

# Draft Amended Mersey River Catchment Water Management Plan 2023

July 2023 – Public Exhibition

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### The Department of Natural Resources and Environment Tasmania (NRE Tas)

The Department of Natural Resources and Environment Tasmania provides leadership in the sustainable management and development of Tasmania's natural resources. The Department's vision is a Tasmania where our natural resources, cultural values and environment are recognised and used sustainably to support our future prosperity.

The Primary Industries and Water Division provides a focus for water management and water development in Tasmania through a diverse range of functions, including implementing the *Water Management Act 1999* and the National Water Initiative; design of policy and regulatory frameworks to ensure sustainable use of surface water and groundwater resources; monitoring, assessment and reporting on the condition of the State's freshwater resources; and facilitating water infrastructure development projects.

# Acknowledgement of Country

*The Department of Natural Resources and Environment Tasmania acknowledges Tasmanian Aboriginal people as the traditional owners of lutruwita (Tasmania). We recognise Aboriginal people's continuing connection to Land, Sea, Waterways, Sky and Culture and pay our respects to Elders past and present.*

For thousands of years the Mersey River has provided a nurturing life-force for Tasmanian Aboriginal Peoples, and like all waterways in *lutruwita*, it is an important part of interconnected Country. The Mersey River has been known by several names, and although it has not been given an Aboriginal and dual name, we know the section of the river where the saltwater and freshwater meet as the *paranaple*.

The river starts its life journey high in the mountains of the Walls of Jerusalem National Park, located in the largest Aboriginal territory in *lutruwita* of the Big River Nation, the home of the Luggemairrernepairrer Clan. Here in this special part of Country, the river and lake banks give plentiful bird and freshwater life for Aboriginal People.

The river makes its way down the escarpment, winding through densely wooded valleys and opening onto occasional kangaroo hunting grounds of the Pallitorre Clan of the North Nation along the way. As the river flows it provides safe homes for many plants and animals, including the freshwater crayfish, once an important food source for some Aboriginal Clans. Winding through important ochre sites, and ceremonial places, the river finally enters Sea Country, the place belonging to one or two unnamed Clans of the North Nation associated with the Mersey River.

The river flows in deep time, giving food sources, cultural materials, and sustenance for everyday life for us, the sovereign Tasmanian Aboriginal People today and our ancestors. We lived and are still living with the river relying on what it gives us.

We have a special relationship with this river through our Tasmanian Aboriginal ancestor Dalrymple (Dolly) Briggs, daughter of Woretemoeteryenner, and granddaughter of Mannalargenna a leader of the North East Nation. In 1847, Dalrymple, her husband Thomas Johnson and children moved to Ballahoo (now known as Latrobe) on the river and soon after, built their family home Sherwood Hall on the banks of the river. Like us, many descendants of Dalrymple remain living in the district and are deeply connected to this river.

We ask that you respect and care for our river, and all our Country; which we have not ceded. Treat it well, cherish it and be thankful that you live in this beautiful place, our sovereign home.

**Dave Gough**

(on behalf of Six Rivers Aboriginal Corporation, May 2022).



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# I. Introduction

This Water Management Plan (the Plan) has been developed following a review of the Mersey Water Management Plan 2005 (DPIWE 2005). The review has considered new information that has been collected since the adoption of the 2005 Plan, and changes in water use and management that have occurred in the catchment.

Over the past decade and a half, there has been a shift in agricultural enterprises in the Mersey River catchment, with greater intensification of farming and conversion of dryland pasture to irrigated pasture. The Sassafras Wesley Vale Irrigation Scheme and Meander Irrigation Scheme (operated by Tasmanian Irrigation) have been developed in this time and there has been an overall increase in water allocation and other water developments.

This updated Plan provides a water management framework that is able to meet the community's needs and expectations, now, and looking ahead for the next 10 years.

## I.1 Purpose of the Plan

The purpose of the Plan is to provide specific rules and arrangements for the management of water resources of the Mersey River catchment downstream of Lake Parangana in accordance with the objectives of the *Water Management Act 1999* (the Act).

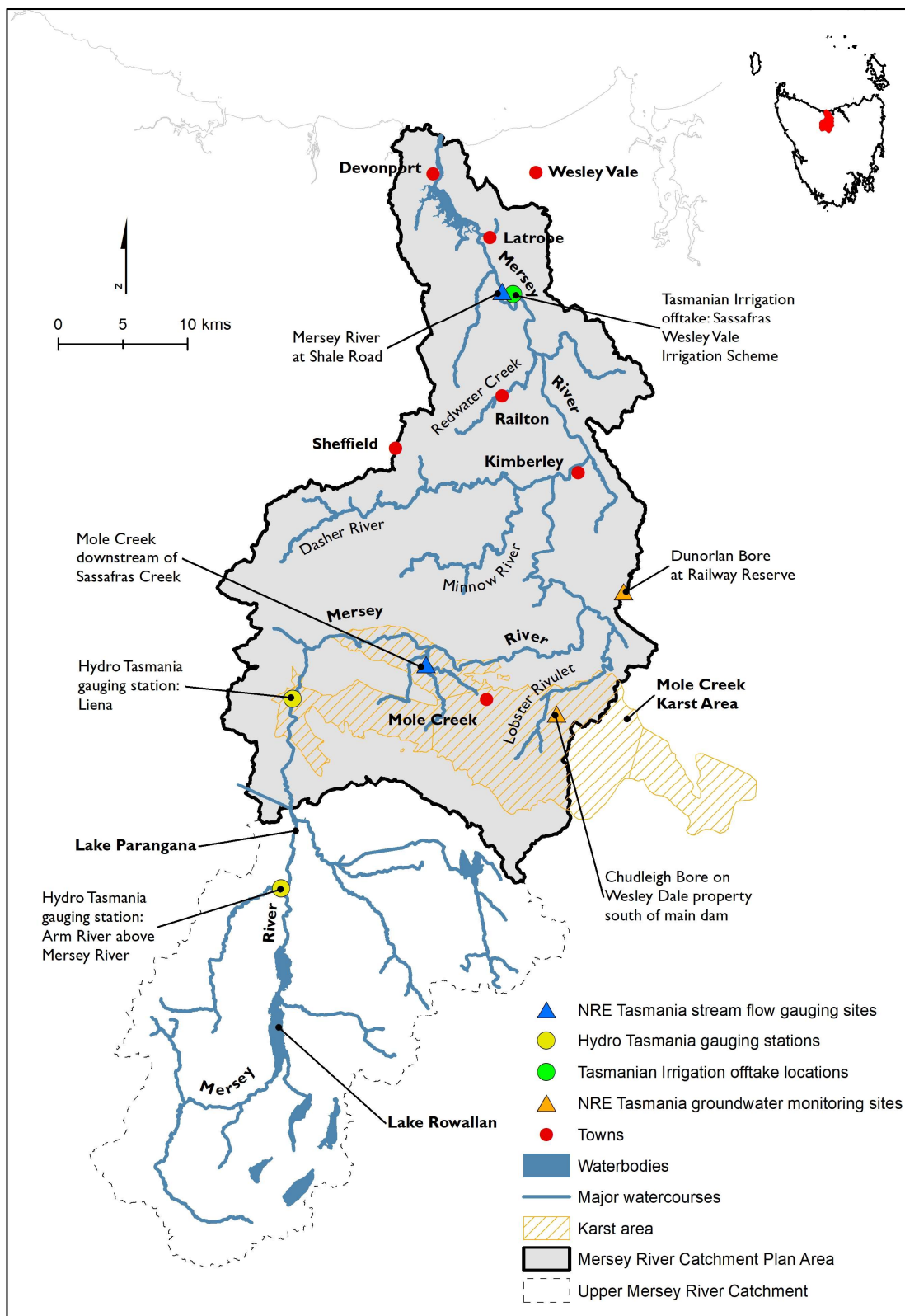
## I.2 Plan area

The Plan applies to the surface and groundwater resources in the Mersey River Catchment Water Management Plan area (the Plan area). The Plan area (Figure 1) covers the Mersey River catchment below Lake Parangana, including the sub-catchments of Mole Creek, Lobster Rivulet, Dasher and Minnow Rivers, Coilers Creek, Redwater Creek, Bonney's Creek, Caroline Creek and a number of other smaller tributaries.

The Plan applies to the management of:

- All water in both permanent and temporary watercourses and lakes within the Plan area.
- All surface water resources within the Plan area.
- All groundwater resources within the Plan area





**Figure 1** Mersey River Catchment Water Management Plan area, showing stream flow gauging stations, current groundwater monitoring bore sites, main townships, the Mole Creek Karst area and key extraction points.

# 2. Vision and objectives

## 2.1 Vision

That the water resources within the Mersey River Catchment Water Management Plan area are managed to support the sustainable use of water for a range of economic, recreational and cultural activities, and maintain healthy and diverse freshwater-dependent ecosystems.

## 2.2 Outcomes and objectives

### 2.2.1 Outcomes

This Plan contributes to the following outcomes that can be used by all stakeholders who can apply them to guide and align their planning and water management strategies and activities.

1. Improved understanding, engagement and confidence within the Tasmanian community that the water resources in the Mersey River Catchment Water Management Plan area are managed sustainably to support the community's water-related economic, environmental and social wellbeing.
2. Priority-based access to water resources to support secure and sustainable development and access to water resources for town water supply, agriculture, and other water-dependent industries.
3. Maintenance of key elements of the flow patterns in watercourses and connected groundwater systems to sustain ecosystem health and support water-related cultural, recreational and tourism activities.
4. A fair and accountable system of water entitlements and access rules supporting open access to information to inform water markets and trade.

## 2.2.2 Objectives

The objectives of this Plan complement and advance the broad objectives of the Act and the Resource Management and Planning System of Tasmania and relate to the freshwater-dependent values<sup>1</sup> in the Plan area to underpin its water management arrangements.

The objectives for the Mersey River Catchment Water Management Plan are to:

1. Support the community and the Department to be accountable for water use and management through access and sharing of information to support engagement, review and improvement of water management.
2. Ensure that water access for essential needs of the community (including Surety 1 – town water, and stock and domestic access by riparian properties) is not impacted by lower surety use.
3. Maintain daily and seasonal extraction of non-essential water from the water resource (Surety Levels 5-6) at levels that protect key elements of stream flow and groundwater regimes by implementing access rules under this Plan in order to cause no material or serious harm to existing freshwater-dependent ecosystem values and processes outlined in section 3.1 of this Plan.
4. Maintain fair and orderly access to the water resource for agriculture and other consumptive water uses by defining classes of water entitlement, access rules and priorities for water access when water availability is limited.
5. Define classes of water entitlements and access rules to facilitate the operation of a secure and accountable water supply system and market.

Refer to Part 6 – Plan effectiveness and review (6.2 Performance measures) for measures that will be used to evaluate and report Plan performance against these objectives.

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<sup>1</sup> Refer to Part 3.1 of this Plan.

# 3. Water dependent values and the water regime that supports them

This Plan recognises the historically altered flow regime of the river and seeks to implement provisions to mitigate risk to the economic, environmental and social values that are supported by the existing 'altered' flow regime.

The water regime within the Plan area includes regulated flows in the main stem of the Mersey River due to the operation of Parangana Dam and more natural flows in its tributaries.

## 3.1 Water Dependent Values

The water resources in the Mersey River catchment support many environmental, social and economic values. Surface water flow and groundwater resources play important roles in supporting all the values in the catchment.

Key water-related values identified by stakeholders in the Mersey River catchment, in addition to the Tasmanian Aboriginal recognition of the importance and value of the river and its tributaries identified in the Acknowledgement of Country in the front of the Plan, include:

- Reliable access to water for essential stock and domestic water supply.
- Water supply for irrigated agriculture and other water-dependent businesses.
- Freshwater ecosystems and ecological processes that support instream and riparian plants and animals within the catchment, including threatened species listed under the *Tasmanian Threatened Species Protection Act 1995* and the *Commonwealth Environment Protection and Biodiversity Conservation Act 1999*.
- Groundwater-dependent ecosystems, processes and species in the Mole Creek Karst National Park and other karst systems.
- Multiple riverside conservation areas including regional and state reserves, such as Warrawee Conservation Area and Lobster Falls.

- The Mersey River estuary.
- Native, recreational and commercial fisheries.
- Water based activities including kayaking, canoeing, rafting, swimming and caving.
- Other water-related social, recreational, cultural and heritage-based activities that are important to the community.
- Suitable water quality for environmental, social and economic uses.

## 3.2 Water Management Context

A range of provisions of the Act and policies also apply to the management of water in the Plan area and complement the provisions of this Plan in achieving its objectives. Part 5 of this Plan and the associated Water Management Protocols specify how the relevant water related provisions and policies under the Act and this Plan are applied to manage water in the Plan area.

Managing water extraction in a largely regulated river system presents many challenges for water managers, such as considering competing water demands and extremes in climate (e.g. droughts and floods), and the need for information to adequately account for water availability and extraction from different sources.

The water regime that best meets the objectives of this Plan is one that represents an appropriate balance between providing water for town and essential water access and to maintain environmental and social values, as well as providing water for economic purposes.

Although the flow in the Mersey River catchment has been modified for hydro power generation the freshwater system continues to support important environmental, social and economic values that are important to the community.

## 3.3 Description of the Water Regime

An appropriate water regime for the water resources of the Mersey River catchment is based on the principles of:

- Improving water management for all stakeholders.
- Not increasing risks related to water extraction or management related to the water dependent values supported by the existing flow patterns.

Even in a developed catchment with modified flows, such as the Mersey River catchment, the remaining natural flow patterns (e.g. seasonal variation in baseflows and freshes, seasonal fluctuations in groundwater levels) are important for sustaining freshwater-dependent ecosystems. They also support access to good quality water for all uses.

This Plan seeks to maintain and conserve the key components of the catchment's existing water regime to mitigate risk to current ecosystem values while at the same time sustainably optimising water access to mitigate risks to water users' access. The water regime for the Mersey River (and its tributaries) supports important environmental, social and economic values related to the water resource, refer to Part 3.1 of this Plan. Table 1 describes the key

components of the flow regime of the Mersey River catchment, their functions in relation to water dependent values and how the provisions of this Plan support delivery of its objectives.

Like other perennial rivers in Tasmania that flow throughout the year, important components of flow regime of the Mersey River catchment include: baseflows, freshes and high flows (including floods). Baseflows in the upper Mersey River below Parangana Dam are supported by environmental water releases<sup>2</sup>, whereas baseflows in the lower reaches are influenced by these releases as well as natural inflows from tributaries. Low flows are the part of the flow regime most at risk if water extraction is not effectively managed.

During periods of water restriction, water is also released from Lake Parangana under various water supply agreements between Hydro Tasmania and water dependent businesses on the Mersey River, in addition to the environmental water releases, and are not considered reliable source of baseflow.

Freshes, which are caused by rainfall-generated runoff, are more prominent in the mid to lower reaches of the Mersey River, where catchment runoff and inflows from tributaries elevate flows during times of moderate rainfall. High flows follow a similar spatial pattern to freshes along the length of the river but can cause spill events at Parangana Dam; however, large floods result in flooding throughout other parts of the river system.

The groundwater resources in the Mersey River catchment are connected to the surface water resources and are an integral part of the overall water regime. The largest components of flow into the groundwater aquifers are rainwater recharge and groundwater discharge which are significant contributors to baseflow into rivers in the catchment.

The relationships between the surface and groundwater in this catchment is complex. For example, in the low-lying meandering river sections (with younger unconsolidated sediments), streams either lose water to groundwater or gain water from groundwater sources. In the rest of the catchment, where streams are incised into harder basement rocks, streams appear to be predominately gaining. Losing stream reaches are rare and occur during periods when surface water levels are above the local groundwater water table. Some reaches are naturally losing, and this tendency increases during high flows and floods or during the release of water from dams into streams. Mole Creek is an example of a complex karstic water system where surface water and groundwater connectivity is more obvious than in the rest of the catchment.

There is a range of requirements for the management of groundwater resources under the Act and the *Water Management Regulations 2019*. At the time of this Plan's development, the risk of impact of groundwater use on groundwater resources from water resource development and extraction has been assessed as low risk and the current level of management has been identified as adequate.

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<sup>2</sup> The environmental release from Lake Parangana is implemented under a condition on Hydro Tasmania's Special Licence Agreement and environmental releases are intended to be protected from extraction by commercial users and flow through the system to the estuary.

**Table 1** Key components of the flow regime, their function and the values that relate to them, and the objectives and provisions of this Plan that maintain them. Flows described are those measured at the streamflow gauging station in the Mersey River at Shale Road.

Type of flow	Frequency	Description and magnitude	Flow functions and values relating to them	Access threshold	Plan provisions	Plan objectives
High flows and floods	1 in 1.4 years	Peak high flows with an instantaneous threshold of 15,000 ML/day.	<ul style="list-style-type: none"> <li>• River, stream, karst and estuarine channel maintenance.</li> <li>• Recharges groundwater to support reliable water supplies and groundwater dependant ecosystems.</li> <li>• Maintains riparian areas, floodplains, and wetlands throughout the river system and estuary, including river side conservation areas.</li> <li>• Transports sediment and organic material through the system from rocky ecosystems and waterfalls.</li> <li>• Access to water during high flow events is provided.</li> </ul>	15,000 ML/day	<ul style="list-style-type: none"> <li>• Opportunistic take access threshold (Provision 4.4.3).</li> </ul>	Objectives 3, 4 and 5.
Freshes	Flows generated by moderate rainfall/runoff events.	Small to moderate flow events that interrupt the normal pattern of baseflows (typically 4,500 – 9,000 ML/day).	<ul style="list-style-type: none"> <li>• Flush algae, silt and organic material through the system.</li> <li>• Maintain habitat for instream fauna (water bugs, fish, crayfish etc.).</li> <li>• Provide cues for migration of fish and other aquatic species (Apr-Nov).</li> <li>• Provide access to water to fill dams and for direct takes.</li> <li>• Provide optimal flows for paddling and canoeing for recreation and tourism.</li> </ul>	Monthly cease-to-take thresholds	<ul style="list-style-type: none"> <li>• Monthly cease-to-take thresholds (Provision 4.4.2).</li> <li>• Water allocation limits (Provision 4.3).</li> </ul>	Objectives 3, 4 and 5.

Type of flow	Frequency of flow	Description and magnitude	Functions and values relating to flows	Access threshold	Plan provisions	Relevant plan objectives
Baseflows	Most of the time.	Natural seasonal pattern of change in low to moderate flows that is not associated with rainfall events. Influenced by water releases from Lake Parangana (typically <1,000 ML/day).	<ul style="list-style-type: none"> <li>• Supply of Surety 1, stock, domestic and firefighting water to riparian properties.</li> <li>• Maintain water quality (related to flow), refuge habitat and connectivity through the river system to support: <ul style="list-style-type: none"> <li>▪ flora and fauna, including fish populations for fishing-based recreation tourism and cultural activities.</li> <li>▪ other community and cultural activities including swimming, paddling and canoeing.</li> </ul> </li> <li>• Water supply for irrigated agriculture and other water-dependent businesses at different levels of reliability.</li> </ul>	Monthly cease-to-take thresholds.	<ul style="list-style-type: none"> <li>• Monthly cease-to-take thresholds (Provision 4.4.2).</li> <li>• Water allocation limits (Provision 4.3).</li> </ul>	Objectives 2, 3, 4 and 5.



### 3.4 Ability of the water regime to meet Plan objectives

This Plan sets out provisions for managing the risks related to water extraction and management in the Mersey River Catchment Water Management Plan area. Water access rules and water allocation limits are the primary tools used to manage risks and are designed to maintain and protect key elements of the flow regime as well as support optimal levels of sustainable water access (Table I). Ultimately, appropriate rules and limits are put in place to help achieve this Plan's objectives. Water access is managed daily by access rules that aim to protect the security of water entitlements and maintain and protect appropriate seasonal baseflows, freshes and high flows in the river, as well as supporting recharge and discharge of groundwater (Table I).

Water allocation limits are also an effective measure in limiting extraction on an annual basis and preserving the overall hydrological character of a river system, especially in a perennial river system. Priority of access (when water is limited) applied by surety levels of allocations provide for sustainable, orderly and equitable access to water when access is limited.

Clear access rules and priorities for water access also support water managers and businesses to plan for risks and enables greater certainty and security to water markets and water users, particularly when water is scarce.

#### *High flows and floods*

High flow events provide a number of functions in relation the freshwater-dependent values in the catchment including the river's estuary (Table I). Preserving high and medium flow events recharges groundwater systems, flushes sediment, algae and other organic material through the system, provides cues for fish migration at certain times of the year.

Introduction of an opportunistic take access threshold enables water users to access water during high flows (flows in excess of 15,000 ML). The limited frequency (1 every 1.4 years) and short travel times of high flow events makes this water unreliable and difficult for water users to reliably access. However, in the Mersey River catchment, most dams licensed to take water are instream and thereby capture flood water as it passes through the dam and spills during high flows. Inclusion of the opportunistic take access threshold in the Plan authorises licensed water users to take this water without an allocation, providing improved access to water that is captured during high flow events. Given the magnitude of these events, there is very low risk that opportunistic takes would have a significant impact on flows, as dams would typically fill and spill during these events. Filling dams during high flow events also reduces the need to fill dams during lower flow conditions and supports mitigating impacts on flushing flows, freshes and baseflows.

#### *Flushing flows and freshes*

Moderate flows (freshes or 'flushing flows') are important for transporting silt and algae, increasing dissolved oxygen and improving water quality overall (Table I). They also wet and inundate riverbanks to maintain habitat for instream fauna and riparian vegetation.

Moderate flows are an important source of water for water users, particularly after a period of prolonged low flows. Some flushing flow events may also reach the high-flow threshold.

Maintenance of baseflows during low flow conditions (below) through the implementation of monthly cease-to-take thresholds supports flushing flows and freshes as they provide a good base to start from and to help to reduce losses (e.g., to groundwater).

This Plan sets limits to the volume of water that can be sustainably allocated for economic use (irrigation or other commercial) during the period 1 May to 31 October. No further water is available to be allocated in the period 1 November to 30 April. Putting a limit on the amount of water that can be allocated from the system, in conjunction with daily access rules, supports sustaining moderate flows and freshes to maintain river health and protect the reliability of supply to water users. Further development of the water resource, for new enterprises can be supported by several mechanisms including accessing any remaining water that may be available for allocation from May to November and/or by permanent or temporary transfer (trade) of existing water entitlements with other water users. Trade supports water being allocated to its highest value use.

#### *Baseflows*

The protection of baseflows during low flow conditions is important for a range of environmental reasons including maintenance of habitats for instream flora and fauna, ecological processes, water quality, and connectivity between different riverine and/or karst habitats, and the river and its estuary (Table 1). Baseflows are also an important reliable source of water for towns, stock and domestic supply and essential services, such as fire-fighting, as well as economic (irrigation and other commercial) use.

Baseflows on the main stem of the Mersey River (and especially immediately downstream of Lake Parangana) are partly maintained by environmental releases from Lake Parangana by Hydro Tasmania in accordance with conditions on their Special Licence Agreement.

The Plan includes monthly cease-to-take thresholds measured at the Mersey River at Shale Road that apply for the entire year to maintain seasonal variation in the surface water baseflow pattern. The protection of baseflows during low flow conditions throughout the year is important given an increasingly variable climate and the increased demand for water on an annual basis (rather than seasonal).

The cease-to-take thresholds (refer to Part 4.4.2) provide a variable monthly cease-to-take threshold for the high flow months between June to November and a 195 ML/day threshold from December to May.

# 4. Water access arrangements

This Plan sets out the allocation limits and access rules for the taking and use of water within the Mersey River catchment. In Tasmania, water is provided at varying levels of priority and Surety.

## 4.1 Priorities for water access

Surety levels indicate the relative priority of water access provided under different classes of water entitlement when supply of water is limited. Surety levels are listed in descending order of priority below. It should be noted that the Department does not guarantee any level of reliability because availability and reliability will vary significantly based on actual climatic conditions, the location of takes in the catchment and the way water users are permitted to access water under licences.

<i>Surety Level 1</i>	Water for town water supply, domestic purposes, public health purposes and consumption by livestock or firefighting.
<i>Surety Level 2</i>	Water to sustain ecosystems dependent on the water resource.
<i>Surety Level 3</i>	Water access entitlements replacing Prescriptive Rights granted under previous Acts (not applicable in Mersey River Catchment Water Management Plan area).
<i>Surety Level 4</i>	Water for special purposes such as for the generation of electricity or similar.
<i>Surety Level 5</i>	Water for purposes other than those described under Surety Levels 1-4. This includes water for direct extraction or taken into storage for irrigation, non-essential town water supplies or other commercial purposes.
<i>Surety Level 6</i>	Water for direct extraction or storage into dams for irrigation, town water and other commercial purposes at a lower level of reliability than Surety Level 5.
<i>Surety Level 7</i>	Water for direct extraction or storage into dams at a lower level of reliability than Surety Level 6. This includes water provided under catchment or site-specific thresholds or triggers.
<i>Surety Level 8</i>	Water for direct extraction or storage into dams at a lower level of reliability than Surety Level 7. This includes water provided under

specific catchment or site-specific thresholds or triggers (not applicable in the Mersey River catchment).

## 4.2 Take periods

Under this Plan new allocations will only be available in the period 1 May to 31 October.

Existing allocations will be retained and limited based on their existing take periods. Refer to Part 4.3.

## 4.3 Water allocation limits

An allocation limit is the maximum volume of water allocated for extraction from a water resource at each Surety Level under this Plan.

For the period from 1 November to 30 April, this resource is now fully allocated at Surety Levels 5 and 6. Existing allocations that fall in this period (in full or in part) will be limited to their existing volumes and take periods.

For the period 1 May to 31 October this Plan has an allocation limit of 96,811 ML<sup>3</sup>. There is no further water available at Surety Level 5.

Water at Surety 2 (environmental water), the rights to water under Part 5 of the Act and opportunistic takes are not allocated but are protected by access rules.

## 4.4 Access thresholds

### 4.4.1 Flow reference point

For the purpose of this Plan, all surface water flow thresholds referred to are measured at the Mersey River gauging station at Shale Road (Table 2; Figure 1).

**Table 2** Flow management reference points.

Water resource	Stream flow gauging station	Station number	Owned and operated by	Easting	Northing
Mersey River	Mersey River at Shale Road	447-1	NRE Tas	451607.9	5430783.1

Refer to section 2 of the Mersey River Catchment Water Management Protocols (NRE Tas 2023c) for details of other current surface and groundwater monitoring sites in the Plan area.

<sup>3</sup> The limit represents the total volume available from all outlets to the river system. Availability of new allocation at Surety Level 6 will be assessed on a case-by-case basis to meet the requirements of the Surface Water Allocation Decision Framework and the Plan limits to ensure alignment with the objectives of the *Water Management Act 1999*. Availability considers the hydrology and allocations at specific offtake locations and will not reflect this volume at sights upstream of the outlets.

#### 4.4.2 Monthly cease-to-take thresholds

The monthly cease-to-take thresholds for the Mersey River catchment are specified in Table 3.

When flow falls to, or below, the cease-to-take threshold (as measured at the Mersey River at Shale Road stream flow gauging station), full restrictions on the taking of water by holders of water licences, from watercourses within the Plan area, will be assessed and implemented by an Authorised Officer<sup>4</sup>.

The implementation of staged restrictions before the cease-to-take is reached is based on surety levels (priority of access) and will be specified and implemented in accordance with the Mersey River Catchment Water Management Protocol (see Section 5.1).

**Table 3** Monthly cease-to-take thresholds for the Mersey River catchment, as measured at the Mersey River at Shale Road stream flow gauging station.

Month	Monthly cease-to-take thresholds (ML/day)
December to May	195
June	330
July	540
August	660
September	580
October	370
November	260

While these thresholds are measured at the Mersey River at Shale Road stream flow gauging station, when flow falls below these thresholds it is indicative of low flows across the whole Plan area.

The cease-to-take thresholds set out in Table 3 do not consider water conveyed according to approved Watercourse Authorities issued under Part 6A of the Act. The relevant conveyance volumes must be fully accounted for and deducted from flow at the gauge in interpreting the access threshold.

#### 4.4.3 Opportunistic take access threshold.

Licensees in the Plan area will be permitted to take water opportunistically from a watercourse during periods of very high flow. Opportunistic takes are not allocated or counted against existing allocation volumes on water licences.

The threshold for opportunistic access to water is a flow of greater than or equal to 15,000 ML/day, as measured at the stream flow gauging station on the Mersey River at Shale Road.

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<sup>4</sup> As defined in Part 12 of the *Water Management Act, 1999*.

Once this threshold has been reached, authorisation will be provided to licensees to take water under section 90 of the Act. Permission will remain in place until flow falls below 15,000 ML/day and authorisation is revoked.

Volumes of water taken must be authorised, measured and accounted for in a licensee's water use records.

# 5. Implementation provisions

This section includes a provision under this Plan that provides a pathway to implementing changes to water management arrangements in accordance with the Plan.

## 5.1 Water Management Protocol

Under this Plan the Department must prepare and approve a supporting document to this Plan called the *Mersey River Catchment Water Management Protocol* (the Protocol) (NRE Tas 2023c). The Protocol may be amended from time to time.

The Protocol is not part of this Statutory Plan but operates in conjunction with the Plan to provide water users with specific information on how water is managed within the broader water management framework provided by the Act, this Plan and other Departmental policies.

By documenting these details outside of the Plan, the Protocol will provide:

- A consolidated and current source of relevant water management information and access arrangements to support water users and water managers to understand and fulfil their obligations.
- Flexibility to review and make improvements to management arrangements (consistent with this Plan) in response to new information and to address changing or emerging risks.

# 6. Plan effectiveness and review

This part of the Plan details the timeframes for the review of this Plan and other provisions that support evaluation of the performance and review of this Plan.

## 6.1 Review of this Plan

The Secretary of the Department is to undertake a review of this Plan after the end of the 10<sup>th</sup> year following the date of this Plan's adoption. The Secretary shall consult with stakeholders during the review of this Plan.

This Plan may also be reviewed by the Secretary of the Department, pursuant to a Direction by the Minister in accordance with section 34(1A) of the Act.

## 6.2 Performance measures

The Performance Measures specified in Table 4 may be used to support monitoring and reporting of the effectiveness of water management in accordance with this Plan. These measures can also support shorter term reporting and evaluations to underpin operational improvement consistent with this Plan.

Evaluation of performance in terms of impact of this Plan on longer term outcomes such as river health (related to flow) and water access will form part of the Plan review at the end of the 10-year planning cycle. Evaluations over longer timeframes are required to test how effectively this Plan contributes to the delivery of the vision, outcomes and objectives specified by this Plan under a broader range of environmental and water management scenarios.



**Table 4** Performance measures for reviewing the effectiveness of this Plan.

PLAN OUTCOMES	PLAN OBJECTIVES	PERFORMANCE MEASURE
1. Improved understanding, engagement and confidence within the Tasmanian community that the water resources in the Mersey Catchment Water Management Plan area are managed sustainably to support the community's water related economic, environmental and social wellbeing.	1. Support the community and the Department to be accountable for water use and management through access, and sharing of, information to support engagement, review and improvement of water management.	(a) Compliance with record keeping by water users to demonstrate accountability. (b) Number of Annual Catchment Reports published and community engagement activities conducted to report on and evaluate the performance of the Plan.
2. Priority-based access to water resources to support secure and sustainable development and access to water resources for town water supply, agriculture, and other water-dependent industries	2. Ensure that water access for essential needs of the community (including Surety 1 - town water and, stock and domestic access by riparian properties) is not impacted by lower surety use.	(a) Days when Surety 5 or 6 restriction is implemented is consistent with the access thresholds in this Plan. (b) Reports and/or evidence of surety 1 access being impacted by lower priority takes.
3. Maintenance of key elements of the flow patterns in watercourses and connected groundwater systems to sustain ecosystem health and support water-related cultural, recreational and tourism activities.	3. Maintain daily and seasonal extraction of non-essential water from the water resource (Surety Levels 5-6) at levels that protect key elements of streamflow and groundwater regimes by implementing access rules under this Plan in order to cause no material or serious harm to freshwater-dependent ecosystem values and processes outlined in section 3.1 of this Plan.	(a) Days of access at all Surety Levels by take periods and water year (1 May to 30 April). (b) Reports and/or evidence of broad scale domestic access to ground water being impacted by commercial takes.
4. A fair and accountable system of water entitlements and access rules supporting open access to information to inform water markets and trade.	4. Maintain fair and orderly access to the water resource for agriculture and other consumptive water uses by defining classes of water entitlement, access rules and priorities for water access when water availability is limited.	Use performance measure 2(a) and: (a) Surety 5 and 6 allocation volumes vs. water allocation limits established in this Plan. (b) Reports and/or evidence of environmental (surety 2) harm occurring as a result of access by lower priority takes.

PLAN OUTCOMES	PLAN OBJECTIVES	PERFORMANCE MEASURE
	5. Define classes of water entitlements and access rules to facilitate operation of a secure and accountable water supply system and market.	Use performance measures 3(a) and 4(a).

# 7. Statutory requirements

This section refers to assessments required under the *Water Management Act 1999* (the Act).

Under the Act, a water management plan is to include:

- (a) a statement of the objectives of the plan, including the environmental objectives (section 2.2.2); and
- (b) a description of the water regime that best gives effect to the environmental objectives and other relevant objectives of the plan (section 3.3); and
- (c) an assessment of the ability of that water regime to achieve the environmental objectives and other relevant objectives of the plan (section 3.4); and
- (d) an assessment of likely detrimental effects of the plan on the quality of water.

Additionally, as this Plan provides for the allocation of water, it must:

- (e) include an assessment of the capacity of the relevant resource to meet the likely demands for water by existing and future users; and
- (f) take into account the needs of existing and future users and state the likely effect of the plan on those users, including any effect on businesses carried on by those users.

Components (a) – (c) listed above are provided earlier in this Plan, as noted. Details of assessments (d) – (f) are provided in the *Mersey River Catchment – Statutory Assessments* document (NRE Tas 2023a). While presented separately, the Statutory Assessments document forms part of this Water Management Plan.

During the process of reviewing and developing amendments to the Mersey River Catchment Water Management Plan 2005, the Department discussed issues and management options with key stakeholders through the Mersey River Catchment Water Management Plan Consultative Group. Through this process, options that provided the greatest improvements in water management in the catchment were chosen (NRE Tas 2023b).

# Definitions

Words used in this Plan have their ordinary meanings as defined in the Macquarie Dictionary unless otherwise defined in this Plan, *Irrigation Clauses Act 1973* or the *Water Management Act 1999*.

**Act** means the *Water Management Act 1999* as amended or, if that Act is repealed, any Act enacted in substitution for that Act.

**allocation limit** means the maximum volume that can be allocated under this Plan at a level of Surety taking into consideration the relative priorities of environmental water requirements, rights under Part 5 of the Act and existing allocations.

**catchment** means the drainage area within which water will naturally flow towards a watercourse and includes the watercourse.

**cease-to-take threshold** means the minimum flow threshold below which all licensees holding surety 5 and 6 allocations will, after assessment by an authorised officer, be restricted from any extraction.

**Department** means the Government agency administering water under the Minister's portfolio.

**Hydro Tasmania** means Hydro – Electric Corporation.

**Minister** means the Minister administering the *Water Management Act 1999* or if that Act is repealed, the Minister administering any Act enacted in substitution for that Act.

**ML** means megalitre (one million litres).

**river system** – the whole natural water system in a drainage basin which includes all surface water and groundwater underneath the earth's surface.

**stream flow gauging station** means the Department's flow measuring device located at a particular reference point.

**surface water** means the surface water from all sources within the catchment, either as dispersed surface water or as occurs in a watercourse.

**take period** means the period between the start date and end date specified on a licence for the taking of a water allocation.

**values** is a broad term that refers to important aspects of freshwater ecosystems in the Plan area, things that they support and how their water resources are used. Three high-level groups of values are recognised.

- a) social values relate to the social attachment of people to water and water dependent landscapes and associated cultural practice (beliefs, traditions, spiritual and

community practices and sense of identity) such as recreational pursuits (e.g. fishing, rafting paddling, bird watching, art), cultural interactions and other social and community-based uses of freshwater ecosystems within the Plan area.

- b) economic values, relate to the use of water for commercial purposes to generate monetary profit (e.g. irrigation of agricultural land, commercial fisheries, tourism events and businesses dependent on the water resource etc.).
- c) environmental values, such as key components of the freshwater-dependent ecosystems in the Plan area (e.g. state of rivers, streams, lakes, wetlands and estuarine ecosystems, native fish populations).

**water access entitlements** means an entitlement to take water under Part 6 of the Act, which has been established through a water licence and any water allocations endorsed on that licence.

**water user** means:

- a) any person who has a right or authorisation to take water under the Act; or
- b) any other person who uses the water resource for recreation or any other purpose.

**Water Manager** means the Minister or delegate who is responsible for administering this Plan under the Act.

**Water Resources** refer to both surface water and groundwater.



# References

DPIPWE 2020. Surface Water Allocation Decision Framework (<https://nre.tas.gov.au/Documents/Surface%20Water%20Allocation%20Decision%20Framework.pdf>).

DPIWE 2005. *Mersey Water Management Plan*. Water Assessment and Planning Branch, Department of Primary Industries, Water and Environment, Hobart.

NRE Tas 2022. *Mersey River Catchment Water Resources Information*. Review and Amendment of the Mersey River Catchment Water Management Plan. Primary Industries and Water Division. Department of Natural Resources and Environment Tasmania

NRE Tas 2023a. *Draft Amended Mersey River Catchment Water Management Plan – Statutory Assessments*. Primary Industries and Water Division. Department of Natural Resources and Environment Tasmania.

NRE Tas 2023b. *Draft Amended Mersey River Catchment Water Management Plan – Impact Assessments*. Primary Industries and Water Division. Department of Natural Resources and Environment Tasmania.

NRE Tas 2023c. *Draft Mersey River Catchment – Water Management Protocols*. Primary Industries and Water Division. Department of Natural Resources and Environment Tasmania.

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