

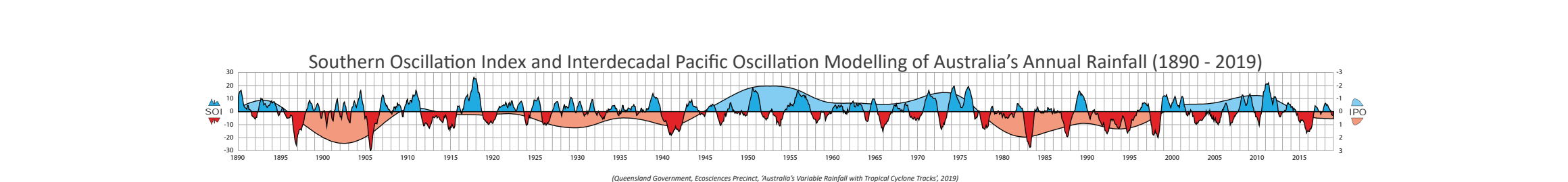
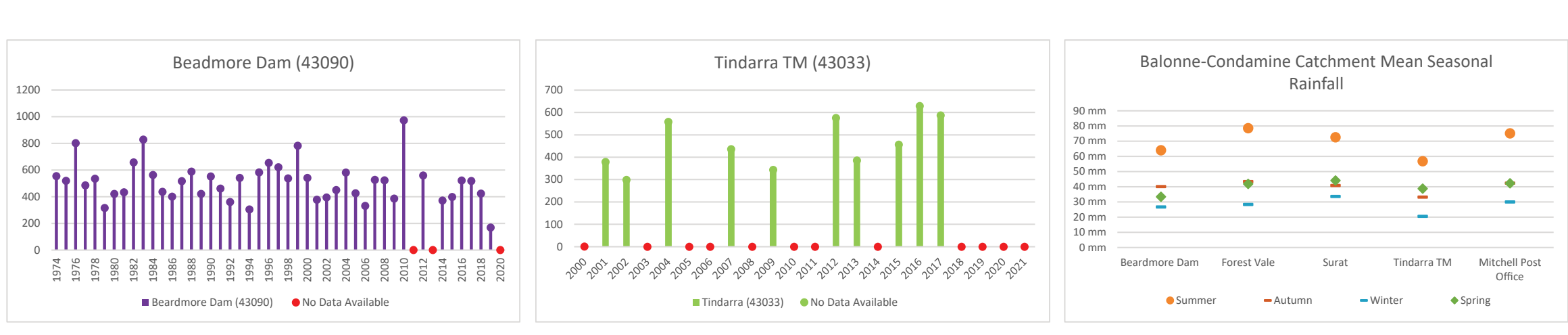
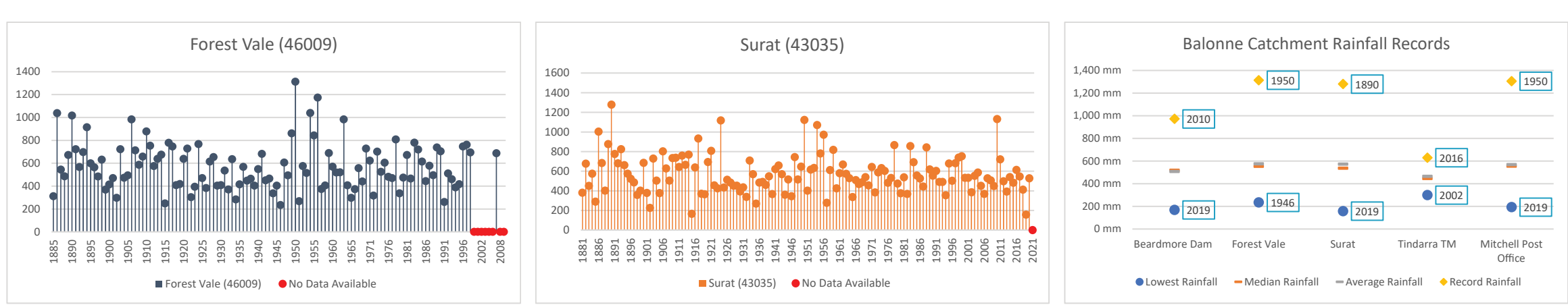
## Catchment Overview

This catchment area is defined by the full extent of the Wallam Creek, Balonne and Maranoa Rivers and parts of the Moonie River catchment within the Maranoa, Regional Council and the Paroo and Balonne Shire Council boundaries. These sub basins are part of the greater Balonne Condamine Basin which in turn is part of the Murray Darling Drainage Division. Wallam Creek is furthest west and is a wide catchment characterised by sheet flow rather than distinct channels. The Maranoa River commences in the high country of the Carnarvon Ranges and is a long and slender catchment flowing past the township before joining the Balonne just north of St George. The Balonne River pans out into numerous slow flowing shallow channels before reaching the NSW border. To the north east, the Balonne is irrigator country, floods are measured in megalitres and are harvested for their value to agricultural production. There are a number of water storage facilities along the Balonne and it is part of the Murray-Darling Drainage Division.



## Climate & Rainfall

Weather and climate characteristics in the Balonne sub-basin in the last 30 years (1989 - 2018):  
 Annual rainfall has been relatively stable, with summer rainfall being reliable, and rainfall in winter decreasing. The region averages an annual rainfall of 550mm over the past 30 years (1989-2018) however, average annual rainfall does fluctuate from year to year with natural variability.  
 Dry years have occurred 10 times and wet years have occurred eight times. It is noted that the Millennium drought accounted for three of these dry years. Hot days have become more frequent with more consecutive days above 38°C.  
 Summer rainfall (November to March) in St George has decreased by 17mm from the 308mm experienced between 1959-1988 to 291mm during the period between 1989-2018. Spring frosts have also become more common and have been occurring later. More frosty nights have tended to occur during through dry winter and springs, when soil moisture is low and cloud cover is infrequent.

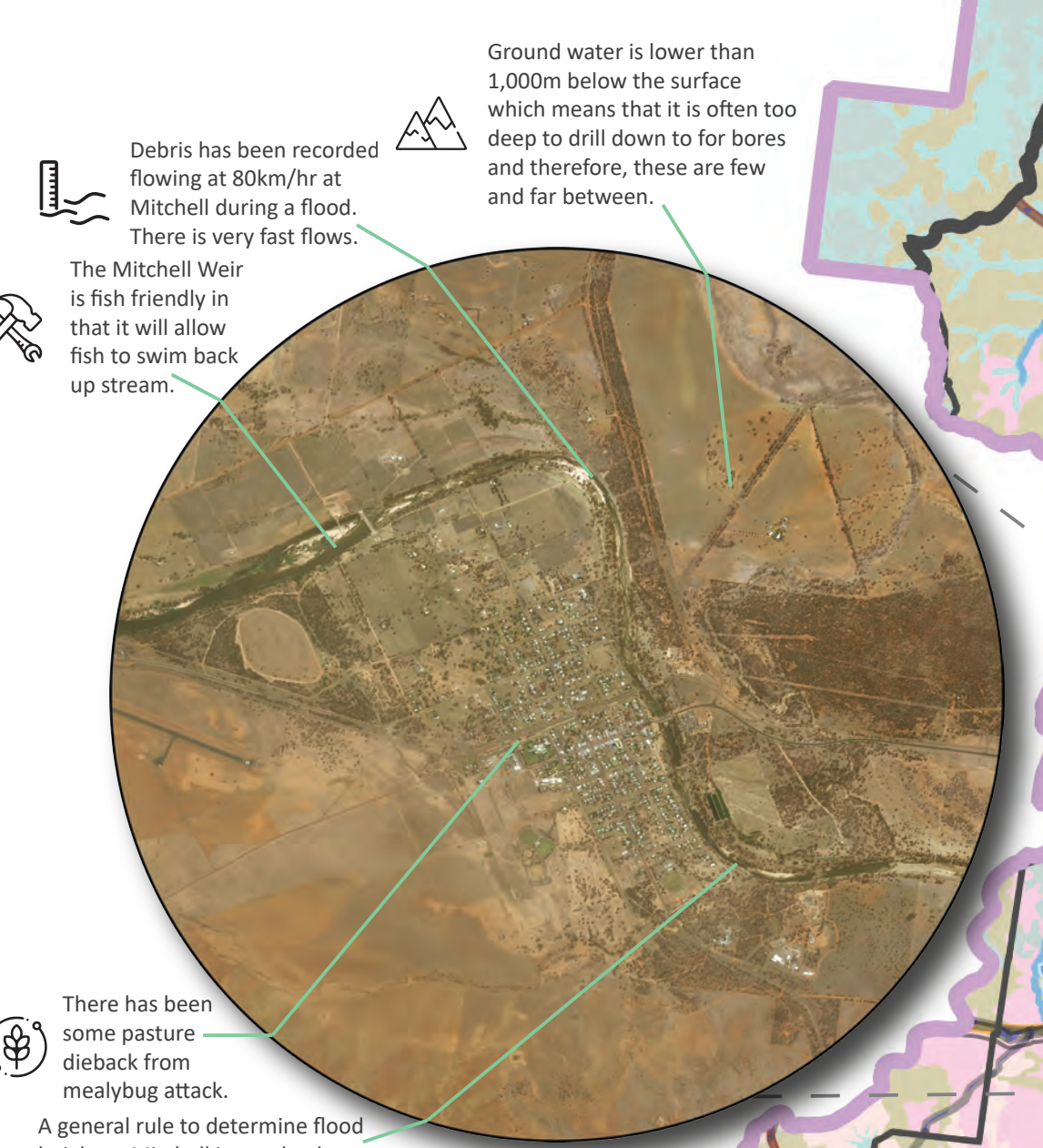
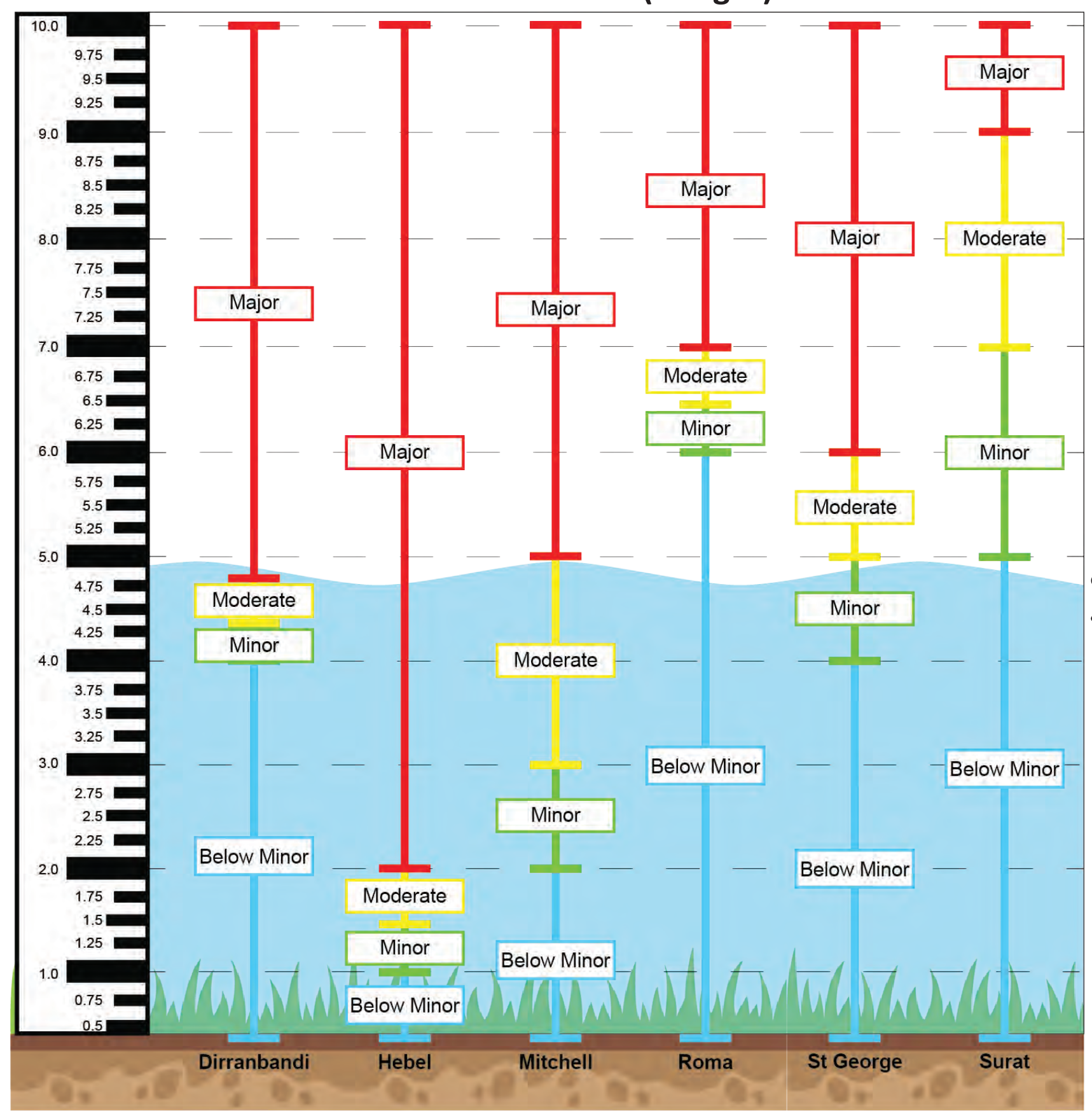


## How to use this guide:

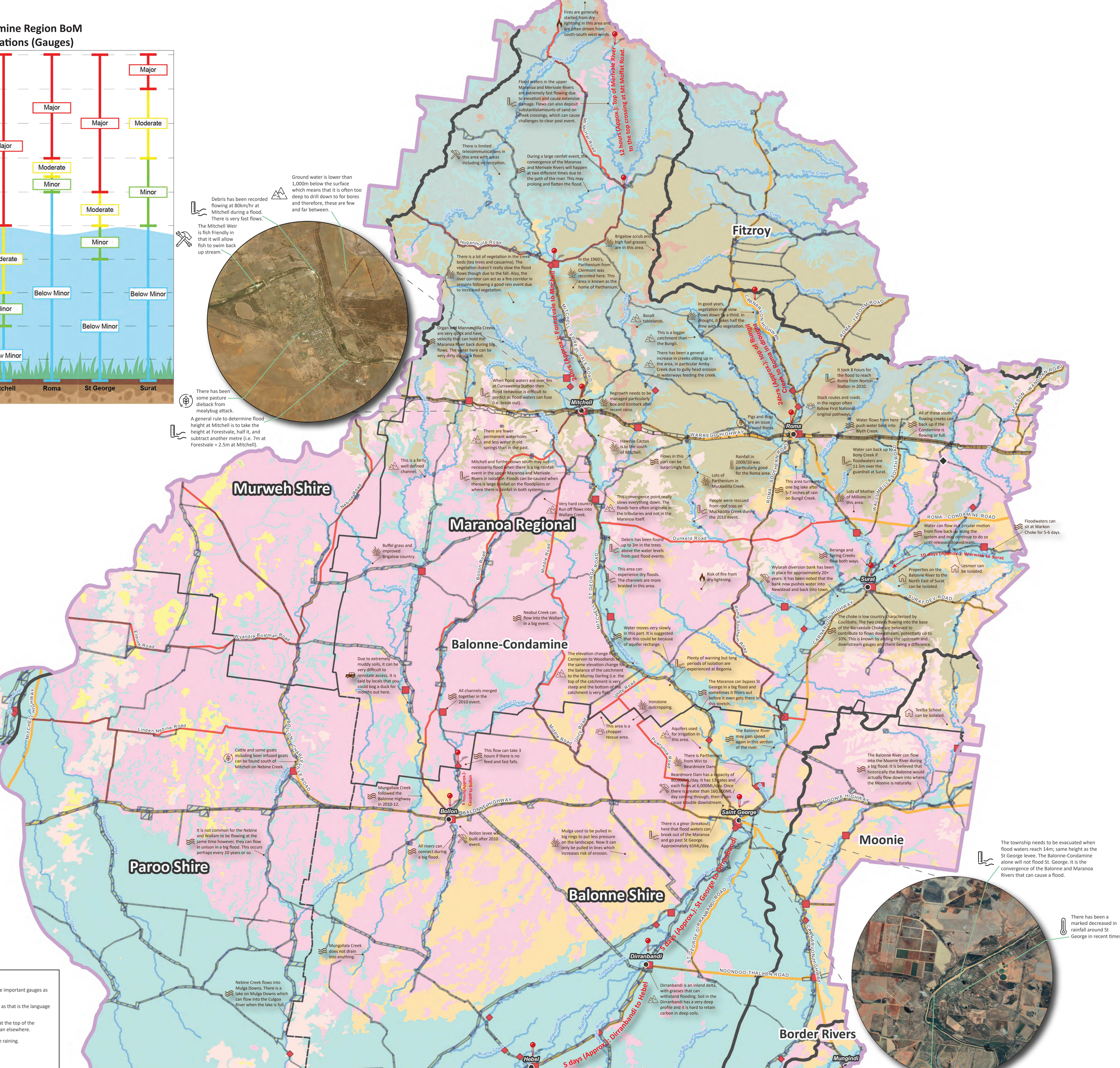
The information below provides local knowledge on landscape characteristics and flood behaviour. This is provided for local land managers, Council staff, and State Government officers to better understand the Balonne-Condamine River catchment and its unique characteristics. This guide has used the best available information at the time of printing. It is intended to help you assess what type of flood is likely to occur and indicate expected feed volumes. You may wish to record your own flooding and landscape characteristics on the map.



## Balonne-Condamine Region BoM Flood Classifications (Gauges)



Ground water is lower than 1,000m below the surface which means that it is often too deep to drill down to for bores and therefore, these are few and far between.  
 Debris has been recorded flowing at 80km/hr at Mitchell during a flood. There is very fast flows.  
 The Mitchell Weir is fish friendly in that it will allow fish to swim back up stream.  
 There has been some pasture dieback from mealybug attack.  
 A general rule to determine flood height at Mitchell is to take the height at Forestvale, half it, and subtract another metre (i.e. 7m at Forestvale = 2.5m at Mitchell).

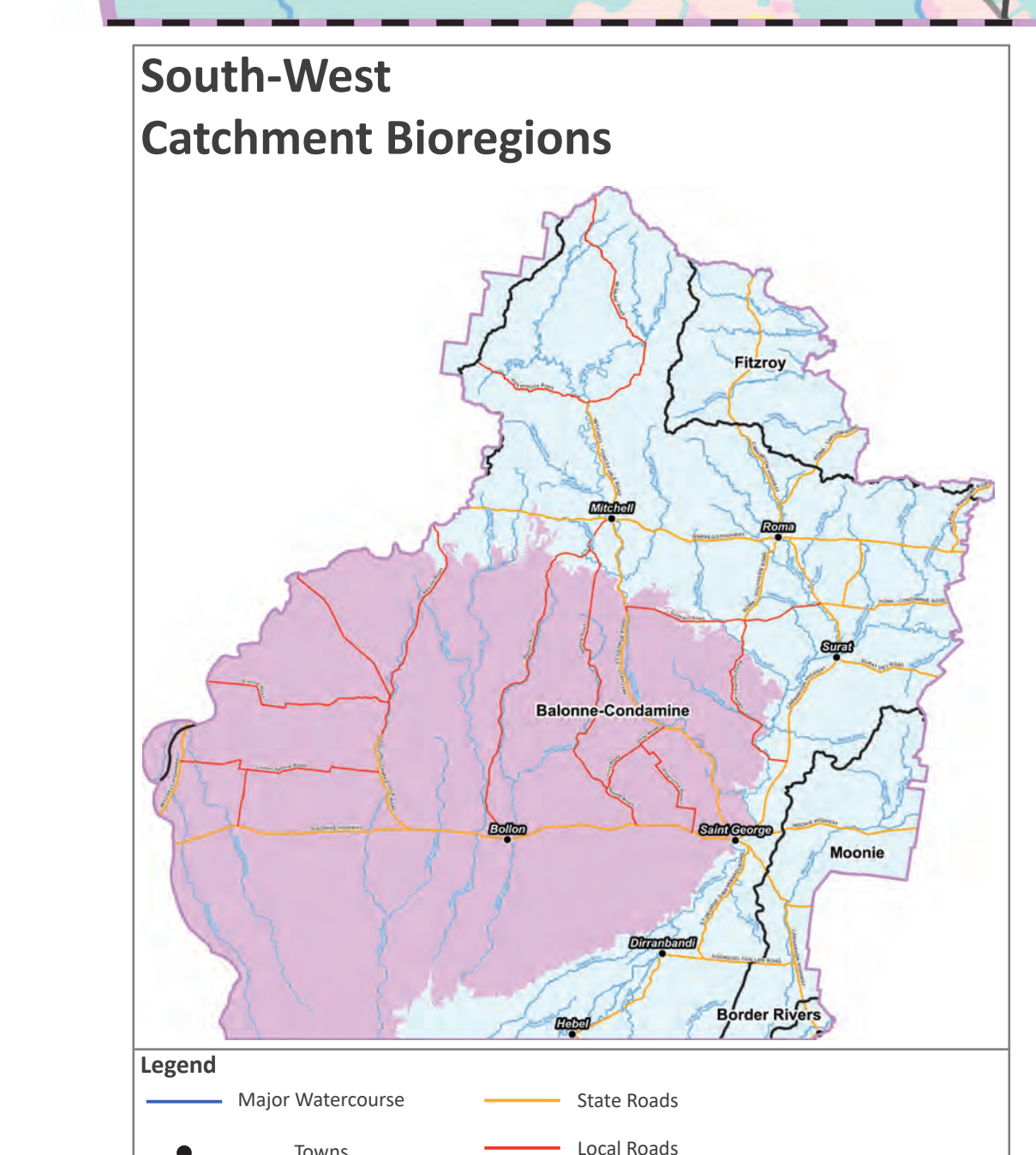


### Handy Catchment Tips

- There are two rain gauges in Carnarvon Gorge National Park. These are important gauges as they are at the head of multiple catchments.
- Megalitres are a common form of measurement for floods in the area as that is the language used by irrigators.
- The upper Maranoa is a very fast catchment with a 1,200m elevation at the top of the Carnarvon Tablelands to 350m elevation at Mitchell. This is steeper than elsewhere.
- The 2010-2012 events were dry. It would have been different if it were raining.

### Legend

- Geology / Landzones**
  - Tidal flats and beaches
  - Coastal dunes
  - Alluvial river and creek flats
  - Clay plains
  - Old loamy and sandy plains
  - Inland dune fields
  - Ironstone jump-ups
  - Basalt plains and hills
  - Undulating country on fine grained sedimentary rocks
  - Consolidated sediments
  - Sandstone ranges
  - Hills and lowlands on metamorphic rocks
  - Hills and lowlands on granitic rocks
- Other**
  - Manual Gauge
  - Automatic Gauge
  - Stock Route
  - Cut D Proposed Gauges
  - Mountains
  - Towns
  - Mines
  - State Controlled Roads
  - Local Roads
  - Train Line
- Local Knowledge**
  - Flood related information
  - Agriculture/Feed information
  - Vegetation related information
  - Pinpoint between locations
  - Community related information
  - Water related information



### General Landscape Knowledge

- More available water through stock troughs and dams etc. provides the opportunity for kangaroos to spread across the region. Dingoes will also prey on older kangaroos and joys particularly.
- Allocations (flood harvesting) in the catchment slows flows. If there is a second flood, it will be a bigger risk as more extractions occur.
- National parks are not fenced however, adjoining landowners can erect fencing.
- Mulga is a valuable resource here especially in dry times when it is used as fodder for stock. Mulga can take up to 12-15 years to regenerate after grazing depending on rainfall. Retaining ground cover is important for mulga country. The aim for fodder management is to keep mulga low by grazing and resting.
- Weeds in waterways is an issue with more weeds coming down watercourses than in the past.
- Water retention can be a challenge in areas with hard ground or geologies. Water infiltration and retention is linked to the health of the soil and the harder country creates a barrier to water infiltration.

### Tips for Graziers

- The general consensus is to allow grass or feedstock to be 1/3 consumed before the cattle are moved on or rotated to the next pasture. It is important to fence off the different types of native grasses so stock do not prioritise one over another and upset the balance of grasses. Goats sometimes die when they have to start eating grass over Mulga trees (browsing).
- The management of leather top grass (Nassella tenuissima), Harrisia cactus and Eragrostis sp. is an issue. Castor oil plant (Ricinus communis) is now present above the weir - the fruit is toxic to animals. Buffel grass can also be a problem where it is a monoculture and reduces diversity of pastures. Pinelaea is a poisonous weed can affect cattle, loves winter when there is nothing to compete with.
- Having a diversity of grass species and not just buffel grasses is good due to different maturing times and extended feed availability. Buffel can form a monoculture which is hard to break. Buffel does not grow well in the sandstone country as conditions are too hard. It will not dominate Mitchell grass country in this region.
- Some landowners on the edge of exclusion fencing are finding that it acts as a funnel for pushing pest animals into areas where they might not have been a big problem in the past.

### General Risk Awareness Information

- Unmanaged properties can be a significant fire and pest risk due to growth of vegetation. Prior to using fire as a land management tool, make sure the weather conditions are appropriate, and relevant information has been obtained and considered.