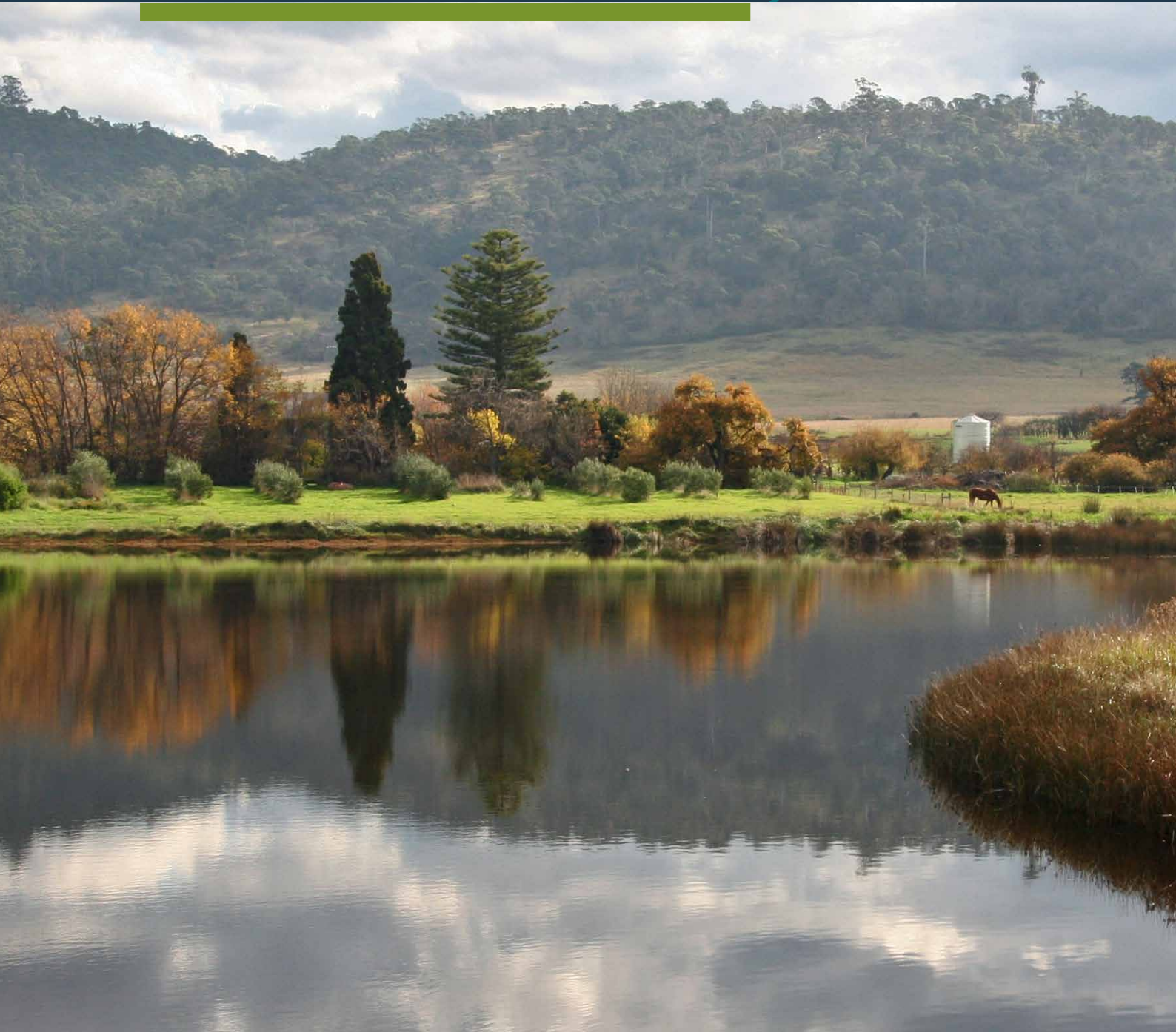


Rural Water Use Strategy Progress Report 2023





Acknowledgement of Country

The Department of Natural Resources and Environment Tasmania acknowledges and pays respect to Tasmanian Aboriginal people as the traditional and original owners and continuing custodians of this land, and acknowledges Elders past and present.



Rural Water Use Strategy Vision

The Rural Water Use Strategy guides Tasmania's future water management arrangements to ensure **integrated, fair and efficient** regulation of our water resources to deliver sustainable outcomes for rural water users, rural communities and the environment, while maintaining Tasmania's competitive advantages in a changing climate.

Goals



Sustainable management of Tasmania's water resources



Strategic development to maximise opportunities from water resources



Effective regulation, strong entitlements and planning



Optimising services



Minister's Foreword

With water arguably our most precious resource, I am pleased to present the Rural Water Use Strategy Progress Report for 2023, highlighting the progress NRE Tas has made towards implementing the Strategy over the 2022-2023 period. Completion of these activities will ensure our water management framework is fit-for-purpose and can support development in irrigated agriculture, while addressing challenges and emerging risks around water quality and changing climate. Water security plays a critical role in supporting our Agri-Food Plan and target to sustainably grow the farmgate value of agricultural production to \$10 billion by 2050.

The total current investment allocated to deliver current projects under the Rural Water Use Strategy is now \$5.68 million, with the Tasmanian Government's investment making up \$4.46 million, and the Australian Government committing \$1.22 million. This investment includes a new commitment of \$600 000 in the 2023-24 Tasmania budget to support renewal of the current Water Information Management System.

The Government is continuing to invest significantly in irrigation development through Tasmanian Irrigation, with construction and pre-construction work on several Tranche 3 schemes underway. Additionally, the National Water Grid Authority is co-funding six smaller water infrastructure projects, including expansion of the Penna Recycled Water Scheme, development of the Bicheno Recycled Water Scheme and a project to upgrade parts of TasWater's sewerage infrastructure near shellfish lease areas. These projects will significantly benefit both the primary industries sector and the environment.



I would like to acknowledge the partnerships built with key stakeholders in water management who have come together to support the Rural Water Use Strategy's objectives and delivery. Enhanced partnerships, such as the continuation of the Rural Water Roundtable and the establishment of the Water Management and Data Custodians Working Group, will continue to drive support for the Strategy and deliver better water management outcomes.

This collaboration is evident in the discussions underway to explore ways to better understand the health and water quality of Tasmania's waterways. This work is critical to improving the way we coordinate and share information relating to the health of our rivers, understanding what is driving changes in river health and setting out a roadmap of roles and responsibilities for river health and water quality monitoring.

Overall, the Tasmanian Government's initiatives in freshwater resource management in 2022-23 have been extremely encouraging, with many significant milestones reached. These efforts undoubtedly set a strong foundation for delivering sustainable water resource management that is aligned with Tasmania's environmental, cultural, social and economic goals.

A handwritten signature in blue ink that reads "Jo Palmer". The signature is written in a cursive style.

Hon. Jo Palmer
Minister for Primary Industries and Water



Key Achievements 2022-2023

- Developed a new Groundwater Risk Assessment Tool to assess potential risks (economic, social, and environmental) to our groundwater resources and support groundwater management decisions. This is the first-ever assessment of its kind for the state and helps us understand and better protect our underground water resources.

- Phase 1 of work to incorporate contemporary climate change projections in water management including development of modelling methodologies and evaluation of new climate datasets in six catchment models.

- Reviewed surface water and groundwater monitoring networks managed by NRE Tas to help prioritise future investment in monitoring across the State.

- Identified requirements for updating the State's water licencing and dam permitting system to meet future needs and the expectations of the Government and water users.

- Designed a study to investigate causes of change in river health. To support this work, the first round of instream sampling was undertaken in four catchments in Autumn 2023, and water quality sampling has commenced at 50 sites across the State.

- Established the Water Managers and Data Custodians Working Group which is facilitating collaboration and sharing of water information, including river health and water quality data. This is the first time that key water management agencies (NRE Tas, Environment Protection Authority, TasWater, Tasmanian Irrigation, Hydro Tasmania and the Inland Fisheries Service) have formally come together to discuss shared challenges and opportunities in relation to water information.

- Reviewed river health and water quality monitoring that is collectively undertaken by Tasmania's key water agencies, which has identified opportunities for collaboration and data sharing.

- Commenced the design of a new, collaborative, statewide water quality monitoring program which incorporates existing monitoring conducted by the State's key water agencies.

- Advanced the review of Tasmania's water accountability framework, and further consultation with stakeholders planned for later in 2023.

Rural Water Use Strategy Overview

RWUS Actions		Status	2023-2024	2024-2025	Goals realised
Sustainable water infrastructure					
1	Water infrastructure development support	Ongoing	✓	✓	
2	New water industry development support	Ongoing	✓	✓	
New water science and access to information					
3	Catchment yield science update (Phase 1)	Complete			
4	Groundwater assessment	On track	✓	✓	
5	Water accountability framework review	On track	✓		
6	Hydrological monitoring network review	On track	✓		
7	Water Managers and Data Custodians Working Group	On track	✓	✓	
8	Water Information Management System upgrade business case	Complete			
Water resource management policy and legislation review and refresh					
9	Surface water allocation review	On schedule to commence in 2024	✓	✓	
10	Water trading review	On schedule to commence in 2024	✓	✓	
11	Water management planning review	On track	✓	✓	
12	Water accountability, metering and reporting refresh	On track	✓	✓	
13	Groundwater management settings	On schedule to commence in 2024		✓	
14	Dam safety regulations	On track	✓	✓	
15	Irrigator self-management	On track	✓		
16	Multiple water managers coordination	Ongoing	✓		
17	Aboriginal freshwater interests	Ongoing	✓	✓	
18	Improving water resource management legislation	On track		✓	
Waterway health and water quality					
19	Waterway data coordination and sharing	On track	✓		
20	Drivers of change in waterway health	On track	✓	✓	
21	Strategic directions for healthy waterways paper	On schedule to commence 2024	✓	✓	
22	New statewide water quality monitoring program design	On track	✓		
23	Ongoing assessment and monitoring	Ongoing	✓	✓	

Goals key		Sustainable management of Tasmania's water resources		Strategic development to maximise opportunities from water resources
		Effective regulation, strong entitlements and planning		Optimising services

New Science to Support Tasmania's Water Management

The Tasmanian and Australian Government, through the National Water Grid Authority, partnered to provide \$1.84 million to deliver three critical science projects to build our knowledge base and support a range of Strategy actions.



Catchment Yield Science Update Project

Identifying contemporary climate change projection datasets to update hydrological estimates for Tasmania.



Water Accountability Framework Review Project

Providing advice on contemporary policy settings for water accountability, metering and reporting framework for Tasmania.



Groundwater Assessment Project

Providing improved knowledge of risks and opportunities for groundwater use, and linkages between surface water and groundwater to support sustainable water resource management in Tasmania.

These projects have achieved many 'firsts' in the State's water management history and are a vital step towards establishing a robust, science-backed foundation for effective water management in Tasmania.



Photograph courtesy of Department of Infrastructure, Transport, Regional Development, Communications and the Arts.

Improving Water Information

Flow monitoring

To ensure our monitoring networks can support our future water resource monitoring and science needs, we are reviewing our networks via the **Hydrological Monitoring Network Review Project**. This project includes a full review of the current surface water and groundwater monitoring network. Through these efforts, NRE Tas is ensuring that the necessary infrastructure is in place to support its commitment to sustainable water resource management.

Water information systems

To enhance access to and management of water information, a business case has been prepared identifying the needs and functional requirements for a new contemporary water licensing and permitting system. This will replace the current Water Information Management System (WIMS) and better support the needs of water users and management of Tasmania's water resources.

The business case will support a budget request for funding and implementation of the new system.

6 groundwater assessments units were identified as priority areas requiring further investigations to assess risks and management of the groundwater resource

69 hydrological models used to predict catchment yield

119 groundwater monitoring sites reviewed

3 climate datasets tested in six pilot study catchments

Photograph courtesy of Department of Infrastructure, Transport, Regional Development, Communications and the Arts.



Science and Information Projects

Yearly Progress Snapshot



Catchment Yield Science Update

- Stakeholder workshops were held to identify the use of and need for climate projections data. 62 attendees from 34 organisations attended the workshops.
- Hydrological and climate science specialists from WMAwater, CSIRO, Bureau of Meteorology, University of Tasmania provided expert input to the project.
- 3 available climate change projection datasets were tested in six pilot study catchments (Leven, Pipers, Northwest Bay, Prosser, Ansons and Duck) to determine their impact on key water management statistics (e.g. end of system annual and summer yields).
- Findings of the pilot study have informed Phase 1 of the project and a preferred approach to incorporating new climate projection datasets to update hydrological estimates of catchment yield for Tasmania has been determined.
- Future implementation of the preferred approach (Phase 2 of the project) has been scoped.



Water Accountability Framework Review

- Aither Pty Ltd, a leading water management and policy consultancy, conducted a review of Tasmania's water accountability framework.
- Four workshops were held to seek stakeholder views about the desired outcomes, current challenges and opportunities associated with the existing Tasmanian water accountability framework. Participants included NRE Tas staff, water managers, industry groups, water users, and irrigation scheme operators.
- The review will be publicly released later in 2023.



Groundwater Assessment

- A new groundwater risk management framework has been developed and includes a supporting Groundwater Risk Assessment Tool – the first time a holistic, consistent, and repeatable approach to groundwater resource risk has been applied in Tasmania.
- A preliminary risk assessment has been completed for 32 groundwater assessment units across Tasmania, to identify key areas of high risk for future investment including monitoring.
- Six groundwater assessment units were identified as areas of high groundwater risk, requiring further investigation: Smithton Syncline, Flinders Island, Burnie Basalts, Great Forester-Brid, Sassafras-Wesley Vale, Sheffield-Spreyton- Kimberley, Huon North.
- The project has commenced targeted research in identified priority areas to enhance our understanding of the groundwater resource, surface water-groundwater connectivity, and strengthen the data informing the Groundwater Risk Assessment Tool.



Hydrological Monitoring Network Review

- A review has been conducted of the 90 surface water gauging stations and 119 groundwater monitoring bores managed by NRE Tas.
- The network review has evaluated monitoring sites based on value (to NRE Tas and our stakeholders), integrity, suitability and strategic location to ensure they are meeting current and future monitoring and science needs.
- NRE Tas will continue to work with other water managers and stakeholders to identify any spatial gaps in the existing hydrological monitoring network to help focus and prioritise future monitoring effort and investment.

Looking After the Health of Our Waterways

Tasmanian communities rely on healthy waterways and catchments for their wellbeing, recreation, economic prosperity, and social and cultural connection. A focus of the Rural Water Use Strategy has been working in partnership with other water management agencies and stakeholders to better understand, maintain and improve waterway health in Tasmania.

Waterway health can generally be referred to as the overall condition of freshwater ecosystems such as rivers, lakes, and wetlands. It includes key physical, chemical, and biological components that are often assessed through river health and water quality monitoring.

In the context of better understanding the status of waterways, **river health** monitoring assesses the ecological conditions of rivers by monitoring aquatic life (e.g. waterbugs, algae on riverbed), habitat (sediment on riverbed, riverbank vegetation), ecological processes, and stream flow. **Water quality** monitoring looks at the physical and chemical characteristics of water including water temperature, dissolved oxygen, pH, suspended sediment, nutrients, and toxicants.

4 catchments targeted to examine drivers of change in waterway health

4 meetings of the Water Managers and Data Custodians Working Group

50 sites monitored under the NRE Tas River Health monitoring Program

156,000 kilometres of rivers in Tasmania

Photograph by Scott Hiddle, NRE Tas.



Healthy Waterways Projects

Yearly Progress Snapshot

A Water Managers and Data Custodians Working Group has been established with members from the key water management agencies (NRE Tas, Hydro Tasmania, TasWater, Tasmanian Irrigation, Environment Protection Authority and Inland Fisheries Service) to:

- investigate options for improved coordination and sharing of river health, and water quality data between water entities.
- guide the design of a new statewide water quality monitoring program for Tasmania.



Statewide Water Quality Monitoring Program

- A review of water quality monitoring programs by water management agencies across the state has been conducted identifying gaps and overlaps in monitoring locations and data collected.
- A new, collaborative, long-term Statewide Water Quality Monitoring Program is in design that builds on existing water quality monitoring undertaken across Tasmania. This is the first time that multiple agencies have come together to collect and share data through a collaborative statewide water quality program for Tasmania.
- The water quality program focuses on the surface water quality of Tasmania's rivers and streams and aims to understand the status of water quality; examine links between water quality and activities in catchments, and inform initiatives to improve waterway health.



Healthy Waterways

Drivers of Change in Waterway Health

- A study has been designed to undertake targeted research in four catchments (Pipers River, Mountain River, upper Ringarooma River and River Leven) to understand what is contributing to recent changes seen in river health.
- Field work to assess river health in these four catchments commenced in Autumn 2023.

Ongoing assessment and monitoring work

- River health monitoring under the River Health Monitoring Program has been completed for Autumn 2023.
- A field demonstration of the river health monitoring methods was given to stakeholders in the lower River Derwent catchment in February 2023.
- Presentations about the River Health Monitoring Program have been provided to Tasmanian Institute of Agriculture, Forest Practices Authority and NRM North.
- Scientific analysis and advice regarding environmental water has been provided for reviews of the Water Management Plans for Lakes Sorell and Crescent and the Mersey River.

Developing Sustainable Water Industries

Irrigation is transforming Tasmanian agriculture, creating jobs and expanding farm production to meet the growing demand for Tasmania's premium produce.

The Tasmanian Government established Tasmanian Irrigation to progress the Tasmanian irrigation development program which is continuing to deliver a number of Tranche 3 schemes, including the current priorities of the Don, Northern Midlands, Sassafras Wesley Vale Augmentation, Tamar and the Greater South East (previously known as South East Integration) irrigation schemes. These five projects, valued at more than \$1 billion, are estimated to deliver more than 70 000 megalitres of high-surety irrigation water to Tasmanian agriculture.

The Don Irrigation Scheme project is nearing completion. Additionally, funding has been secured for the Northern Midlands Irrigation Scheme and Sassafras-Wesley Vale Irrigation Scheme Augmentation projects, including a

total of \$171 million co-contribution from the Australian Government's National Water Grid Fund and \$103 million from the Tasmanian Government.

The Bell Bay area is being actively considered for establishing green hydrogen production facilities. The proposed Tamar Irrigation Scheme is being evaluated for a potential role in providing water for use in hydrogen production, in addition to providing water to irrigators in the Tamar area. The Government is progressing legislative changes necessary to support the extended role that Tasmanian Irrigation might play in this case.

The Tasmanian Government has worked with the Australian Government to secure funding allocations for six smaller projects totalling \$26.5 million through the Connections and Small Projects funding pathways of the National Water Grid Authority. TasWater is leading the delivery of three of these projects, including the Penna Recycled Water Scheme expansion, the Bicheno Recycled Water Scheme development, and the upgrade of sewerage pump stations in proximity to shellfish lease areas.

Photograph courtesy of Department of Infrastructure, Transport, Regional Development, Communications and the Arts.



Collaboration, Partnerships and Engagement

NRE Tas regularly seeks input from stakeholders into the design of water management arrangements. Meaningful collaboration, partnerships and engagement are fundamental core components for the successful delivery of our Strategy.

We are doing this through:

- Our engagement and collaboration with Advisory Groups such as:
 - Rural Water Roundtable which has met 8 times since establishment in 2021.
 - Water Managers and Data Custodians Working Group (NRE Tas, Hydro Tasmania, Tasmanian Irrigation, Environment Protection Authority, Inland Fisheries Service and TasWater) which has met 4 times since establishment in 2022.
- Workshops and information sessions for key projects such as Catchment Yield Science Update, Groundwater Assessment, and Water Accountability Framework projects.
- Collaboration with other State Government agencies, CSIRO and BoM for the Catchment Yield Science Update Project.
- Working with Consultative Groups on Water Management Plan reviews.
- Working with other States, Territories, and the Australian Government towards a renewal of the National Water Initiative and the design of our new Water Information Management System.
- Working with the National Water Grid Authority to deliver key infrastructure projects.
- Keeping people informed via SMS around water restrictions, flood and opportunistic takes as well as information messages such as audit notifications of catchments.
- Engagement with the Bureau of Meteorology on Water Information and Water Regulation requirements.
- General liaison and engagement with EPA, Hydro Tasmania, Tasmanian Irrigation Tas Water and TFGA regarding water licencing issues.
- Further engagement and collaboration with Hydro Tasmania environmental monitoring section.
- Engaging with water licence holders for catchment audits. 154 water licences audited in the 2022-23 financial year.



At NRE Tas, we are on a pathway to better engage with Tasmanian Aboriginal people to provide for greater inclusion of Aboriginal interests in the protection and management of freshwater.

We are continuing to learn, talk and work with Tasmanian Aboriginal people about freshwater to build relationships and better understand important issues, cultural values and practices, while discerning community priorities and partnerships.

Further information on our Aboriginal engagement can be viewed at www.nre.tas.gov.au/water/water-legislation-policies-and-strategies/aboriginal-freshwater-interests

Artwork by Nina Morris

Looking Forward

Rural Water Use Strategy Implementation Timeline

2023

- Commencement of Phase 2 of the Catchment Science Update Project
- Groundwater investigations including resource mapping, groundwater use and groundwater-surface water interactions
- Further advancement of the Water Accountability Framework review
- Review of Tasmania's Water Management Planning framework
- Introduction to Parliament of *Water Miscellaneous Amendment (Delegation and Industrial Water Supply Bill)*
- Continued engagement with Tasmanian Aboriginal people on Aboriginal water interests
- River health monitoring through the River Health Monitoring Program (this will continue through following years as a business-as-usual activity)


2024

- Review and refresh of the Water Trading and Water Accountability, Metering and Reporting policies
- Targeted case-study research for understanding drivers of change in waterway health
- Identification of key challenges, opportunities, and policy and operational initiatives to maintain or improve waterway health management
- Next steps to implement the Statewide Water Quality Monitoring Program completed
- Commencement of the upgrade of the Water Management Information System
- Next steps of the Water Accountability Review implemented
- Progression of the Groundwater Assessment Project
- Commencement of the review of the Surface Water Allocation Decision Framework

2025

- Review and refresh of the Surface Water Allocation, Water Management Planning and Groundwater Management policies
- Strategic Directions for Healthy Waterways Paper
- Renew dam safety regulation (*Water Management (Safety of Dams) Regulations*) so as to ensure they remain fit-for-purpose.
- Policy paper summarising a review of Tasmania's water resource management legislation and recommendations for change
- Continuing support for Tranche 3 and other water infrastructure and industry development
- Commence the review of the water management fees

NRE Tas will continue to engage and collaborate with key water stakeholders through the Rural Water Roundtable, Water Managers and Data Custodians Working Group, and individual project consultation to further the outcomes of the Rural Water Use Strategy.



In addition to the work being done under the Rural Water Use Strategy, NRE Tas is continuing the management of Tasmania's freshwater resources in the areas of water infrastructure and new water industry support, water licencing, dam permitting, dam safety, water management plans, and water monitoring and assessment.

Further information

Full copies of the Rural Water Use Strategy and project reports:
www.nre.tas.gov.au/water/water-legislation-policies-and-strategies/rural-water-use-strategy

Enquiries

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