of Sydney. The main road is the Princes Highway running north to south, from Berry to Termeil. There are two major east-west links. These are the Braidwood Road (Main Road 92) from Tomerong to Nerriga and Moss Vale Road, from Bomaderry, through Kangaroo Valley, to Fitzroy Falls. The major rail link from Sydney stops north of the Shoalhaven River at Bomaderry. Shoalhaven experiences impacts on its transportation systems during peak periods such as Christmas and Easter holidays mainly because of the huge influx of tourists.

Scheduled interstate bus services use both the Princes Highway and Moss Vale Road in the Shoalhaven.

| Road Name | Road Number | Classification | Direction | Links | Length (Metres) |
|---|-------------|----------------------------|-------------|--|-----------------|
| ALBATROSS RD | MR 92 | Classified Regional Road | East West | Kinghorne roundabout to Albatross | 6,985.20 |
| BRAIDWOOD RD | MR 92 | Classified Regional Road | East West | Nowra to Braidwood | 56,259.47 |
| MOSS VALE RD | MR 261 | Classified State Road | North South | Southern Highlands with Princes HWY @ Bomaderry | 30,445.58 |
| BOLONG RD | MR 293 | Unclassified Regional Road | East West | Shoalhaven Heads to Coolangatta Rd | 933.21 |
| BOLONG RD | MR 293 | Classified Regional Road | East West | Princes HWY to Shoalhaven Heads | 13,879.72 |
| JERVIS BAY RD | MR 312 | Classified Regional Road | North South | Princes HWY to Huskisson Road | 7,491.87 |
| PRINCES HWY (north of Shoalhaven River) | HWY1 | Classified State Road | North South | Nowra bridge north to SCC boundary near Fox Ground | 21,972.54 |
| PRINCES HWY (south of Shoalhaven River) | HWY1 | Classified State Road | North South | Nowra Bridge South to SCC Border | 107,030.81 |
| ISLAND POINT RD | 7631 | Unclassified Regional Road | North South | HWY to Vincentia | 1,121.38 |
| PARADISE BEACH RD | 7631 | Unclassified Regional Road | East West | HWY to Vincentia | 1,131.78 |
| THE WOOL RD | 7631 | Unclassified Regional Road | East West | HWY to Vincentia | 9,171.78 |
| WALMER AVE | 7631 | Unclassified Regional Road | East West | HWY to Vincentia | 907.64 |
| LORALYN AVE | 7631 | Unclassified Regional Road | East West | HWY to Vincentia | 1,934.25 |
| TASMAN RD | 7631 | Unclassified Regional Road | East West | HWY to Vincentia | 621.11 |
| LARMER AVE | 7631 | Unclassified Regional Road | East West | HWY to Vincentia | 1,248.28 |
| KALANDAR ST | 7632 | Unclassified Regional Road | East West | Links Nowra with Greenwell Point | 1,254.34 |
| CULBURRA RD | 7632 | Unclassified Regional Road | East West | Links Nowra with Greenwell Point | 8,401.36 |

| Road Name | Road Number | Classification | Direction | Links | Length (Metres) |
|-------------------------|-------------|----------------------------|------------|--|-----------------|
| GREENWELL POINT RD | 7632 | Unclassified Regional Road | East West | Links Nowra with Greenwell Point | 7,808.10 |
| PYREE LANE | 7632 | Unclassified Regional Road | East West | Links Nowra with Greenwell Point | 1,643.33 |
| SUSSEX INLET RD (Rural) | 7633 | Unclassified Regional Road | East West | Princes Hwy to Sussex Inlet | 10,937.58 |
| NAVAL COLLEGE RD | 7634 | Unclassified Regional Road | East West | Huskisson Rd to JBT Boundary | 11,530.36 |
| GERROA RD | 7643 | Unclassified Regional Road | East West | Coolangatta road to SCC boundary before Gerroa | 7,135.81 |
| ILLAROO RD | | Local Road | East West | From Princes Highway Nowra to North Nowra | 11,900 |
| BUDGONG RD | | Local Road | East West | North Nowra to Budgong area | 10,800 |
| MT SCANZI RD | | Local Road | West North | Bugong Road to Moss Vale Road, Kangaroo Valley | 8,860 |

Airports

The Shoalhaven has no official airport however the aerodrome at HMAS Albatross Navy air base provides runways for landing and take off under specific prearranged circumstances.

Ports & Harbours

The Shoalhaven has one official Harbour, Ulladulla Harbour, which services commercial fishing enterprises. There are no Ports within the Shoalhaven.

Economy and Industry

The Shoalhaven has a mature but growing economic base. With broad diversity in many value adding sectors such as aircraft maintenance and overhaul, general manufacturing and logistics, the economic base is supported by domestic and international trade. Government administration and services including three Defence sites are strong as is education, health and the construction industry. Many localities are also highly orientated to tourism and retail.

Population growth, based on immigration from metropolitan areas, continues to grow the labour force and provide extension to existing and new businesses. A skilled workforce supports the business base and utilises the resources of local training facilities of the University of Wollongong and TAFE NSW.

| Shoalhaven Sectors of Employment | | |
|-----------------------------------|---------------------|----------------|
| Industry Sector of Employment | Number of Employees | % of Workforce |
| Accommodation & Food Services | 3,663 | 10.20% |
| Administrative & Support Services | 1,428 | 4.00% |
| Agriculture, Forestry & Fishing | 803 | 2.20% |
| Arts & Recreation Services | 468 | 1.30% |
| Construction | 4,009 | 11.20% |
| Defence | 1727 | 4.8% |

| Shoalhaven Sectors of Employment | | |
|--|---------------------|----------------|
| Industry Sector of Employment | Number of Employees | % of Workforce |
| Education & Training | 2,912 | 8.10% |
| Electricity, Gas, Water & Waste Services | 403 | 1.10% |
| Financial & Insurance Services | 478 | 1.30% |
| Health Care & Social Assistance | 5,848 | 16.40% |
| Information Media & Telecommunications | 244 | 0.70% |
| Manufacturing | 1,928 | 5.40% |
| Mining | 76 | 0.20% |
| Other Services | 1,416 | 4.00% |
| Professional, Scientific & Technical Services | 1,586 | 4.40% |
| Public Administration, Regulatory Services, Order Safety | 2052 | 5.7% |
| Rental, Hiring & Real Estate Services | 622 | 1.70% |
| Retail Trade | 4,499 | 12.60% |
| Transport, Postal & Warehousing | 1,128 | 3.20% |
| Wholesale Trade | 461 | 1.30% |

Source: REMPLAN data incorporating Australian Bureau of Statistics (ABS) 2016, 2011, 2006 and 2001 Censuses Shoalhaven (C) (2019 Release 2)

Annexure B – Hazards and Risks Summary

A Local Emergency Risk Management (ERM) Study has been undertaken by the Shoalhaven Local Emergency Management Committee identifying the following hazards as having risk of causing loss of life, property, utilities, services and/or the community's ability to function within its normal capacity. These hazards have been identified as having the potential to create an emergency. The Shoalhaven Emergency Risk Management Study should be referenced to identify the complete list of consequences and risk descriptions.

| Hazard | Risk Description | Likelihood Rating | Consequence Rating | Risk Priority | Combat / Responsible Agency |
|--|--|-------------------|--------------------|---------------|----------------------------------|
| Communicable Disease (Human/Animal) | Pandemic illness that affects, or has potential to affect, large portions of the human or animal population | Possible | Major | Extreme | Department of Health |
| Biosecurity | An agriculture/horticulture incident that results, or has potential to result, in the spread of a communicable disease or infestation. | Possible | Major | High | Department of Primary Industries |
| Storm | Severe storm with accompanying lightning, hail, wind, and/or rain that causes severe damage and/or localised flooding.(includes tornado) | Almost Certain | Major | Extreme | NSW SES |
| Fire (Bush or Grass) | Major fires in areas of bush or grasslands. | Almost Certain | Major | Extreme | NSW RFS FRNSW |
| Utilities Failure | Major failure of essential utility for unreasonable periods of time as a result of a natural or man-made occurrence. | Possible | Moderate | High | LEOCON |
| Flooding | High water level which overtops the natural or artificial banks and/or local overland flooding associated with drainage before entering a watercourse. | Almost Certain | Major | Extreme | NSW SES |
| Earthquake | Earthquake of significant strength that results in localised or widespread damage. | Rare | Major | High | LEOCON |
| Tsunami | A tsunami wave of magnitude that presents a risk to land and marine elements. | Unlikely | Major | High | NSW SES |
| Flood (Flash) | Sudden short duration flooding, occurring less than six hours after heavy rainfall | Almost Certain | Minor | High | NSW SES |

| Hazard | Risk Description | Likelihood Rating | Consequence Rating | Risk Priority | Combat / Responsible Agency |
|-----------------------------------|---|-------------------|--------------------|---------------|-----------------------------|
| Bridge Collapse | Failure of a major bridge structure with or without warning owing to structural failure or as a result of external/ internal events or other hazards/ incidents. | Unlikely | Moderate | Medium | LEOCON |
| Building Collapse | Collapse of building owing to structural failure or impact from external/internal event of other hazards /incidents. | Unlikely | Moderate | Medium | FRNSW (USAR) LEOCON |
| Dam Failure | A dam is compromised and results in localised or widespread flooding. | Unlikely | Minor | Low | Dam Owners NSW SES |
| Fire (Industrial) | Serious industrial fire in office complexes and/or warehouses within industrial estates. | Possible | Minor | Medium | FRNSW NSW RFS |
| Fire (Commercial) | Serious commercial fires in shopping centres, aged persons units, nursing homes and hospitals. | Possible | Minor | Medium | FRNSW NSW RFS |
| Fire (Residential) | Serious residential fire in medium/high rise apartments. | Possible | Minor | Medium | FRNSW NSW RFS |
| Hazardous Release | Hazardous material released as a result of an incident or accident. | Possible | Minor | Medium | FRNSW |
| Landslip | Landslip/landslide resulting in localised or widespread damage. | Possible | Minor | Medium | LEOCON |
| Transport Emergency - Air | Aircraft crashes in LGA resulting in large number of fatalities, injuries and/or damage to property. | Rare | Major | High | LEOCON |
| Transport Emergency - Rail | A major rail accident that disrupts transport routes that can result in risk to people, restrict supply routes and/or protracted loss of access to or from the area. | Rare | Moderate | Medium | LEOCON |
| Transport Emergency - Road | A major vehicle incident that disrupts one or more major transport routes that can result in heavy traffic congestion, restrict supply routes and/or protracted loss of access to or from the area. | Possible | Minor | Medium | LEOCON |

| Hazard | Risk Description | Likelihood Rating | Consequence Rating | Risk Priority | Combat / Responsible Agency |
|----------------------------------|--|-------------------|--------------------|---------------|--|
| Transport Emergency - Sea | A major accident that results in environmental damage and major recovery operation | Unlikely | Moderate | Medium | Relevant Port / NSW Maritime/Marine Rescue |

Risk Evaluation Criteria – Information from Shoalhaven Emergency Risk Management Report 2011

| Likelihood Scale | |
|------------------|--|
| Descriptor | Description |
| Almost Certain | Is expected to occur in most circumstances; and/or high level of recorded incidents; and/or strong anecdotal evidence; and/or a strong likelihood the event will recur; and/or great opportunity, reason or meant to occur. May occur once a year or more frequently |
| Likely | Will occur in most circumstances; and/or regular recorded incidents and strong anecdotal evidence; and/or considerable opportunity, reason or means to occur. May occur once every 5 years |
| Possible | Might occur at some time; and/or few, infrequent, random recorded incident or little anecdotal evidence; and/or every few incidents in associated or comparable organisations, facilities or communities; and/or some opportunity, reason or means to occur. May occur once every 20 years. |
| Unlikely | Is not expected to occur; and/or no recorded incidents or anecdotal evidence; and/or no recent incidents in associated organisations, facilities or communities; and/or little opportunity, reason or means to occur. May occur once every 100 years |
| Rare | May occur only in exceptional circumstances May occur once every 500 + years. |

| Consequence Descriptors | | |
|-------------------------|--|---|
| | Human Life and Health | Property, Financial and Environmental |
| Catastrophic | <ul style="list-style-type: none"> • Significant fatalities • Large number of severe injuries • Extended and large numbers requiring hospitalisation • General and widespread displacement for extended duration | <ul style="list-style-type: none"> • Extensive damage • Extensive personal support • Community unable to function without significant support • Significant impact on the environment and/or permanent damage |
| Major | <ul style="list-style-type: none"> • Fatalities • Extensive injuries and significant hospitalisation • Large numbers displaced (more than 24 hours duration) • External resources required for personal support | <ul style="list-style-type: none"> • Significant damage that requires external resources. Community only partially functioning with some services unavailable. • Some impact on the environment with long term effects • Significant financial loss – some financial assistance required. |
| Moderate | <ul style="list-style-type: none"> • Medical treatment required but no fatalities • Localised displacement of people who return within 24 hours • Personal support satisfied through local arrangements | <ul style="list-style-type: none"> • Localised damage that is rectified through local arrangements. Normal community functioning with some inconvenience. • Some impact on the environment with no long-term effects or small impact on the environment with long term effect • Significant financial loss |
| Minor | <ul style="list-style-type: none"> • Small number of injuries and no fatalities. First aid treatments required. • Some displaced people (less than 24 hours) • Some personal support required • Some community disruption (less than 24 hours) | <ul style="list-style-type: none"> • Some damage • Small impact on the environment with no lasting affects • Some financial loss |

| | | |
|---------------|--|--|
| Insignificant | <ul style="list-style-type: none"> No injuries or fatalities Small number or no people are displaced for a small period of time Little or no personal support required (support not monetary or material) | <ul style="list-style-type: none"> Inconsequential or no damage Little or no disruption to the community No measurable impact on the environment Little or no financial loss |
|---------------|--|--|

| Risk Matrix | | | | | | |
|-------------|--------------------|-------------------|-----------|--------------|-----------|------------------|
| | | CONSEQUENCES | | | | |
| | | 1 - Insignificant | 2 – Minor | 3 – Moderate | 4 - Major | 5 - Catastrophic |
| LIKELIHOOD | A - Almost Certain | H | H | E | E | E |
| | B - Likely | M | H | H | E | E |
| | C -Possible | L | M | H | E | E |
| | D -Unlikely | L | L | M | H | E |
| | E -Rare | L | L | M | H | H |
| | | E = Extreme | H = High | M = Medium | L = Low | |

Annexure C – Local Sub Plans, Supporting Plans and Policies

Responsibility for the preparation and maintenance of appropriate sub and supporting plans rest with the relevant Combat Agency Controller or the relevant Functional Area Coordinator.

The sub/supporting plans are developed in consultation with the Shoalhaven LEMC and, in non-operational cases, the community.

The plans listed below are supplementary to this EMPLAN. The sub/supporting plans have been endorsed by the LEMC and are determined as compliant and complimentary to the arrangements listed in this EMPLAN.

These plans are retained by the LEMO on behalf of the LEMC.

| Plan/Policy | Purpose | Combat / Responsible Agency |
|---|--|---------------------------------------|
| Shoalhaven Section 52 Plan of Operations | This Policy describes the method and standard for preparing plans which are to be known as Operations Coordination Plans and provides a range of supporting resources to assist BFMCs and agencies in achieving the goal of efficient and coordinated fire fighting. | NSW Rural Fire Service |
| Shoalhaven Local Bushfire Risk Management Study | To minimise the risk of adverse impact of bush fires on life, property and the environment | NSW Rural Fire Service |
| Shoalhaven Local Flood Plan 2014 | Preparedness measures, the conduct of response operations and the coordination of immediate recovery measures from flooding. Covers operations for all levels of flooding and arrangements for the management of coastal erosion in the Shoalhaven LGA | NSW State Emergency Service |
| Engineering Services Plan | This plan details arrangements for the provision and coordination of Engineering Services during response to and recovery from incidents and emergencies in the Shoalhaven | Shoalhaven City Council – Engineering |

| Plan/Policy | Purpose | Combat / Responsible Agency |
|--|---|--|
| Communications Services Plan | This plan details arrangements for the provision and coordination of Communications including mobile towers and radio infrastructure during response to and recovery from incidents and emergencies in the Shoalhaven | Shoalhaven City Council – Communications |
| Transport Services Supporting Plan | This plan details arrangements for the provision and coordination of Transport Services during response to and recovery from incidents and emergencies in the Shoalhaven | Shoalhaven City Council – Transport |
| Welfare Services Supporting Plan | This plan details arrangements for the provision and coordination of Welfare Services and supporting agencies during response to and recovery from incidents and emergencies in the Shoalhaven | Welfare Services |
| HMAS Albatross Aerodrome Emergency Plan | This plan details arrangements for the provision and coordination of a Defence response to and recovery from aircraft incidents and emergencies at HMAS Albatross and the Shoalhaven Area | Defence Estate and Infrastructure Group |
| HMAS Albatross Base Emergency Management Plan | Details arrangements for the response to and recovery from non aircraft related emergencies | Defence Estate and Infrastructure Group |
| Shoalhaven Emergency Operations Centre Standard Operating Procedures | To facilitate the full or partial activation of the Emergency Operations Centre in support of the LEOCON and in accordance with the NSW Emergency Operations Centre Policy | Shoalhaven City Council - LEMO |

| Plan/Policy | Purpose | Combat / Responsible Agency |
|--|--|-----------------------------|
| NSW State Waters Marine Pollution Contingency Plan | The NSW State Marine Pollution Contingency Plan has been prepared in support of the New South Wales State Emergency Plan (EMPLAN) and the National Plan for Maritime Environmental Emergencies (National Plan) to outline arrangements for dealing with marine oil or chemical spills and maritime incidents such as groundings, collisions, disabled vessel or fire on a vessel that could result in an oil or chemical spill into State waters of NSW. | TfNSW, NSW Maritime |
| NSW South Coast Marine Pollution Contingency Plan | The NSW South Marine Pollution Contingency Plan has been prepared as a supporting plan to the NSW State Waters Marine Pollution Contingency Plan to coordinate local resources in responding to a maritime incident in the NSW South Coast area. | TfNSW, NSW Maritime |