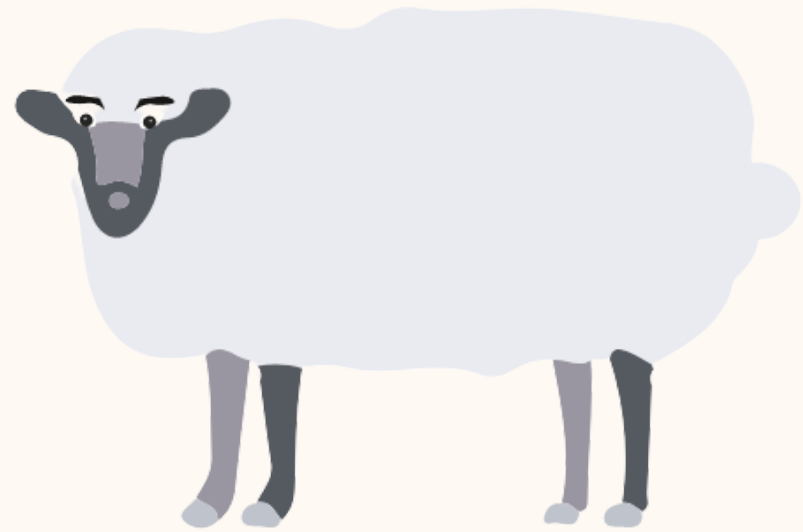


Macalister Irrigation Area

From the reservoir, to the paddock and onto your plate.



Let's learn about our local irrigation system, and why it is so important to our everyday lives.





What is irrigation?



Irrigation is the 'controlled' way of feeding crops, plants, fruits, and vegetables.

Unlike rain, which can be unpredictable, irrigation allows us to control when and how much water is available. Irrigation is so important in Australia because we rely on it for so much food and fibre production.

Rice, cotton, fruit and nuts use the most irrigation water. Other major water users are; sugar cane, grapevines, vegetables, as well as pastures and cereals for grazing animals.

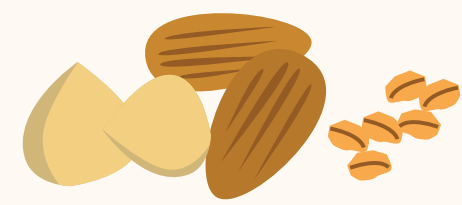
Australian farmers use 5.7 million megalitres of water per year to water their crops and pastures, with 1.5 million hectares of agricultural land under irrigation (ABS, 2021).



Rice



Cotton



Nuts



Fruit



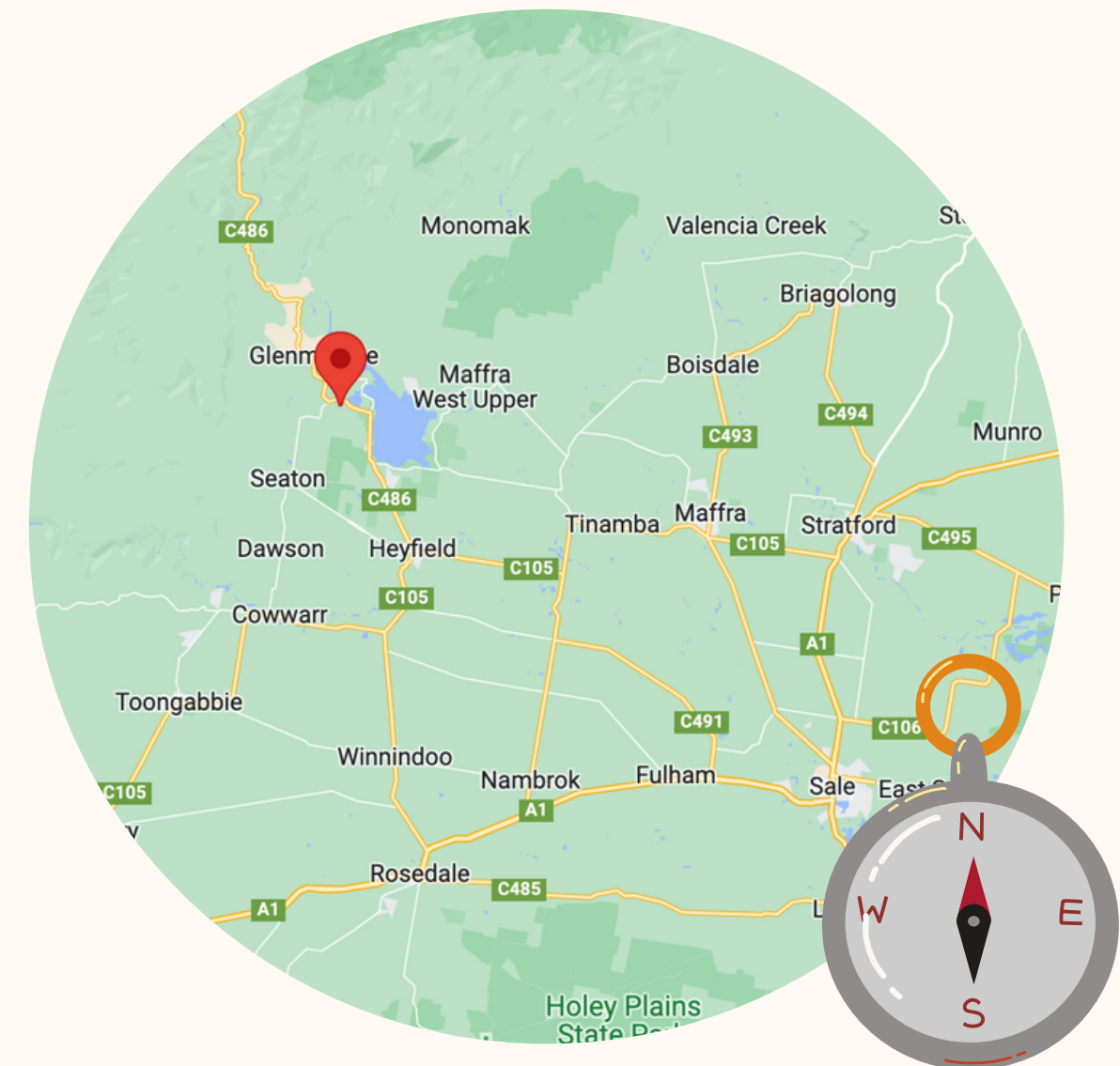


Macalister Irrigation Area

Water is crucial for all of us to live. As we know, when it rains, water droplets fall high from the sky and onto the earth. Some droplets may land in creeks, some may land in the ocean, and some may land on your head. But it's harder than you think to catch the water ourselves.

This is where **Southern Rural Water** comes into play; they supply the systems that are responsible for capturing, storing and providing irrigation water to the Macalister region.

The **Macalister Irrigation Area** is the largest irrigation area south of the Great Dividing Range. Located in Central Gippsland, it covers an area of 58,000 hectares. The Macalister Irrigation Area has an abundance of dairy cattle, a growing horticulture sector, as well as beef cattle and some crops (WGCMA, 2022).





Regions in Macalister

The Macalister Irrigation Area is supplied from:

- the northern, eastern and southern channel systems that feed the Glenmaggie Reservoir;
- the southern Cowwarr channel from the Thomson River; and
- the Thomson, Macalister and Rainbow regulated rivers for our river diverters.

Some of the regions within the Macalister Irrigation Area may sound familiar to you. Has anyone heard of or been to any of these places?

- | | |
|------------|------------|
| - Heyfield | - Sale |
| -Cowwarr | - Tinamba |
| - Kilmany | -Cobains |
| - Maffra | - Boisdale |
| - Airly | -Newry |

There are many towns within the Macalister Irrigation Area. Shall we learn about the history, and what produce comes from these places?





The history of Macalister Irrigation Area

Water Commission encourages people to move to, and develop, rural Victoria.

1912

Construction of the Glenmaggie Dam begins

1920

Glenmaggie Dam completed. Irrigation areas progressively extended.

1929

Maffra and Sale Districts unite to form 'Maffra-Sale Irrigation District'.

1935

1919
Proposal put forward to supply water to irrigate 9,000 hectares on the Avon flats.

1919

1924
Construction of the Main Northern Channel to supply the Boisdale and Newry River flats.

1924

1926
Glenmaggie Dam able to supply 3,600 hectares in Boisdale, Airly, Cobains and other estates near Sale.

1926

1933
Irrigation areas span across 7,400 hectares, served by 310 kilometres of channels, and 90 kilometres of drains.

1933

1940s
Dairy farming becomes more profitable.

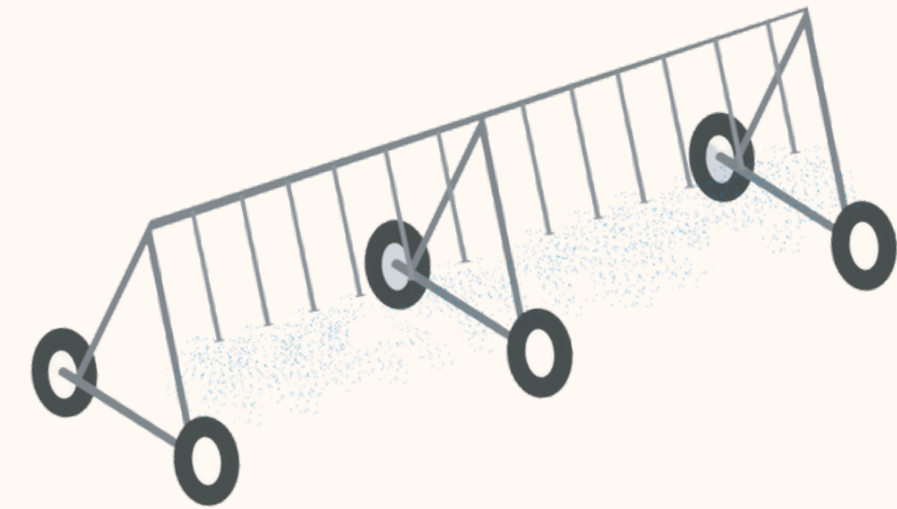
1940s



Flood Irrigation



The history of Macalister Irrigation Area



Report prepared regarding the use of the Thomson River for irrigation of 24,000 hectares of land in the Nambrok and Denison areas.

1942

Vertical lift gate structure completed on Maffra weir to increase storage capacities.

1954

1952

Maffra-Sale Irrigation District extended to include the Nuntin, Clydebank and West Boisdale areas.

1957

Crest gates on Glenmaggie Dam completed allowing water capacity to increase from 130,800 megalitres to 190,410 megalitres.

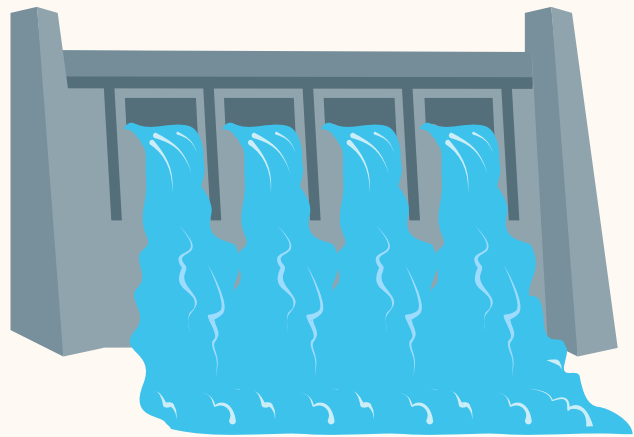
1960

Construction of the Cowwarr Weir. The Maffra-Sale and Central Gippsland Irrigation Districts merge to form the Macalister Irrigation Area

.....So how does our irrigation system work today? Let's find out!



How water is supplied today



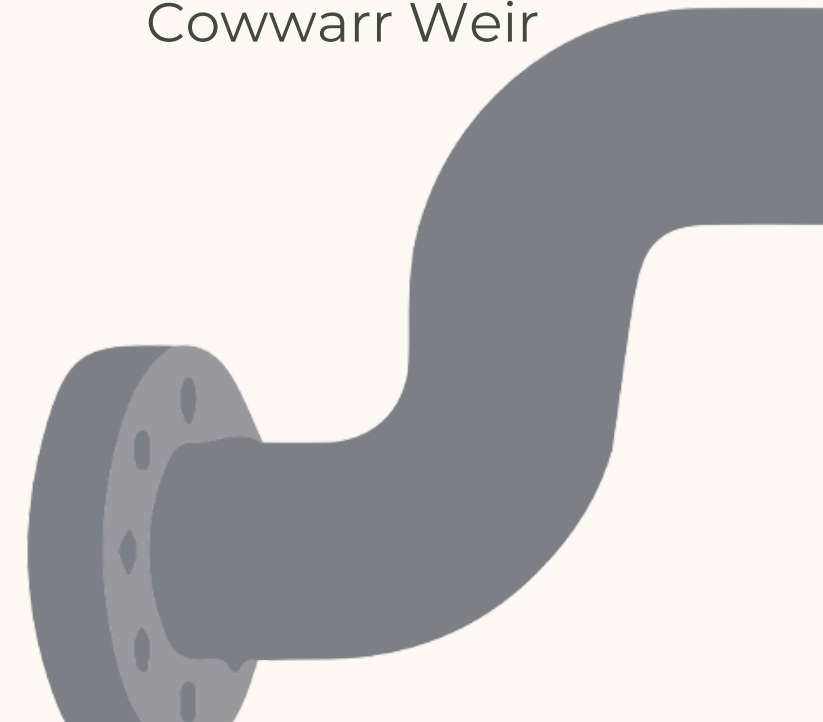
Water for the Macalister Irrigation Area is mainly sourced from Lake Glenmaggie on the Macalister River. Additional water is accessed from the Cowwarr Weir and Thomson River.

To distribute irrigation water from Lake Glenmaggie, three main channels were built - the Main Northern, the Main Southern, and the Main Eastern. Macalister uses gravity to transfer water to the community. This means that the system relies on there being enough water in the reservoir upstream to travel down (with the help of gravity) through pipes and channels to customers. Some customers also receive their water supply directly from regulated rivers.

When customers order their water from **Southern Rural Water**, it is delivered via a complex series of check metres, regulators and valves to ensure the right amount of water reaches the right customer!



Cowwarr Weir





Irrigation reuse system

Irrigation 'reuse systems' were developed to help improve water use on irrigated dairy farms in Macalister. Reuse systems are dams that are designed to catch water runoff from irrigation and from rainfall. They are put in place so that farmers have the opportunity to use the water (and nutrients) that would have otherwise gone to waste.

Irrigation reuse systems have proved to be a great success within the area of Macalister. In the last 22 years, over 230 reuse systems have been installed which have helped capture irrigation runoff from over 12,000 hectares!

By using these systems, there has been an estimated saving of approximately 24,000 megalitres per year.





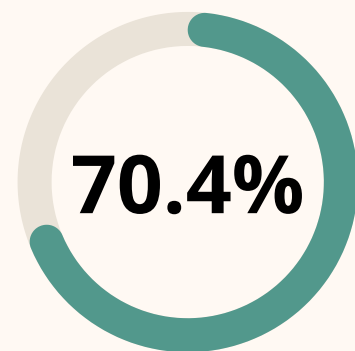
What is produced in Macalister?

The Macalister Irrigation Area is responsible for the production of a lot of the food and drink that we consume everyday. Approximately half of the soils across the area are classed as moderate to highly permeable, which means the area is perfect for pasture (grass/plants for animals to graze on) and vegetable growth.

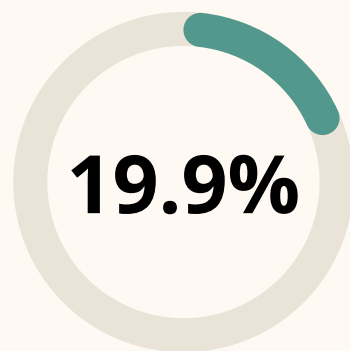
The land within the Macalister Irrigation Area is used for:



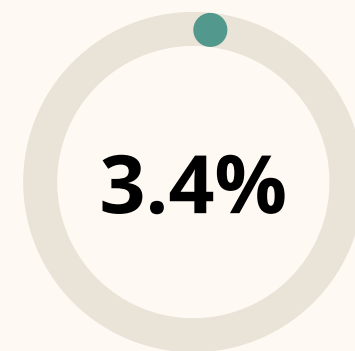
Spinach



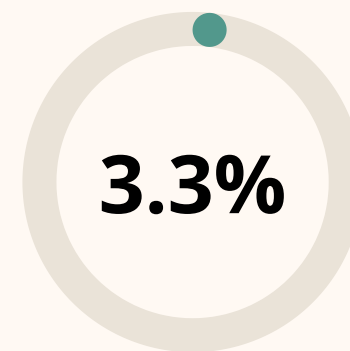
Dairy



Livestock



Horticulture



Cropping



Beef

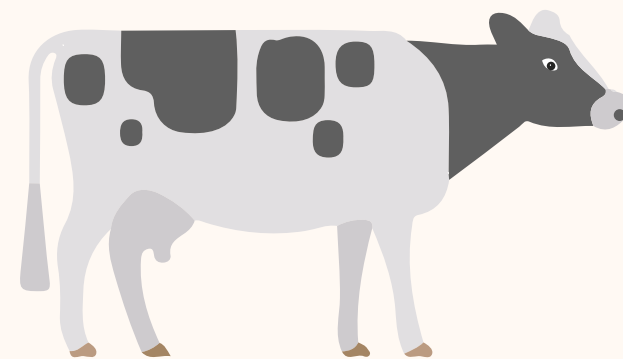


What is produced in Macalister?

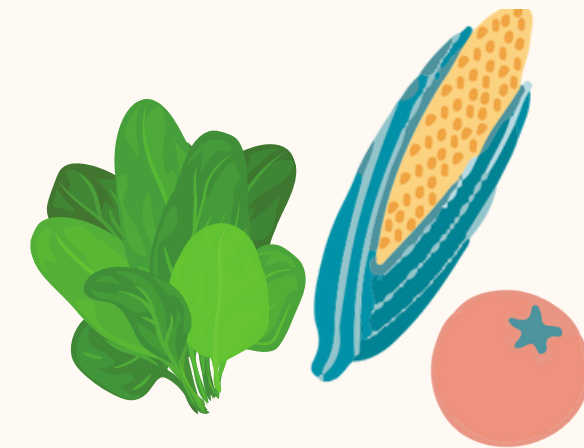
Can anyone think of any dairy or meat products they have consumed recently that may have come from the Macalister Irrigation Area?



6% of Australia's total milk production comes from the Macalister Irrigation Area.



\$926 million is contributed to the Australian economy each year from milk production in Gippsland alone.



There has been a 300% increase in irrigated land here for horticulture since 2010 and 2020.



Project spotlight: Modernisation Project

The Macalister Irrigation Area Modernisation project was announced in May 2020. The \$62.6 million project will invest in modernisation works across the area, which were developed by Southern Rural Water in 2007.

The phase of the project they are currently working on focuses on upgrading infrastructure that is 60-100 years old that limits the water supply and contemporary farming practices.

The project, which is expected to continue until 2024, will provide climate and drought resilience through generating water savings.

The next phase will consist of:

- Completing the modernisation of remaining channel sub systems through piping and automation
- Undertaking channel, outlet and associated asset rationalisation and modernisation, and
- Upgrading high use water outlets to modern, compliant outlets.

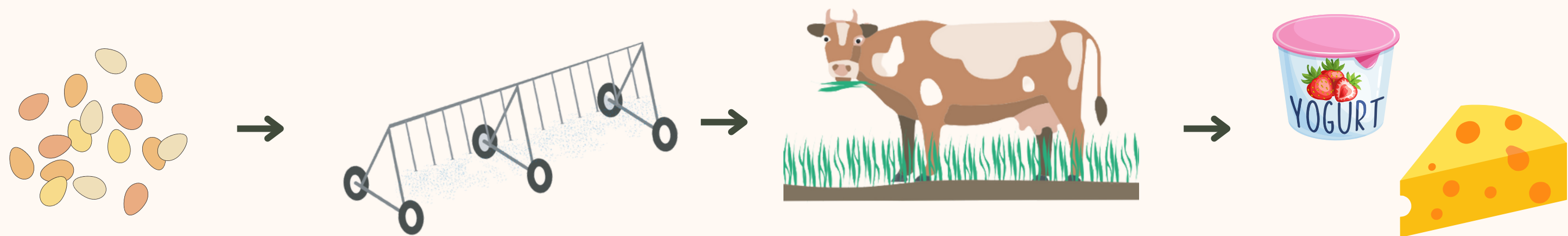




Water for community health and nutrition

The food that ends up on our plate has quite a journey when you really think about it.

- Grass is grown from a tiny seed...
- Irrigation allows the grass to grow beautiful and lush
- Cows live on the farm and graze on this pasture
- Eating the grass helps the cow to grow big and strong (and in turn, helps to boost their milk supply)
- When the cow is ready to be milked, dairy farmers milk them
- The milk is then taken to milk factories to be processed and packaged for sale





Water for community health and nutrition

Fresh vegetables eaten every day are so beneficial for our health - with all of the essential vitamins, minerals and dietary fibre to help us live long, healthy lives, not to mention the superhero-like strength we get from eating all of our greens.

Southern Rural Water helps our communities have access to reliable water every day, helping our regions to thrive.

