LAND & WATER USE MAPPING

GOULBURN MURRAY IRRIGATION DISTRICT[1] 2021/22[2] SUMMARY

The Goulburn Murray Irrigation District (GMID) is a major irrigation system in Victoria, stretching from Swan Hill to Yarrawonga, including Shepparton and Echuca. The GMID supports a range of agricultural industries such as dairy, cropping, horticulture and grazing.

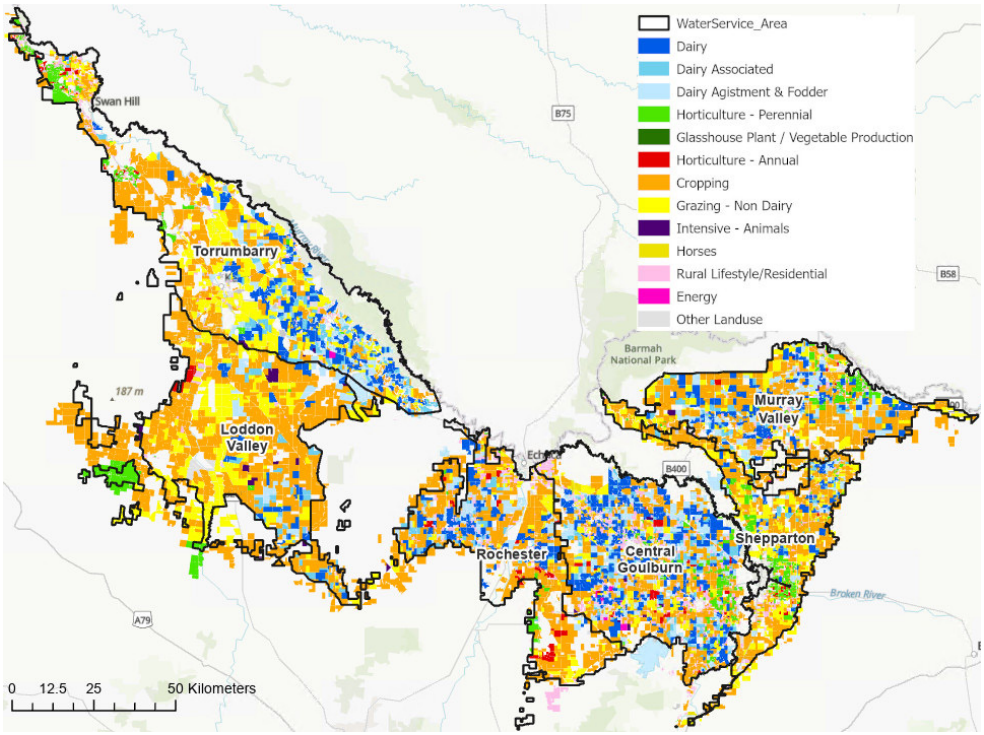
The GMID Land and Water Use Mapping project provides updated land and water use data across the GMID and helps build an understanding of how land and water use is changing in the GMID.

In 2021/22 the total irrigable area of the GMID mapped by primary land use as part of this project was 843,445ha.

Land use continues to change in light of changing water availability, and other social, environmental and economic factors. Two new land use categories have been added to the land use mapping since the 2019/20 season including Energy (e.g. solar farms) and Glasshouse Plant / Vegetable Production. Both land uses were previously accounted for in the 'Other' land use (e.g. with municipal infrastructure such as sporting ovals and schools), however have been identified as emerging industries to be monitored into the future.

Cropping and Dairy (Combined)[3] remained the two most extensive land uses in the GMID in 2021/22, accounting for 46% and 24% of the primary land use, respectively.

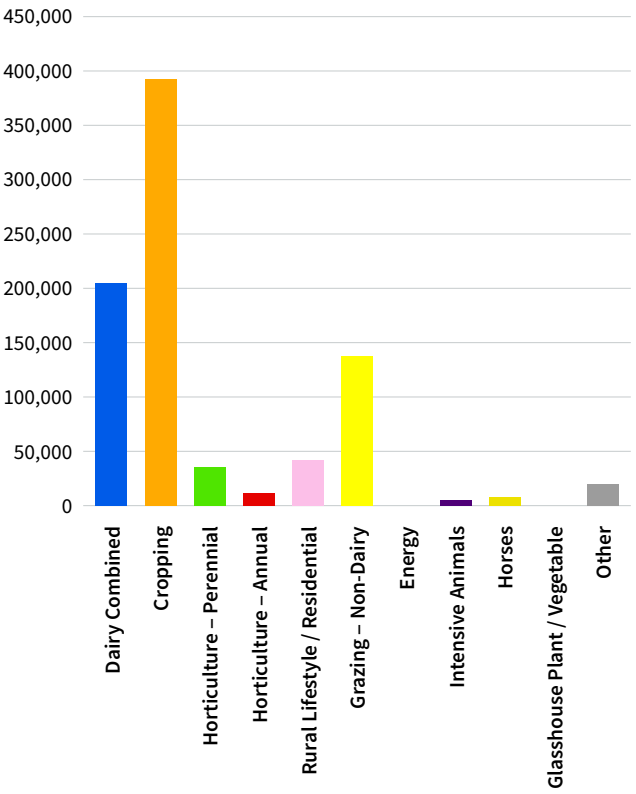
Figure 1: GMID Irrigated Land Use Map 2021/22



Primary Land Use	Water Use licences	Area (ha)	Water Use (GL)
Dairy	675	101,453	268
Dairy Associated	527	40,863	65
Dairy Agistment & Fodder	667	63,699	89
Horticulture - Perennial	767	34,534	82
Glasshouse Plant / Vegetable Production	6	123	0.09
Horticulture - Annual	125	9,102	12
Cropping	3,000	391,893	264
Grazing Non-Dairy	1,260	137,799	108
Intensive Animals	35	3,939	3
Horses	176	5,629	5
Rural Lifestyle/Residential	6,764	41,863	30
Energy	10	925	0.79
Other	420	11,623	5
Total	**14,432**	**843,445**	**932**

1. The project area is referred to collectively as the Goulburn Murray Irrigation District (GMID), which includes the GMID (including Woorinen), Tresco and Nyah Irrigation Districts.
2. 2021/22 data is reflective of activity at the point of survey and based on the 2021/22 irrigation season (August 2021 to May 2022).
3. Dairy (Combined) includes all of the dairy land use categories including 'Dairy' (Water Use Licences with an active milking shed), 'Dairy Associated' (land linked to an active milking shed Water Use Licence) and 'Dairy Agistment and Fodder' (no clear link to an active milking shed but dairy cattle present or a former active dairy farm that may be in transition).

Figure 2: GMID Land Use Area by Industry (ha)



14,432
WATER USE LICENCES

Of the 14,432 Water Use Licences (WUL) across the GMID in 2021/22, most were attributed to Rural Lifestyle / Residential (6,764), Cropping (3,000) and Dairy (Combined) (1,869). The minor increase in WULs since 2019/20 (14,401) was attributed to changing land use and farm configurations.

932 GL
IRRIGATION WATER USE

In 2021/22, total irrigation water used in the GMID was 932 GL. This was far greater than use in 2019/20 (513 GL, dry year), and more closely resembled water use in the seasons of 2018/19 (1,074 GL) and 2015/16 (1,003 GL).

45%
DAIRY (COMBINED) WATER USE

Dairy (Combined) had the highest water use with 422 GL representing 45% of water share across the GMID in 2021/22. Cropping was the next highest water user with 264 GL, representing 28% of total water use for the GMID.

7%

DAIRY (WITH MILKING SHED)

The area of Dairy land use reduced by 7% or 8,205 ha (from 109,658 ha to 101,453 ha) between 2019/20[4] and 2021/22.

46%

DAIRY ASSOCIATED (LINKED TO A MILKING SHED)

There was a 46% or 34,925 ha decrease in the area of Dairy Associated land use (properties with WULs linked to a Dairy) (from 75,788 ha to 40,863 ha) between 2019/20 and 2021/22. A 46% reduction in Dairy Associated alongside a 7% reduction in Dairy, suggests a change in how Dairy farmers are configuring their businesses.

DAIRY AGISTMENT & FODDER

67%

Dairy Agistment and Fodder area increased by 67% or 25,561 ha (from 38,138 ha to 63,699 ha) between 2019/20 to 2021/22. This is in part reflective of the 46% reduction in Dairy Associated and more properties providing agistment and fodder services. It should also be noted that GMW have modified how they link customer WULs which has also contributed to some of the observed change.

CROPPING

10%

Cropping increased by 10% or 36,058 ha (from 355,835 ha to 391,892 ha) between 2019/20 and 2021/22. Loddon Valley Water Service Area (WSA) had the largest extent of Cropping (124,048 ha), and Shepparton WSA the least (38,961 ha).

RURAL LIFESTYLE / RESIDENTIAL

11%

The area of Rural Lifestyle / Residential land use reduced by 11% or 5,300 ha between 2019/20 and 2021/22. Central Goulburn had the largest extent of Rural Lifestyle / Residential with 15,916 ha and Loddon Valley the least with 1,728 ha.

HORTICULTURE - ANNUAL

29%

The area of land primarily used for the planting of annual crops (e.g.. vegetables and tomatoes) reduced by 29% or 3,765 ha between 2019/20 and 2021/22 (from 12,867 ha in 2019/20 to 9,101 ha in 2021/22). Rochester had the largest area of Annual Horticulture, compared to Murray Valley with the least.

HORTICULTURE - PERENNIAL

9%

The area of land primarily used for the production of perennial tree crops (e.g. fruit, nuts and Viticulture) increased by 9% or 2,914 ha (from 31,620 ha to 34,534 ha) between 2019/20 and 2021/22. Loddon Valley and Torrumbarry had the largest extent of Perennial Horticulture with 8,786 ha and 7,354 ha respectively.

4. There are continuous processes of improving datasets (i.e. identifying and correcting errors, inconsistencies or duplicates, and standardisation of data to WUL footprint) that may result in inconsistencies between reports/fact sheets and the Data dashboard (online).

This project is delivered and funded by partnerships between Department of Energy, Environment and Climate Action, Agriculture Victoria, Goulburn Broken and North Central Catchment Management Authorities, Goulburn-Murray Water, Murray Dairy and HMC Property Group. These organisations do not guarantee that the publication is without flaw of any kind or is wholly appropriate for your particular purpose and therefore disclaim all liability for error, loss or other consequence which may arise from relying on this publication's information.

Please reference as: *GBCMA (2023). Regional Irrigated Land and Water Use Mapping in the Goulburn Murray Irrigation District - Fact Sheets - 2021/2022.*