



WIMMERA  
SOUTHERN  
MALLEE  
DEVELOPMENT

# Value of Recreational Water: Rocklands Reservoir 2023-24

June 2024





## SUMMARY

### Background

Rocklands Reservoir, located on the Glenelg River 14 kilometres upstream from Balmoral, is GWMWater's largest reservoir. With fish stocking by the Victorian Fisheries Authority of around 2.63 million fingerlings and advanced stockers in the past three years, or 877,000 per year, it is increasingly recognised as a major inland Victorian destination for recreational fishing.

### Recreational Water Facility Visitation and Usage

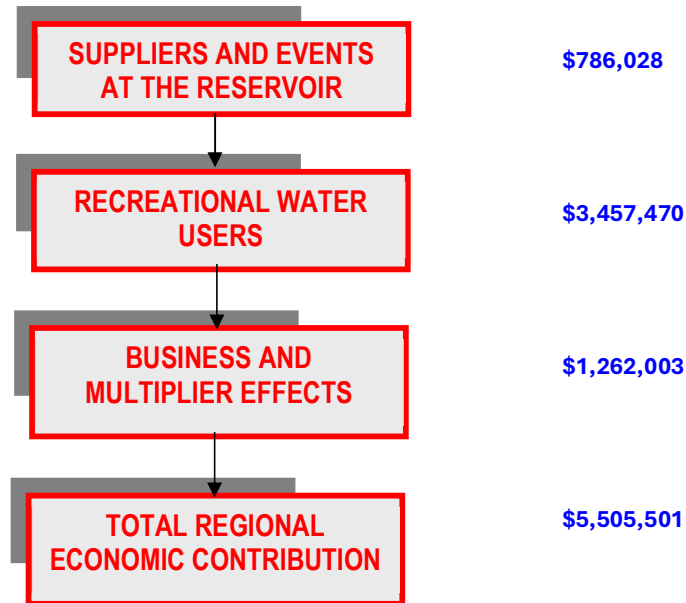
- Estimated recreational water users at Rocklands Reservoir in 2023-24 was:
  - Overnight visitors: 32,109
  - Visit nights: 102,769
  - Active daytrip participation (people using the water facility as a day trip destination for fishing, swimming, boating, picnicking, etc): 9,412
  - Total recreational participation: 41,521
  - Percentage of recreational trips involving fishing: 80.6%
  - Estimated number of people visiting Rocklands: 25,624
  
- The estimated distribution of participation across the seven main Rocklands Reservoir access sites was:
  - Brodies 7,625
  - Glendinning 16,008
  - Weir Wall 8,757
  - Henrys 1,851
  - Mountain Dam 2,123
  - Hynes 2,415
  - Fergusons 2,741
  
- Activities and amenities around Rocklands are suited to residents and visitors across the spectrum, with good levels of participation across all age ranges with fishing club members and family groups dominating the overnight visitor users. The age distribution of interviewed participants was:
  - 35.9% aged 25-44 years.
  - 21.7% aged 45-64 years.
  - 20.6% aged less than 15 years.
  - 12.5% aged 15-24 years.
  - 9.3% aged 65+ years.
  
- A large majority of visitors to Rocklands (75.7%) are residents of regional Victoria.

### Economic Contribution

- Total estimated contribution from Rocklands Reservoir to the regional economy<sup>1</sup> is \$5.506 million in 2023-24 as shown in Figure 1. This is a 21.5% per annum increase on the estimated economic contribution in 2018-19 (and total increase of 165% over the five year period).

<sup>1</sup> The region includes Rural City of Horsham and Shires of Buloke, Hindmarsh, Northern Grampians, Southern Grampians, West Wimmera and Yarriambiack.

**Figure 1 2023-24 Estimated Recreational Water Regional Economic Contribution: Rocklands Reservoir**



**Social Contribution**

- Estimated total (annual) health benefits from country Victorians participating at Rocklands Reservoir recreational water facilities in 2023-24 is \$1,279,569 (physical benefit: \$1,160,367 and mental benefit: \$119,202).



# 1 INTRODUCTION

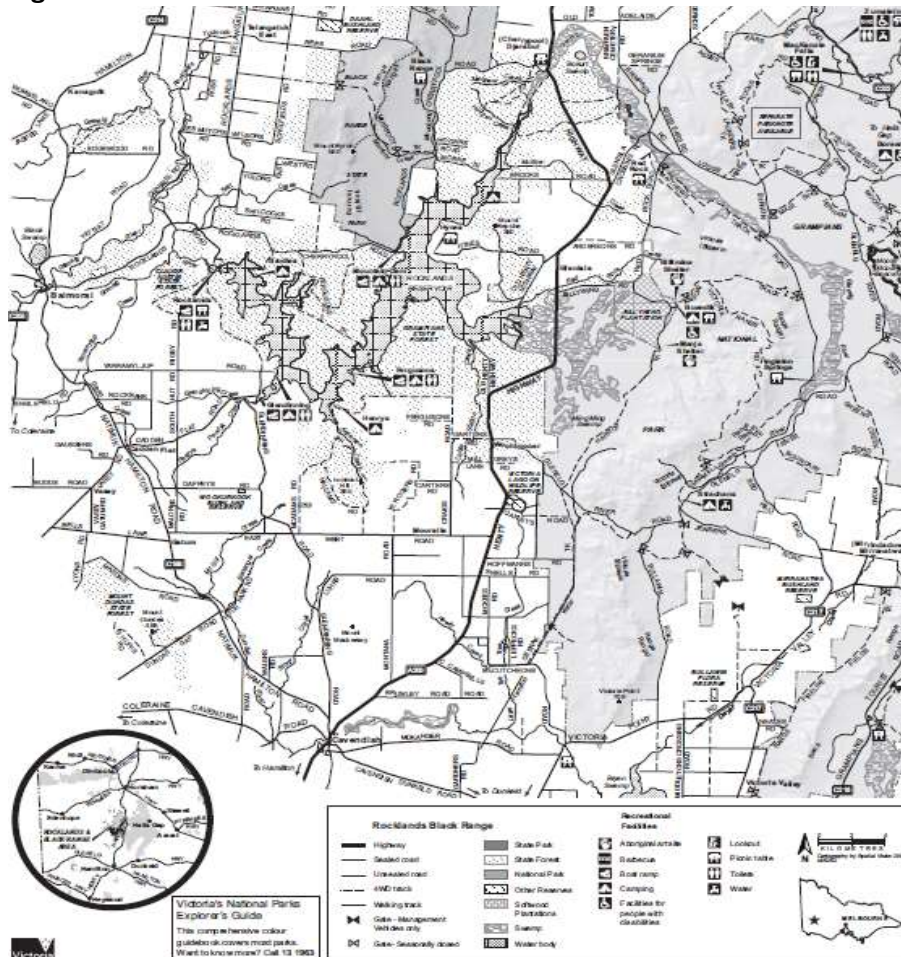
## 1.1 OVERVIEW

Rocklands Reservoir, shown in Figure 2, is located on the Glenelg River and is GWMWater's largest reservoir and one of Victoria's largest water storages. Rocklands Reservoir provides a water supply for consumptive and environmental purposes in both the Glenelg and Wimmera catchments. Rocklands Reservoir demands include environmental supply to the Glenelg River, urban supply to Hamilton and Balmoral and transfers to the Wimmera for consumptive, environmental and recreational purposes.

A unique feature of Rocklands Reservoir is that all Wimmera-Glenelg entitlement holders, including the environment, can be supplied from this reservoir. It has an important role to play in the region as a land and water based recreational destination.

The reservoir construction began in 1938 but was delayed during World War II and construction recommenced in 1950, with the dam being completed in 1953. A 270 metres long cement gravity dam forms the main wall and it is flanked by two embankment sections. The reservoir has a full supply volume of 296,000 megalitres with a surface area of 60.8 square kilometres. The catchment area of Rocklands Reservoir is 1,355 square kilometres. In June 2024 the reservoir water level is at 45% (or 133,000 megalitres).

**Figure 2 Location of Rocklands Reservoir**



## 1.2 SCOPE

This project was a joint initiative of Wimmera Southern Mallee Development Association, Victorian Fisheries Authority (VFA), Wimmera Catchment Management Authority, and GWMWater. It was designed to assess the economic and social contribution made by Rocklands Reservoir to the regional economy and local communities.

The project measured contributions in the ‘recreational water supply chain’ at three levels:

- Level 1: Service providers (supplying products and services to the Reservoir) including camping/caravanning, maintenance, and management.
- Level 2: Users of the recreational water including residents, clubs/community groups and visitors. Person to person interviews were conducted with 314 recreational water facility users (overnight, active and passive day visitors); individuals and groups.
- Level 3: Local businesses including accommodation, food services, health, sport and recreation, transport, retail and personal services.

Interviews were conducted during November 2023 to March 2024. Although respondents were asked to comment on their usage of the Reservoir over the entire 2023-24 year, the nature of the individuals and groups may be affected by the months in which interviews were conducted.



Busy school holiday periods and public holidays were explicitly included in the interview period, and the types of visitation during other seasons is likely to be somewhat different. However, bias associated with a restricted interview period has been addressed in discussions with service providers at the Reservoir and supplier organisations.

Interviews were conducted at seven sites around Rocklands Reservoir during selected dates between November 2023 and April 2024:

- The weir wall precinct (which includes the Rocklands Tourist Caravan Park and Turkey Neck area)
- Brodies
- Mountain Dam
- Henrys
- Hynes
- Fergusons
- Glendinning.

The number of people interviewed is summarised in Table 1.

**Table 1: Number of Recreational Users Interviewed, Rocklands November 2023-March 2024**

	Number	%
Glendinning/Fergusons/Henry's	122	38.9%
Brodies/Mountain Dam	35	11.1%
Hynes	44	14.0%
Weir Wall Precinct	113	36.0%
<b>Total</b>	<b>314</b>	<b>100.0%</b>



## 2. WATER RECREATION AT ROCKLANDS

### 2.1 FISH STOCKING PROGRAM

Rocklands Reservoir has extensive stands of timber below full supply level, which were created when the forest was flooded in the 1950's. These conditions provide ideal fish habitat supporting a high-quality recreational fishery for Murray cod, golden perch and estuary perch. Based on the VFA's experience in developing other native fisheries, annual fishing participation at Rocklands has more than doubled over the five years from 2018-19 to 2023-24) as stocked fish reach catchable size.

In 2018 the Victorian Fisheries Authority commenced a significant fish stocking program, focused on large numbers of Murray cod and golden perch, and estuary perch when available. The development of Rocklands fishery aligns with the State Government's Target One Million plan, initially a state government commitment of \$46 million towards recreational fishing with the aim to grow participation to one million anglers by 2020. Since 2018 the stocking program at Rocklands was substantially escalated.

Native species make up the overwhelming majority of stockings at Rocklands. Victorian Fisheries Authority has stocked 5,228,749 native fish fingerlings (Murray cod, golden perch and a small number of estuary perch) and 31,100 yearling trout (brown and rainbow) in Rocklands Reservoir during the period 2016 to 2024<sup>2</sup>. Significant increases in native fish stocking at Rocklands Reservoir, has created a high quality and popular new recreational fishery for the region, which is now being recognised by recreational fishers and fishing clubs around the State.



Details of the number and species of stockings over the periods leading up to the 2023-24 value assessment, are summarised in Table 2.

**Table 2 Fish Released in Rocklands Reservoir 2016-17 to 2018-19, 2019-20 to 2020-21 and 2021-22 to 2023-24**

Fish stocked (fingerlings and/or yearling/advanced stockers)	Estuary Perch	Brown Trout	Rainbow Trout	Murray Cod	Golden Perch	Total
2016-2019	0	7,500	10,600	515,342	505,650	1,039,092
2019-2021	0	2,000	5,000	1,083,757	500,000	1,590,757
2021-2024	26,000	2,000	4,000	1,653,000	945,000	2,630,000
<b>Total</b>	<b>26,000</b>	<b>11,500</b>	<b>19,600</b>	<b>3,252,099</b>	<b>1,950,650</b>	<b>5,259,849</b>

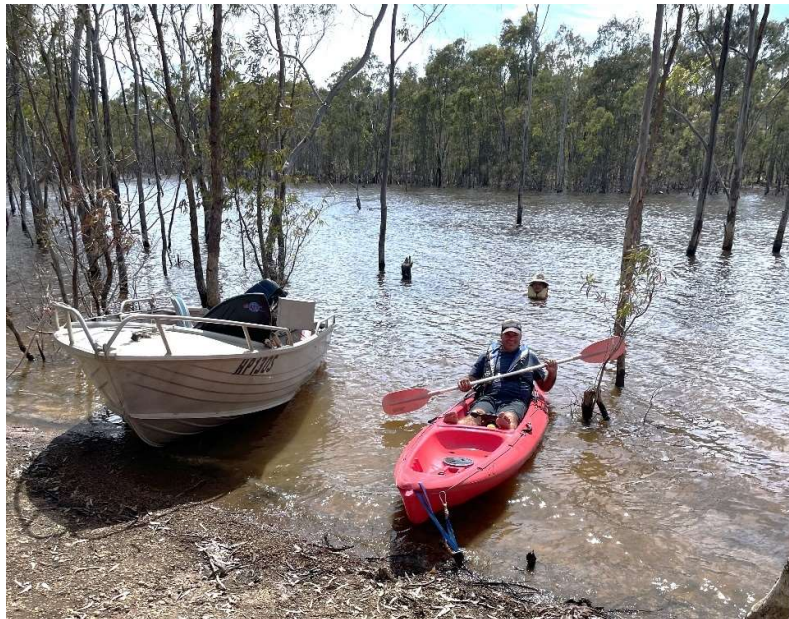
<sup>2</sup> Stocking fish in recreational waterways is considered similar to providing an asset, for which there will be a return on investment over three years. The 2023-24 economic contribution is therefore based on the fish stocking numbers during 2021-24

## 2.2 RECREATIONAL ACTIVITIES

Rocklands Reservoir is surrounded by both public and private land. The public campgrounds within the State Forest on the northern foreshore of Rocklands Reservoir include Turkey Neck, Brodies and Mountain Dam and on the southern side of the Reservoir include Glendinning, Fergusons and Henrys. These are all managed by Department of Energy, Environment and Climate Action (DEECA). The Weir Wall foreshore area is managed by GWMWater and is popular with day visitors.

There are managed caravan parks/camping grounds, with powered and unpowered sites and amenities, at the Rocklands Weir Wall, where there is a managed tourist caravan park, privately owned and operated lodge and a Horsham Angling Club lodge, and Hynes where this a camping ground accessible to the public (with some permanently occupied sites and mobile infrastructure) and a second lodge managed by the Horsham Angling Club.

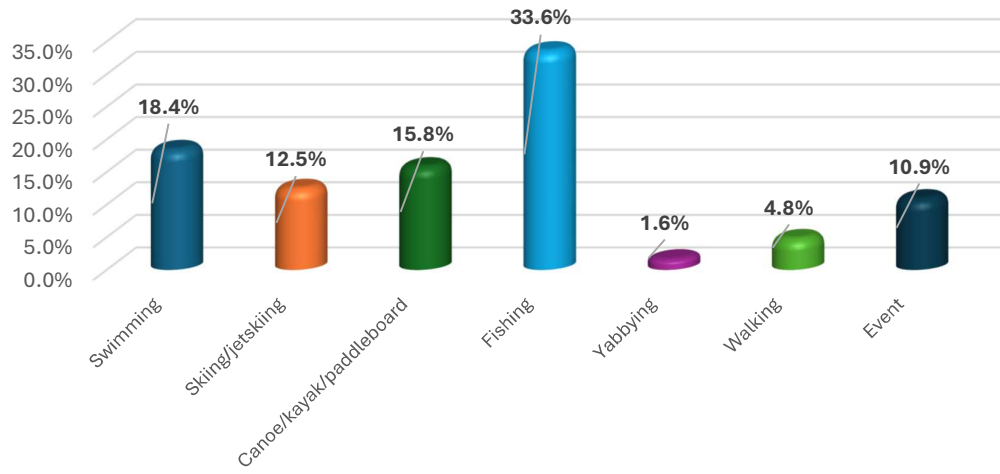
A range of other camping areas around Rocklands Reservoir are in open box woodlands on the foreshore. Mountain Dam has toilets with wheelchair accessible fireplaces, and Glendinning, Fergusons and Mountain Dam have fireplaces, toilets, picnic tables and boat ramps. Up-market cottages are available for hire at the eco-resort style Rocklands Retreat on the Rocklands-CherryPool Road, close to Turkey Neck on the reservoir.



Rocklands is primarily a recreational fishing destination. Water skiing and jet skiing are popular around the reservoir and particularly at the Weir Wall - Turkey Neck area and at Glendinning. Kayaking and paddleboarding are increasing in popularity, especially along inlets and tributaries around the reservoir.

Fishing is, by far, the most popular recreational water activity at Rocklands Reservoir. Figure 3 shows that fishing contributes 33.6% of all recreational activities. The average participant engages in 2.4 different recreational activities during a Rocklands visit, and this implies that about 81% of participants went fishing during their 2023-24 visit.

**Figure 3: Main Recreational Activities at Rocklands Reservoir (% of all activities)**





### 3. PARTICIPANT CHARACTERISTICS AND ECONOMIC CONTRIBUTION

#### 3.1 PARTICIPANT DETAILS

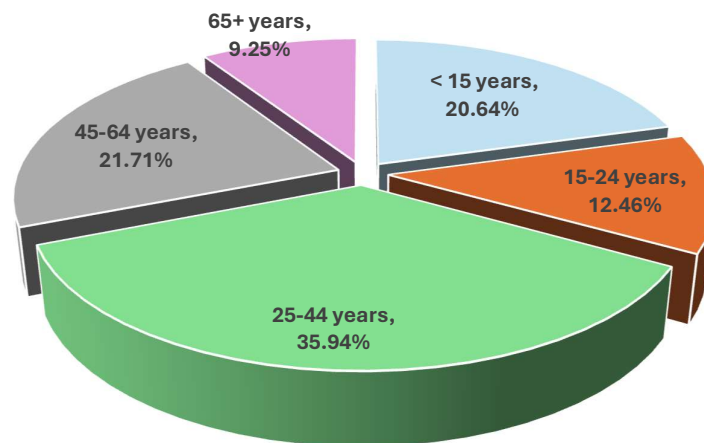
Estimated overnight visitors and day users of the main sites around Rocklands in 2023-24 are summarised in Table 3. These estimates have been developed through interviews on site, traffic counts supplied by Department of Energy, Environment and Climate Action (DEECA), and discussions with suppliers to the lake.

**Table 3: Estimated Recreational Participation, Rocklands 2023-24**

	Overnight Visitors	Visit Nights	Active Day Visitors	Total Participants
Brodies	6,526	20,886	1,099	7,625
Glendinning	13,700	43,849	2,308	16,008
Weir Wall - Turkey Neck	4,668	14,941	4,089	8,757
Henrys	1,584	5,070	267	1,851
Mountain Dam	1,817	5,815	306	2,123
Hynes	1,468	4,699	947	2,415
Fergusons	2,346	7,508	395	2,741
<b>Total</b>	<b>32,109</b>	<b>102,769</b>	<b>9,412</b>	<b>41,521</b>

Of the interviewed participants at Rocklands in 2023-24, 59.4% were male and 40.6% were female and the age distribution is shown in Figure 4. There were good levels of participation across all age ranges with fishing club members, family groups and reunions dominating the overnight visitor users.

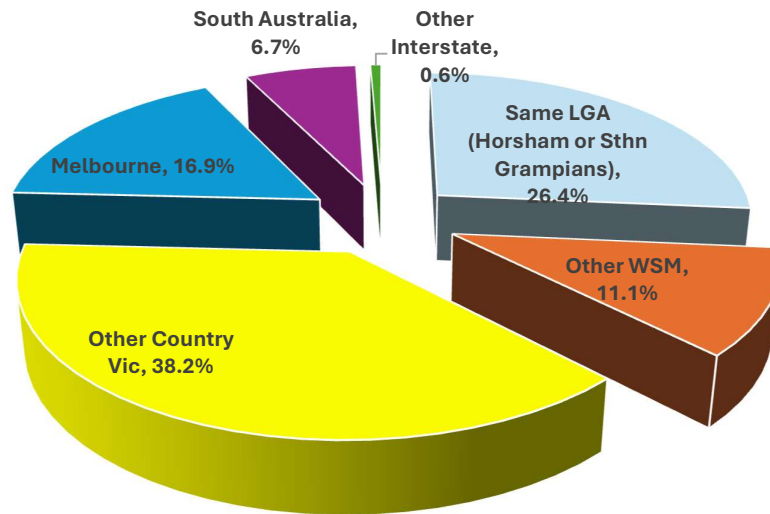
**Figure 4 Rocklands Reservoir Recreational Participants, Age Structure**



The reputation of Rocklands as a recreational fishery and visit destination is strongest among regional Victorians. While the number of visitors from Melbourne and interstate (largely South Australia) is significant, more than three-quarters of visitation was from non-metropolitan Victoria in 2023-24.

- Figure 5 reveals that in 2023-24, 76% of interviewed participants lived in a Victorian region:
- 26.4% in the local government areas around Rocklands (Horsham Rural City and Southern Grampians Shire).
  - 11.1% in another part of the Wimmera Southern Mallee (Buloke, Hindmarsh, Northern Grampians, Yarriambiack or West Wimmera Shire).
  - 38.2% elsewhere in non-metropolitan Victoria.

**Figure 5 Residential Locations of Rocklands Reservoir Recreational Participants**



### 3.2 ECONOMIC CONTRIBUTION

Tables 3, 4 and 5 detail the estimated 2023-24 economic contribution of recreational water at Rocklands Reservoir, and the growth since 2018-19. Total estimated contribution from Rocklands Reservoir to the regional economy<sup>3</sup> is \$5.506 million in 2023-24, a 21.5% per annum increase on the estimated economic contribution in 2018-19.

**Table 3: Estimated Visitor Expenditure 2018-19 and 2023-24: Rocklands Reservoir**

	Overnight Visitors	Active Day Visitors	Total Participation
<b>Visitor Expenditure (\$)</b>			
2023-2024	\$3,242,865	\$214,605	\$3,457,470
% per annum change on 2018-19	24.9%	11.2%	23.7%

**Table 4: Estimated Economic Contribution 2023-24: Supplier Organisations**

Suppliers: Direct	
Caravan Parks, Events, Clubs	\$169,716
Statutory Agencies <sup>4</sup>	\$616,312
<b>Total</b>	<b>\$786,028</b>

<sup>3</sup> The region includes Rural City of Horsham and Shires of Buloke, Hindmarsh, Northern Grampians, Southern Grampians, West Wimmera and Yarriambiack.

<sup>4</sup> These agencies include GWM Water, Fisheries Victoria and DEECA (Forests)



**Table 5 Type of Expenditure by Visitors**

<b>Rocklands Reservoir</b>	<b>Visitor Expenditure</b>	<b>%</b>
Café/Milk bar Eat in Meal/ Takeaway	\$1,261,979	36.5%
Supermarkets/ Groceries	\$1,229,211	35.6%
Fuel, vehicle and equipment maintenance	\$337,791	9.8%
Accommodation and entertainment	\$348,548	10.1%
Health needs, sportswear, bait, all other	\$279,941	8.1%
<b>TOTAL</b>	<b>\$3,457,470</b>	<b>100.0%</b>

### 3.3 HEALTH/SOCIAL CONTRIBUTION

The value of recreational water users' health contribution has been estimated based on prevention of chronic diseases (such as breast cancer, coronary heart disease, diabetes, bowel cancer and stroke). The mental health benefits are derived from the prevention of anxiety and depression.

Estimated total (annual) health benefits from country Victorians participating at Rocklands Reservoir recreational water facilities in 2023-24 include:

- Physical: Annual benefit: \$1,160,367
- Mental benefit: \$119,202
- Total annual health benefit \$1,279,569