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ECONOMICS

# **Jerramungup Shire**

## *Adverse Event Plan*

*Report prepared for*

**Shire of Jerramungup**

**May 2021**

# lucid

*/ˈluːsɪd/*

*adjective*

1. expressed clearly; easy to understand

2. bright or luminous



## Document Control

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# 1. Introduction

The Shire of Jerramungup is a local government area in the Great Southern region of Western Australia, about 180 kilometres northeast of Albany and about 440 kilometres southeast of the state capital, Perth. The Shire covers an area of 6,507 square kilometres with Bremer Bay its largest town. The seat of government is the town of Jerramungup.

The Fitzgerald River National Park, within the Shire, covers an area of 2,972 square kilometres. The park is one of the most botanically significant national parks in Australia, containing 20% of Western Australia's described plant species - more than 1,800 in total.

The Shire has experienced numerous previous adverse events including drought, bushfires and other adverse events. The development of this plan has been informed through the National Strategy for Disaster Resilience as well as other similar plans and strategies. It seeks to leverage this previous work in order to better plan for future adverse events in the Shire of Jerramungup. The Shire of Jerramungup's Strategic Community Plan and other strategic and policy documents have also been considered.

The area is synonymous with a unique and picturesque natural environment highlighted by the presence of the Fitzgerald River National Park and the Bremer Canyon. The Fitzgerald River National Park, located east of Jerramungup and Bremer Bay, and easily accessible from both towns, is one of the largest national parks (329,039 hectares) in Australia.

Figure 1.1. Shire of Jerramungup Map



Source: Google maps Shire of Jerramungup

The Shire of Jerramungup is bordered by the Shires of Gnowangerup to the west, Kent to the north, Ravensthorpe to the east, Lake Grace on the north-east corner, the City of Albany to the south-west and the Southern Ocean to the south. The Shire incorporates the towns of Jerramungup and Bremer Bay and the districts of Needilup, Jacup, Gairdner, Boxwood Hill and Fitzgerald. Jerramungup and Bremer Bay and the two main town sites the others have not developed in any significant way. The Adverse Event Plan will guide the Shire of Jerramungup's approach to preparing for and implementing recovery activities in response to the current drought and future adverse events affecting the shire's economy.

As stated in the shire's Economic Growth Project Plan 2016-2021, "The Shire of Jerramungup is heavily reliant on agriculture with 48% of local residents employed in the sheep, beef cattle and grain farming industries. The entire local economy relies on consistent rainfall and the continued prosperity of the agricultural sector."

It is strongly recognised that water is a fundamental enabler of economic growth and state prosperity. Securing water sources of the appropriate quality is critical to Western Australia's quality of life. Water is also essential to the ecological and cultural landscapes of the State. Achieving a balance between the needs of the community, the economy and the environment is of prime importance.

There is increasing competition for water resources between sectors, including agriculture, mining, and residential development, and also for ecological processes to ensure functioning and resilient ecosystems. The State's objective is to support Western Australia's growth and development by managing the availability and quality of water sustainably.

As a remote and reasonably dry location, the Shire of Jerramungup's local community has a profound appreciation of this finite resource. The community is dependent on an isolated rain catchment system for its potable water supply, whilst Bremer Bay has a series of bores that penetrate a priority one ground water system.

As part of the Drought Communities Projects, Council was tasked with the preparation of a plan to mitigate risks associated with adverse events by also taking into account existing community plans, corporate plans and any economic development and tourism strategies.

This plan establishes a community-led process to determine the recovery needs for businesses and the community depending on the exact nature of the adverse event.



Source: Fitzgerald Bioshere Group

The plan establishes a context for defining severity of adverse events from a meteorological (rainfall) perspective, a production perspective and the socio-economic impacts.

Our changing climate will also continue to present challenges to our communities in the future. The Shire of Jerramungup's coastline is likely to be impacted by rising sea levels over time and coastal erosion which has the potential to impact existing and planned development.

The threat of bushfire is also ever prevalent and its devastating impacts on environment and communities has been considered in the Shire's forward planning.

The Shire of Jerramungup is susceptible to increased risks of natural disasters and coastal inundation. A warming climate will also impact lifestyle amenity and potentially change the way we interact with our local environment including driving up costs to maintain existing levels of public open space infrastructure.

Planning and preparedness for adverse events is an ongoing endeavour for the Shire of Jerramungup to support our businesses and community and encourage growth and innovation.

The Shire recognises that community-led recovery is a responsive and flexible approach used to empower and enable adverse affected communities to create and implement their own solutions and move forward.

Less than 12 months ago Gairdner in the Shire of Jerramungup has become Western Australia's 11th water deficiency declaration since May 2019, highlighting the significant impact climate change is having on rainfall in the Great Southern agricultural region.



A file photograph of CBH's Gairdner site.

-  The State Government plans to cart water to CBH's Gairdner site from Friday after the South Coast town became the 11th WA area declared water deficient in 12 months.
- 
-  Water Minister Dave Kelly today announced 660 kilolitres of water a week would be carted to two, 75,000 litre mobile water tanks at CBH's Gairdner site, 150km north of Albany, to help farmers in desperate need of water for livestock.
- 

At the time, Water Minister Dave Kelly announced that the State Government will begin carting water from Friday, June 12 for emergency water supplies for animal welfare needs.

The official declaration followed an application from the Shire of Jerramungup on behalf of 10 farmers in the Gairdner farming area, located over 40 kilometres west of Jerramungup. A declaration was made as a last resort after continued dry conditions have depleted on-farm and local community water supplies.

The declaration will initially see up to 660 kilolitres of water carted each week to two 75,000 litre mobile water tanks at the Co-operative Bulk Handling's (CBH) site on South Coast Highway, Gairdner while a longer-term site is prepared. This will significantly reduce the distance farmers need to travel to source emergency livestock water.

Water will be sourced from the Great Southern Towns Water Supply Scheme and from the Water Corporation's Bolganup Dam.

Water carting arrangements had been managed by the Department of Water and Environmental Regulation with support from the Department of Primary Industries and Regional Development and the Water Corporation.

In light of continuing water shortages and the need to conserve this precious resource, farmers who are carting livestock water are encouraged to cart to closed storages or tanks rather than into dams where water losses are high through evaporation.

For the Shire of Jerramungup to strive to achieve its key objectives, preparedness via an Adverse Event Plan is imperative.

Those key objectives are:

- The Shire will sustain a dynamic infrastructure network responsive to usage demand that attracts and retains residents and businesses.
- The Shire will experience broad economic and population growth with decreasing economic barriers, diversified agriculture and fisheries output and a vibrant visitor economy.
- The Shire will be a responsible custodian of the environment, working with community groups and other entities to increase renewable energy initiatives, vegetation cover and rehabilitate degraded public land throughout the local region.
- The Shire’s resident population will grow more than the WA regional average supported by increased community recreation and cultural opportunities and access to key liveability factors such as health and wellbeing services and educational opportunities.



Source: [www.farmweekly.com.au/story/6560591/more-areas-now-declared-water-deficient/](http://www.farmweekly.com.au/story/6560591/more-areas-now-declared-water-deficient/)

## 2. Planning for Adverse Events

### 2.1 Adverse Event Overview

In Section 2.3.6 of the Shire of Jerramungup’s Economic Growth Project Plan 2016-2021, it is clearly articulated that security is vital for the sustainable use and development of land throughout the State. Security efforts in Western Australia have the aim of managing risks while building capacity to adapt to changing global and domestic circumstances. The State’s objective is to secure strategic economic, ecological and social assets.

The sustained growth and prosperity of the State and its regions, and the physical safety of its citizens, relies on its resilience, its capacity to withstand or limit damage and recover quickly from adverse events. Planning for security seeks to ensure that all people and essential economic and ecological assets are protected from threats.

The report highlights that risk management is needed to prepare safeguards and contingencies against a variety of present and emerging threats.

The State’s strategic approach to planning for security includes the following adverse events elements such as natural hazards and climate change. The Shire’s strategic direction is reflected in: S5.0.1: Risks are managed and the Shire achieves security relating to natural hazards/disaster management.

Despite existing strengths, every year, communities like the Shire of Jerramungup are subjected to the damaging impacts of disasters caused by destructive bushfires, droughts and/or severe storms. The impacts of these disasters on people, the economy, major infrastructure and the environment remind us of the need to continue improving resilience to disasters.

We need to develop and embed new ways of doing things that enhance existing arrangements across and within governments, as well as among businesses, the not-for-profit sector, and the community more broadly, to improve disaster resilience and prevent complacency setting in once the memory of a recent disaster has subsided.



Source: Shire of Jerramungup Facebook

The size, severity, timing, location and impacts of disasters are difficult to predict, and our changing climate increases the uncertainty about future risks. Scientific modelling suggests that climate change will likely result in an increased frequency and severity of extreme weather events. Rising sea levels are increasing the likelihood of coastal erosion and severe inundation.

Many known factors are increasing our vulnerability to disaster. Work-life patterns, lifestyle expectations, demographic changes, domestic migration, and community fragmentation are increasing community susceptibility, as well as altering local social networks and sustainability of volunteer groups. The increasing complexity and interdependencies of social, technical, and infrastructure systems are also playing a role in increasing our vulnerability to disasters. In future, pressures for urban development to extend into areas of higher risk from natural disasters compounds the problem, as does the expectation that the same services and facilities will be available wherever we choose to live.

Australian communities are varied in their composition and in their level of exposure to disaster risk. Factors that can influence disaster resilience include remoteness, population density and mobility, socio-economic status, age profile, and percentage of population for whom English is a second language. Within individual communities, certain members are more vulnerable and may need tailored advice and support.

Potential escalation in the frequency and magnitude of hazards and our increasing vulnerability to disasters presents governments with unprecedented calls on their resources and expertise. Governments' desire to help communities in need, and pressure to help those affected may be creating unrealistic expectations and unsustainable dependencies. Should this continue, it will undermine community capability and confidence. Therefore, communities need to be empowered to take shared responsibility for coping with disasters.

To increase disaster resilience, emergency management planning should be based on risk and be integrated with strategic planning of government and communities. It should consider risks and risk treatments across the social, built, economic and natural environments.

For the purposes of this plan, the term 'adverse event' is used to include natural disasters and other extraordinary events such as pandemics, drought and situations whereby large industries, such as primary production and/or tourism sectors, and/or the community at large are impacted.



Source: Shire of Jerramungup Facebook

## 2.2 Principles of Disaster Resilience

Given the increasing regularity and severity of natural disasters, the Australian Government has recognised that a national, coordinated and cooperative effort is required to enhance Australia's capacity to withstand and recover from emergencies and disasters. A disaster resilient community is one that works together to understand and manage the risks that it confronts. Disaster resilience is the collective responsibility of all sectors of society, including all levels of government, business, the non-government sector and individuals. If all these sectors work together with a united focus and a shared sense of responsibility to improve disaster resilience, they will be far more effective than the individual efforts of any one sector.

Governments, at all levels, have a significant role in strengthening the nation's resilience to disasters by:

- Developing and implementing effective, risk-based land management and planning arrangements and other mitigation activities;
- Having effective arrangements in place to inform people about how to assess risks and reduce their exposure and vulnerability to hazards;
- Having clear and effective education systems so people understand what options are available and what the best course of action is in responding to a hazard as it approaches;
- Supporting individuals and communities to prepare for extreme events;
- Ensuring the most effective, well-coordinated response from our emergency services and volunteers when disaster hits; and
- Working in a swift, compassionate and pragmatic way to help communities recover from devastation and to learn, innovate and adapt in the aftermath of disastrous events

The Shire of Jerramungup must implement change in a coordinated manner, as leadership is needed to drive improvements in disaster resilience. It is important to understand the risks and communicate them to all levels of the community; we must work with the people and organisations that can affect the necessary changes and empower individuals in our community to exercise choice and take responsibility. Our planning approaches must include risk reduction strategies and our capacity to deal with disasters must be enhanced by greater flexibility and adaptability of our emergency services agencies and communities.

According to the Council of Australian Governments National Strategy for Disaster Resilience (February 2011), best practice will be achieved through the following steps:

- **Leading change and coordinating effort:** The Shire needs to drive improvements in disaster resilience. The responsibility for leadership should be taken by the Shire and its executive in a coordinated manner, so as to maximise the benefits from limited resources.
- **Understanding risks:** Underpinning a disaster resilient community is knowledge and understanding of local disaster risks. We all share responsibility to understand these risks, and how they might affect us. By understanding the nature and extent of risks, we can seek to control their impacts, and inform the way we prepare for and recover from them.

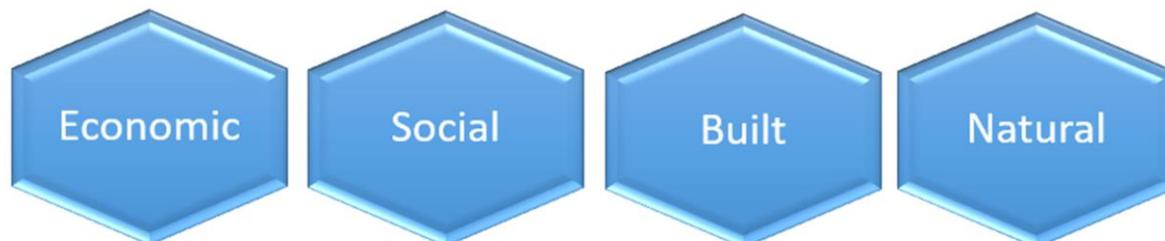
- **Communicating with and educating people about risks:** Risks should be openly discussed in order to anticipate and manage them. The Shire needs to seek a clearer understanding of our risks and what to do about them is needed, particularly at the community level. Information on disaster risk should be communicated in a manner appropriate to its audiences. Good communication has never been so important than during an adverse event.
- **Partnering with those who effect change:** Working together and drawing on the expertise and capacity of various partners produces far greater results than do individual efforts alone. Partnerships across and within governments, businesses, the not-for-profit sector and the community, will create a well-informed, integrated and coordinated approach to increasing disaster resilience. The result will be a stronger and more resilient nation.
- **Empowering individuals and communities to exercise choice and take responsibility:** Individuals and communities should be more self-reliant and prepared to take responsibility for the risks they live with. For a resilient nation, all members of the community need to understand their role in minimising the impacts of disasters, and have the relevant knowledge, skills and abilities to take appropriate action. A resilient community will understand and have the ability to use local networks and resources to support actions required during an emergency and to support recovery efforts. How well this works will again be dependent on good communications.
- **Reducing risks in the built environment:** Having knowledge and understanding of hazards and risks is of little use unless the information can be translated into relevant controls and mechanisms for dealing with them. Planning approaches that anticipate likely risk factors and the vulnerability of the population can reduce future possible impact of disasters. Responsible land use planning can prevent or reduce the likelihood of hazards impacting communities. Building standards can mitigate the likelihood of loss of life, as well as damage to and/or destruction of property and infrastructure.
- **Supporting capabilities for disaster resilience:** Disasters can stretch the capacity of our emergency services agencies and overwhelm communities. Development of remote community and industrial centres, extent of isolation, and reliance on emergency service volunteers, all present challenges. We should, therefore, pursue greater flexibility and adaptability within our emergency services agencies and communities to increase our capacity to deal with disasters.

These elements have been embedded in our plan.

## 2.3 Understanding Adverse Events

Recovery is defined in the Australian Emergency Management Handbook as being “the coordinated process of supporting affected communities in the reconstruction of the built environment and the restoration of emotional, social, economic, built and natural environment wellbeing”. In assisting individuals and communities to manage their own recovery, activities are delivered in an integrated manner across the four domains of community wellbeing (Figure 2.1).

Figure 2.1. Four Domains of Community Wellbeing



Source: Lucid Economics

The economic domain considers the impact that an adverse event may have on the local or regional economy of the area or industry. The Shire of Jerramungup’s recovery focus is on the economic domain as it relates to primary industries, primary producers and tourism.

Longer term recovery for primary producers, primary industries and tourism operators can involve a range of financial, social and personal factors that will vary between primary producers, businesses, and industries. Assistance measures often require a multi-faceted approach to meet people’s needs.

Adverse events such as droughts are a recurrent and frequent feature of Australia’s climate. Severe droughts bring sharp reductions in agricultural output and farm incomes. The effects of climate change are expected to increase the frequency and severity of droughts and intensify impacts to primary production.

The context for defining severity of events from a production perspective and the socio-economic impacts is contained within the plan; and in the case of droughts, from a meteorological (rainfall) perspective. Regardless of the event, standard features that guide recovery efforts are outlined in this plan as the general principles and approach will be similar.

The plan establishes a context for defining severity of adverse events from a meteorological (rainfall) perspective, a production perspective and the socio-economic impacts.

Planning and preparedness for adverse events is an ongoing endeavour through the delivery of the shire of Jerramungup’s core business to assist primary industries and regions to grow and innovate. Depending on the exact nature of the adverse event our approach to working with primary industries and primary producers ensures we have the networks and intelligence required to support effective recovery programs.

This plan will guide the Shire of Jerramungup’s approach to providing a dedicated, committed and structured recovery program. The recovery program will provide the following benefits to the region:

1. Provides critical support for primary industries and primary producers to recover from severe impacts and hence return to ‘normal business’ as quickly as possible.
2. Assists the Shire in mitigating an identified strategic risk: Failure to provide effective response to an emergency or adverse event
3. Meets the Intergovernmental Agreement (IGA) objectives and contributes to the State’s agreed role and responsibilities under the IGA.
4. Ensures that the Shire meets its obligations under the State Emergency Management Plan, in particular supporting the economic recovery of primary industries.
5. Complements the Shire’s Emergency Response Program.

The Adverse Event plan covers emergency events that can occur quickly, without warning but have a defined ‘start’ and ‘end’ (fire, flood, frost, hail, severe storm) and other adverse events such as drought and significant sudden trade restrictions resulting from an adverse event which are less obvious and defined. The principles for dealing with these events are similar; however, the insidious nature of drought and sudden significant trade restrictions require a slightly different approach.



Source: Hit.com.au news: 21 December 2018

The following figure summarises the Shire of Jerramungup’s role for the different events and stages of support to manage the adverse events.

Figure 2.2. Adverse Event Scenarios, Stages and Shire Responsibility/Role

		EVENT SCENARIO		
		SUDDEN ONSET Emergency events (fires/floods)	SUDDEN ONSET non-Emergency event (eg power failure)	SLOW ONSET Prolonged events (droughts)
STAGE	PLAN AND PREPARE	<ul style="list-style-type: none"> <li>• Know your networks</li> <li>• Keep local database</li> <li>• Prepare individual businesses</li> <li>• Communications systems</li> <li>• Resource volunteers</li> <li>• Educate the community</li> </ul>	<ul style="list-style-type: none"> <li>• Prepare resources (spare)</li> <li>• Infrastructure maintenance</li> <li>• Resource volunteers</li> <li>• Educate the community</li> </ul>	<ul style="list-style-type: none"> <li>• Land Planning</li> <li>• Understanding climate change</li> <li>• Coastal Management Plans</li> </ul>
	RESPONSE	<ul style="list-style-type: none"> <li>• Rapid impact assessment</li> <li>• Establishing emergency management centre</li> <li>• Establish Evacuation centre</li> <li>• Early and accurate info</li> </ul>	<ul style="list-style-type: none"> <li>• Early and accurate info</li> <li>• Work with partners to address the event</li> <li>• Establishing emergency management centre (if needed)</li> </ul>	<ul style="list-style-type: none"> <li>• Regional leadership</li> <li>• Communications and IT</li> <li>• Retention of people and skills</li> <li>• Health &amp; wellbeing assistance</li> </ul>
	RECOVER	<ul style="list-style-type: none"> <li>• Evaluate and document the experience</li> <li>• Reconstruction of build environment</li> <li>• Restoration of economic community business centre</li> </ul>	<ul style="list-style-type: none"> <li>• Evaluate and document the experience</li> <li>• Restoration of normal operating conditions</li> <li>• Work with partners to reduce future incidence</li> </ul>	<ul style="list-style-type: none"> <li>• Assistance packages</li> <li>• Capacity building</li> <li>• Multi-agency phased support</li> </ul>

Source: Lucid Economics; SA (2017)

Outside of the Shire of Jerramungup, the WA Department of Primary Industries and Regional Development (DPIRD) plays a key role in the preparation, response and recovery from adverse events.

One of the Department of Primary Industries and Regional Development's roles is to grow and protect Western Australia’s agriculture and food sector.

Enabling farm businesses to better manage the increasing seasonal variability is critical for the success of the Western Australian agrifood sector. The Department of Primary Industries and Regional Development is enabling farm businesses to make more informed planning and financial decisions on weather and climate risks. These decisions range from short-term tactical decisions, through to managing strategic planning for climatic futures. The development of improved weather data and seasonal forecasting tools are designed to assist you to better manage and take full advantage of the opportunities related to seasonal variability and climate change.

The extreme weather events tool uses data from DPIRD's extensive weather station network to map extreme temperatures, either below or above a specified threshold.

It provides real-time information about the location, duration and severity of frost and heat stress events to help grain growers manage accordingly to reduce their financial impact.

DPIRD has a lead role in emergency prevention, preparedness, response and recovery.

Depending on the type and severity, an outbreak could cause significant damage to property, the environment and harm humans and industry.

Under the State Emergency Management Policy statement 5.9.7, DPIRD also has the role and responsibility for coordinating animal welfare services in emergencies as outlined in the State Support Plan - Animal Welfare in Emergencies (interim).

Long-term records show that our climate is becoming warmer and drier. This trend is expected to continue, with dry seasons likely to become more frequent over southern Western Australia.

DPIRD provides data and information on seasonal weather through its network of automatic weather stations and seasonal climate forecasts through the Statistical Climate Information system.

In dry years, the department provides information to assist growers and agribusiness to manage seasonal conditions and their consequences.



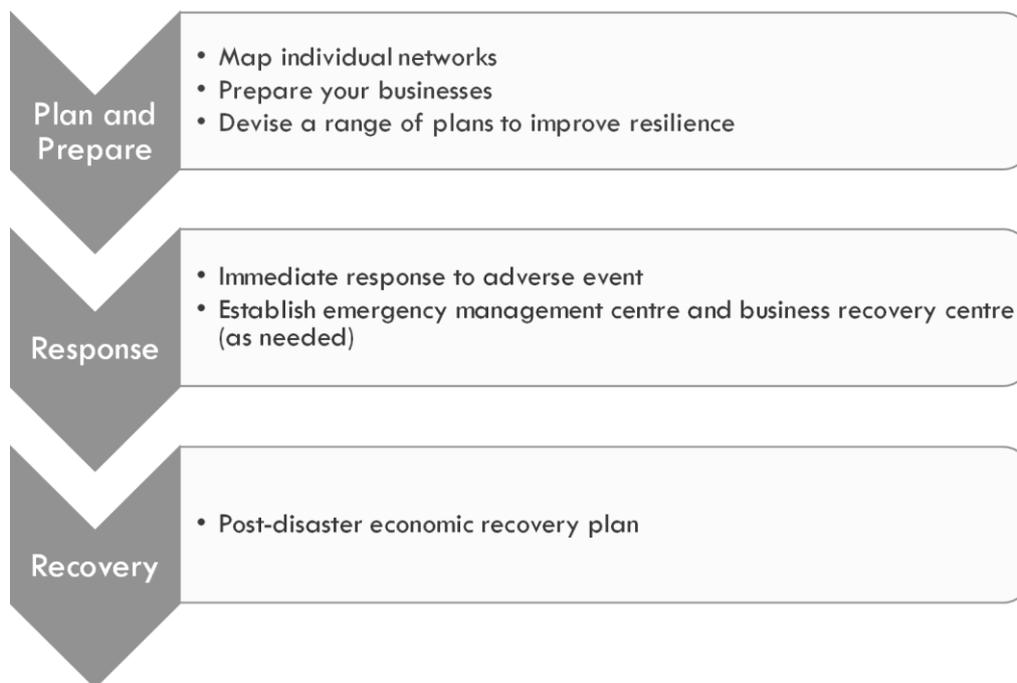
## 3. Shire of Jerramungup Adverse Event Plan

### 3.1 Overview

The following figure (Figure 3.1) provides a summary of the Jerramungup Adverse Event Plan, which has three key components:

- Plan and Prepare
- Response
- Recovery

Figure 3.1. Overview of Jerramungup Adverse Event Plan



Source: Lucid Economics

### 3.2 Plan and Prepare

Planning and preparedness for adverse events is an ongoing endeavour through the delivery of Shire's core business to assist primary industries and regions to grow and innovate. Our approach to working with primary industries and primary producers ensures we have the networks and intelligence required to support effective recovery programs. Good communication networks are the key.

Preparing business communities for disaster is a critical pillar of overall community planning and resilience. Investment into building local business capacity is never a dud investment as whether it is a natural disaster or an economic crisis, sound planning can provide a buffer and a solid building block for recovery.

### 3.2.1 Map your networks

Understanding communication networks is essential in good adverse event preparation so that in the event of an adverse event taking place, communication can be streamlined, ensuring all the relevant community stakeholders and businesses receive the most up to date and accurate information, which is critical in the response phase. Specifically, this activity should include:

- Apply available resources into developing and maintaining the most robust local business database as possible.
- Explore opportunities to utilise data held by other Shire departments – for example Environmental Health and Building – to populate and maintain your database. In doing so understand the constraints of privacy regulations and the like.
- In developing relationships, consider how they can be formalised and be readied for deployment. For example, have an agency business support team signed off in advance via an MOU.

### 3.2.2 Prepare your individual businesses

While individual businesses should be responsible for their own disaster preparedness, smaller businesses may not have the time and capacity to develop specific and detailed disaster preparedness plans. The Shire can assist through continuing to support the message that businesses need to be aware of and prepared for a range of potential adverse events.

The Shire will be seen as a responsible custodian of the environment working with community groups and other entities to increase renewable energy initiatives, vegetation cover and rehabilitate degraded public land throughout the local region. The Shire will be prepared for and respond to the challenges of climate change.

### 3.2.3 Diverse range of plans

The Shire is responsible for developing a wide range of plans that support resilience in the local community. From coastal management through to community and strategic planning as well as specific strategies (i.e., investment attraction, economic development, etc.), the Shire conducts a wide range of planning activities that help to support and prepare the community in the face of potential adverse events. The Shire of Jerramungup current Plans and Strategies include:

- 2016-2026 Community Plan
- 2017 - 2022 Workforce Plan
- 2017-2021 Corporate Business Plan
- 2017-2022 Bushfire Risk Management Plan
- Asset Management Plan
- Bremer Bay Airfield Master Plan 2015
- Council Business Plan - Staff Housing Replacement and Seniors Independent Living
- Customer Service Charter 2020
- DAIP 2019 - 2024
- DRAFT - 2021 Strategic Community Plan
- Economic Growth Project Plan 2016 - 2021
- Reviewed Local Emergency Management Arrangements - March 2016
- Shire of Jerramungup Coastal Management Plan 2017 - 2027
- Shire of Jerramungup Long Term Financial Plan 2017 - 2032

The following table (Table 3.1) highlights a range of water projects that Shire of Jerramungup will undertake regarding planning for the future resilience of the community.

Table 3.1. Water Project Planning for Resilience, Shire of Jerramungup

Jerramungup	completed	started	in progress	to be planned	total
	<b>\$49,365</b>	<b>\$3,940</b>	<b>\$138,000</b>		<b>\$191,306</b>
Gairdner Bore	<u>Earthworks</u> : Track access & sand pad <u>Water Storage</u> : New tank 215KL <u>Distribution</u> : new solar pump and fittings				
Houstons Dam	Earthworks: clean dam and channel Distribution: pump				
Jacup Dam			Earthworks: catchment expansion		
Earthworks: catchment expansion	Earthworks: improve inlet channel between catchment and dam (Shire); catchment grade to clay				
Cowalellup Bore	Distribution: Repair/replace tampered pump & distribution	Other: fencing around bore pump			
Gairdner Community Dam	remove dividing wall between two existing catchments, clean out and enlarge catchment area		\$50,000		
Boxwood Hill Community Dam upgrade (Ken Shields)	Redirecting water from private dam into community dam by installing plumbing and pumps that channel water across the road into the community dam		\$73,000		

Source: Rural Water Planning -Summary of site works undertaken, Shire of Jerramungup p1 Shire Report.Jerra.20210322

Table 3.2. Project details by shire (all figures \$ excl gst) 2018 – 2019 and 2019 – 2020

Excerpt from Site_Visits_WA_RuralWater Planning_investment_v202 0.07.14F.pdf		2018-19	2019-20	Total
<b>Jerramungup</b>	<b>Works' summary</b>	<b>\$10,521</b>	<b>\$150,392</b>	<b>\$160,914</b>
Jacup Dam SCWS – Lester's property	Catchment refurbish and upgrade		\$7980	\$7980
Jerramungup bore.0. explore. test	4 x projects at Cowalellup Road, Devils Creek Road, Bremer Bay, Parson's properties x2 (no water)	\$1 166	\$15 218	\$16 385
Jerramungup bore.1 Cowalellup Road	Develop bore, improve access and distribution to existing tank, including build power box and disconnect and reconnect power during works	\$4 363	\$7 242	\$11 606
Jerramungup bore.2 Devils Creek Road	Develop bore, improve access and distribution, new 250 kilolitre tank	\$4 990	\$44 276	\$49 267
Jerramungup Bore.3 Bremer Bay: Millers Point Road at Bremer Boxwood Hill Road	Develop bore, improve access and distribution, new solar pump and 250 kilolitres tank		\$28 670	\$28 670
Needilup Siding SCWS dam	Catchment refurbish, improve access, new 250 kilolitre tank, solar pump, scour drain and distribution.		\$47 004	\$47 004

Source: Rural Water Planning -Summary of site works undertaken, Shire of Jerramungup p2 Shire Report.Jerra.20210322

Table 3.3. Categories of expenditure in the Rural Water Planning works program as at Oct 2020

Category of expenditure, Rural Water Planning works, version October 2020	
1	bore development infrastructure and testing
2	desalination infrastructure installation and maintenance
3	earthworks
4	fittings, pipes, plumbing, standpipes for water distribution
5	freight / transport / haulage
6	groundwater exploration and assessment
7	labour
8	mobilisation of earthmoving machinery
9	pumps for water distribution
10	site surveillance
11	tanks and associated hardware for water storage
12	technical planning / consult
13	utilities / trade / specialty / certified practice / repair
14	water level surveillance
15	other goods and services for site works

Source: Rural Water Planning -Summary of site works undertaken, Shire of Jerramungup p3 Shire Report.Jerra.20210322

### 3.2.4 Shire of Jerramungup Water Declarations:

The Minister for Water had approved and announced 3x Water Deficiency Declarations since 19 December 2019 at the following locations; Jerramungup North, Jerramungup East (Fitzgerald) and the Gairdner area of the Shire of Jerramungup. The Shire has been proactively working with our farmers in the Shire since November 2019 to secure water. Water Corporation also assist DWER with logistics of water carting. Water Corporation are responsible for carting the water to the 3 sites. The carted water is purely for emergency livestock and firefighting and should not be accessed for spray water or unregistered farmers.

Gairdner has since been revoked however Jerramungup North and East have been suspended

The 3 water declarations within the Shire of Jerramungup include:

[10 June 2020 – Gairdner area](#)

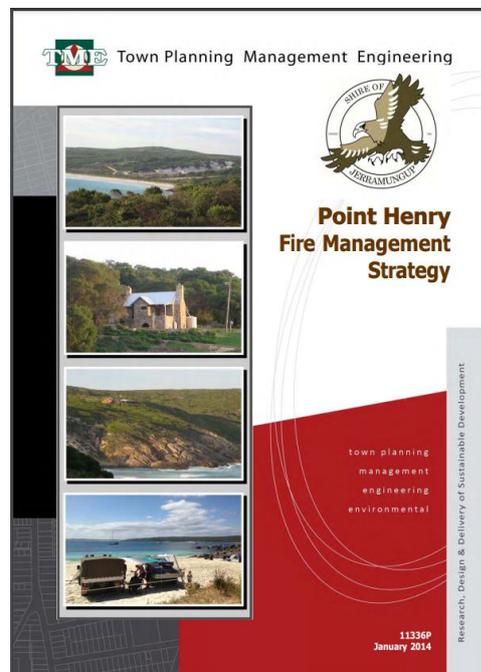
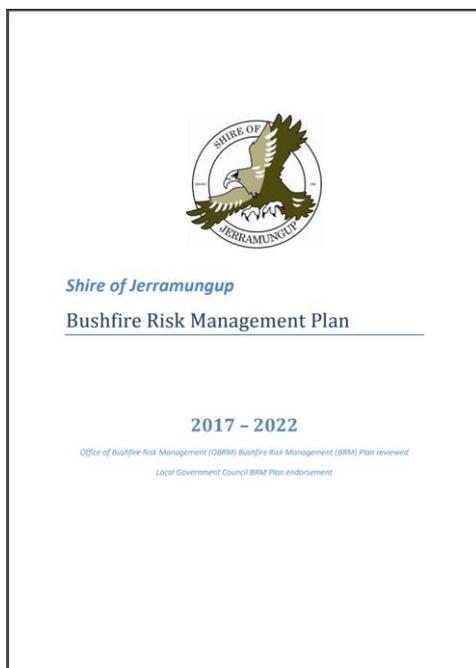
[13 February 2020 – Jerramungup East \(Jacup\)](#)

[19 December 2019 – northern parts of Shire of Jerramungup](#)

### 3.2.5 Bushfire Preparedness:

The Shire of Jerramungup has done some really good work and has been very proactive in the area of bushfire preparedness; in particular:

- The Shire of Jerramungup was the first local government in the State to adopt a Bushfire Risk Management Plan.
- The Shire also have a Point Henry Fire Management Strategy as Point Henry is a serious bushfire risk to the Shire due to the one road in an out, topography and vegetation.
- Since the adoption of the Bushfire Risk Management Plan the Shire has been seeking ongoing financial support and assistance from DFES to continue to fund a Bushfire Risk Mitigation Officer, the Shire was successful in negotiating an agreement. The agreement is to pay the salary of the Bushfire Risk Mitigation Coordinator to undertake and complete Bushfire Risk Management Activities.



### 3.2.6 Covid-19 Pandemic preparedness

The Shire of Jerramungup like most local councils around Australia faced an unprecedented adverse event in early 2020 with the spread of the coronavirus around the world. As identified in KPMG’s COVID-19: Local Government Response Plan, the coronavirus (COVID-19) pandemic presents many challenges for local government. While local government themselves are complex medium-sized businesses experiencing many of the same challenges as other small to medium businesses, they are also the first point of contact with our communities and play a key role in supporting our local businesses and communities during times of challenge.

During the coronavirus pandemic, they are being enlisted to enable and enforce the federal and state government’s restrictions in regards to their communities needing to be physical distancing and self-isolating. Many essential services are delivered by the local councils, and often involve a high degree of interaction with vulnerable members in our communities through their provision of services such as public health and aged care; meals on wheels; community services and waste management.

KPMG identified some key focus areas and themes to consider to assist local councils as they navigate through these challenges:

- Council’s own Operational Resilience
- Council’s Financial resilience
- Service delivery
- Customer and community engagement
- Technology continuity and mobility deployment
- Workforce management and remote working
- Local economic support

#### COVID-19 UPDATES FOR THE SHIRE OF JERRAMUNGUP COMMUNITY

*Published on Wednesday, 1 April 2020 at 9:48:00 AM*

The Shire of Jerramungup are working with the Department of Health to provide accurate updates on the current COVID-19 (Coronavirus) health issue.

It is important during this time that you continue to keep updated through the [Department of Health](#) who are indicating that there will be a continued risk of COVID-19 through Western Australia from late April with August currently forecast to be the most dangerous period across the State.

##### FOR LATEST UPDATES AND DEPARTMENT OF HEALTH INFORMATION

For the **latest updates** from the State Government in relation to COVID-19 including a daily snapshot, please visit their [website](#).

We do recommend keeping up to date on the Coronavirus through the Australian Government’s [Department of Health](#) and the World Health Organisation [‘Coronavirus disease \(COVID-19\) advice for the public’](#).

Members of the public are also encouraged to go to the following online resources for up to date information:

- [HealthyWA website](#) – contains important information on COVID clinics and current advice.
- [Commonwealth Department of Health](#) – contains a number of fact sheets to answer the many questions currently being asked by the community and different industries including advice for employers.
- [State Government Coronavirus Page](#) – includes the WA Government Pandemic Plan

##### IMPORTANT WAYS TO REDUCE YOUR RISK

You should continue to go about your usual day-to-day business without the need to stay home or limit your social activities.

Everyone must practice good hygiene to protect against infection and prevent the virus spreading.

The Department of Health provide information on protecting yourself and your family at their [website](#).

There are also ways you can easily reduce your risk:

- **Wash** hands often with soap and running water, for at least 20 seconds. **Dry** with paper towel or hand dryer.
- **Try** not to touch your eyes, nose or mouth.
- **Cover** your nose and mouth with a tissue when you cough or sneeze. If you don’t have a tissue, cough or sneeze into your upper sleeve or elbow.
- **Isolate** yourself at home if you feel sick. If you take medication ensure you have adequate supplies.
- **Phone** your GP first if you need medical attention. They will tell you what to do.
- **Continue** healthy habits: exercise, drink water, get plenty of sleep, and now is the time to quit smoking. Call the Quitline 137 848.
- **Don’t** wear a face mask if you are well.
- **Buy** an alcohol-based hand sanitiser with over 60 per cent alcohol.
- **Get** the flu shot (available April).
- **Shaking hands** is optional!



Source: Shire of Jerramungup website

### 3.3 Response

Obtaining early and accurate information regarding the impact of an event is a core expectation on local government. Impacts on individuals, infrastructure and the community are generally measured and managed initially through municipal emergency recovery arrangements.

In terms of business recovery, a rapid impact assessment is critical for the response in order to facilitate an efficient and appropriate response from government.

Establishing a business centre (physical or virtual) is an integral feature of the business response. The need for a dedicated business support area is critical, as there are many barriers to business owners seeking support from perceptions such as their issues not being as important or fear of backlash. A business information portal is another important support mechanism.

The response phase will always be customised to the type and severity of the adverse event that has taken place (or is taking place). For example, the response to differing types of drought are presented in the following tables.

**Table 3.2. Response Phase 1: ‘Mild’ Adverse event (or Drought)**

A description of the circumstances which may define a ‘mild adverse event or drought’ and the commensurate response measures. An event may be defined by any or all of the circumstances below.

#### THE CIRCUMSTANCES

Production: two years of less than 65% of the long term average farm production

Socio economic/Environment Impacts:

In the region, a 10% increase in the:

1. % of farm businesses that are clients of the Rural Financial Counselling Service.
2. % of farm businesses in receipt of the Farm Household Allowance
3. Increasing rate of FMD draw down.
4. Numbers of referrals for mental health counselling from GPs and Community Health NGOs.
5. Number of days soils exposed to wind erosion (for drought only).

Meteorological: a 1 in 10 year, 2 growing seasons rainfall deficiency.

E.g. a second year of < decile 3 growing season rainfall.

The impacts will be determined from intelligence through the Jerramungup Adverse Event Plan and may also consider other metrics indicative of the impact on a region or community.

#### OVERVIEW OF RESPONSE

Strategies will be considered to address the additional demand for targeted and flexible support to assist early decision making. Including:

- Focussed regional intelligence on production impacts, land condition impacts, and demand on financial and health and wellbeing services
- Implementation of a communications and information strategy appropriate to the circumstances

Source: Lucid Economics

**Table 3.3. Response Phase 2: ‘Moderate’ Adverse event (or Drought)**

A description of the circumstances which may define a ‘moderate adverse event or drought’ and the commensurate response measures. An event may be defined by any or all of the circumstances below.

#### **THE CIRCUMSTANCES**

Production: three years of less than 65% of the long term average farm production.

Socio economic/

Environment Impacts: In the region, a 30% increase in the:

1. % of farm businesses that are clients of the Rural Financial Counselling Service
2. % of farm businesses in receipt of the Farm Household Allowance
3. increasing rate of FMD draw down
4. numbers of referrals for mental health counselling from GPs and Community health NGOs
5. Number of days soils exposed to wind erosion (for drought only).

Meteorological: a 1 in 20 year, 3 growing seasons rainfall deficiency.

E.g. a third year of < decile 3 growing season rainfall.

The impacts will be determined from intelligence through the Jerramungup Adverse Event Plan and may also consider other metrics indicative of the impact on a region or community.

#### **OVERVIEW OF RESPONSE**

Strategies will be considered to boost services that can provide additional support to:

- focus regional intelligence on production, demand on financial and health and wellbeing services and land condition
- implementation of a communications and information strategy
- business and production technology extension to assist farms to manage and recover
- support retention of people and skills in the regions
- regional leadership, coordination and community health and wellbeing, and
- priority environmental concerns

Source: Lucid Economics

**Table 3.4. Response Phase 3: ‘Severe’ Adverse event (or Drought)**

A description of the circumstances which may define a ‘severe adverse event or drought’ and the commensurate response measures. An event may be defined by any or all of the circumstances below.

#### **THE CIRCUMSTANCES**

Production: four years of less than 65% of the long term average production.

Socio economic/

environment impacts: In the region, a 50% increase in the:

1. % of farm businesses that are clients of the Rural Financial Counselling
2. % of farm businesses in receipt of the Farm Household Allowance
3. increasing rate of FMD draw down
4. numbers of referrals for mental health counselling from GPs and Community health NGOs
5. number of days soils exposed to wind erosion (for drought only)

Meteorological: a 1 in 100 years, 4 growing seasons rainfall deficiency.

E.g. a 4th year of < decile 3 growing season rainfall.

The impacts will be determined from intelligence through the Jerramungup Adverse Event Plan and may also consider other metrics indicative of the impact on a region or community.

#### **OVERVIEW OF RESPONSE**

Strategies will be considered to address and mitigate disruption of rural and regional communities, economies and environments. Additional support to:

- focus regional intelligence on production, demand on financial and health and wellbeing services and land condition
- implementation of a communications and information strategy
- business and production technology extension to assist farms to manage and recover
- support retention of people and skills in the regions
- regional leadership, coordination and community health and wellbeing, and priority environmental concerns
- maintaining services infrastructure for primary producers, the social fabric and communities, regional populations and infrastructure

Source: Lucid Economics

## 3.4 Recovery

### 3.4.1 Recovery Planning

The end of a drought or other adverse events can be difficult to define and can occur at any point in time along the continuum of scenarios.

For example, it is important for assistance measures to recognise that there is uncertainty and a time difference between the end of a meteorological drought and the associated financial, social and environmental impacts that have occurred as a result of drought.

Assistance measures may be required in some form (particularly health and wellbeing programs), and for a significant period of time, even when the meteorological or production indicators signal the adverse event is over.

The relevant governance arrangements enacted within each phase will have responsibility for determining when and how assistance measures should be terminated or reduced.

Funding for the recovery phase needs to be included as a critical component of budgets for response measures.

The recovery phase should evaluate, document and learn from the experience. The recovery phase is the time to reflect upon longer terms considerations like the prospects of climate change impacts on seasonal variability and to adjust risk management approaches.

It is clear that hazards are an enduring feature of the Australian environment, and we have some big challenges ahead. We also know that disaster risks are likely to increase and magnify as our climate changes, our population grows and ages, and our society and economy become increasingly dependent on technology. We have a strong foundation of relationships, systems, information and plans upon which to build; and across the community, we have capability, goodwill, and commitment from governments to improve our resilience to disasters.

If individuals and communities understand the impacts of their behaviours on themselves as well as their families, their communities and the environment, this can help to improve their capacity to make informed decisions based on assessed risks. Building disaster resilience requires sustained behavioural change across the entire community. Successfully achieving behavioural change is beyond the capacity of a single organisation, and will require coordinated, whole-of-nation action.

Summary of key success factors in disaster recovery and renewal are highlighted in Table 3.5.

Table 3.5. Key Success Factors for Adverse Event Recovery

Key Success Factors	Attributes/Actions
<b>Long term commitment</b>	Long term recovery timeline covering emergency relief, early stage recovery and longer term community reconstruction and renewal with adequate support and funding provided to meet long term needs
<b>Localised, community based approach</b>	Geographic, community based response with local solutions developed to meet local needs
<b>Strong community participation and ownership</b>	Strong participation by community members and local organisations in recovery response design and delivery
<b>Multi-faceted focus</b>	Ensure broad, whole of community development/renewal plan rather than a narrow physical reconstruction plan used when developing localised response plans. Provide support to meet the social, emotional, economic and wellbeing needs of individuals and communities. Rebuild social, built, natural and economic environments simultaneously. Reduce future exposure to hazards and ensure that the community is prepared for future adverse events
<b>Integrated response</b>	Wherever possible use activities in one domain to support/reinforce activity in other areas. For example, use the redesign and reconstruction of the built environment to support economic renewal by using local suppliers and (re)training and employing local community members in the reconstruction process
<b>Well-structured planning and design</b>	Use good practice principles in the design and construction of community services and infrastructure
<b>Flexible response structure</b>	Flexible response structure, timing and delivery systems used to allow responses to be tailored to local needs
<b>Decentralised decision making and implementation</b>	Decentralised decision making, planning and implementation used to allow responses to be tailored to local needs and encourage community ownership and participation
<b>Strong local governance and coordination structure</b>	Strong local governance and coordination plan including government, support service and community representatives Funding and resources provided to support community consultation and intra and cross-sectoral coordination
<b>Strong communication processes</b>	Clear communication processes established to monitor community needs, keep community members informed and support participation in community consultation and coordination processes
<b>Local resourcing preference</b>	Recognise, support and build the capacity of community members and local organisations to participate in and drive local recovery - provide opportunities to participate in reconstruction and renewal process
<b>Training and support</b>	Training and support provided to local leaders, government and non government service providers and staff to assist them to understand recovery requirements and to sustain ongoing service delivery

Source: Philanthropy Australia

### 3.4.2 Measuring Recovery Success

A good starting point is to set clear priorities and targets. These may need to be flexed/changed later. A core challenge is often a lack of baseline data to begin with therefore it can be very difficult to measure the impact of recovery activities. In the absence of relevant generic indicators that can be applied, think about measures that are relevant to the local setting and the event.

A few numeric measures to consider:

- Numbers of commercial planning and building approvals.
- Decisive outcomes – businesses categorically deciding whether to re-establish or exit (a decision either way is a concrete result).
- Attendance numbers at business workshops.
- Grant and loan scheme applications – note, successful applications may be a different measure.
- Number of visitors/vehicles entering the region.
- Number of accommodation beds and what standard.
- Restocking of rural properties
- Export sales and tourism contributing to the economy

## 4. Summary

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In the recent draft of the Shire of Jerramungup Strategic Community Plan 2021 – 2031, community members were asked to rank strategic priorities in order of importance. Results below show the importance of planning for adverse events with the top 5 priorities all potentially affected by droughts, bushfires, pandemics...

Strategy	High Priority	Medium Priority
1. Access to Health Services	86%	13%
2. Road Network	63%	30%
3. Bush Fire Prevention and Control	62%	29%
4. Safety and Security	45%	34%
5. Agriculture and Rural Services	44%	29%

Planning and preparedness for adverse events is an ongoing endeavour which through the foresight of adverse event planning we can assist primary industries and regions to grow and innovate. The main approach is to work together, be prepared and to ensure the community have the networks and intelligence required to support effective recovery programs.

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