

North West Region

Water and Sewerage Master Plan

2025



Since creation, the Palawa have lived in Lutruwita – Tasmania. More than 2,000 generations of Aboriginal families have cared for this Country, looking after its lands, seas, skies and waterways.

In the spirit of respect and gratitude, TasWater acknowledges the Tasmanian Aboriginal community as the traditional and ongoing custodians. We pay our respects to them, their culture and to elders past and present.

TasWater commits to working collaboratively and respectfully with the Tasmanian Aboriginal community to protect and sustain the precious resources on this ancient land for future generations.

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This is Version 1.0 of the North West Master Plan which will be updated following community and stakeholder feedback. The latest versions of all nine Master Plans will be published at www.taswater.com.au where ongoing submissions and comments are welcome.

Planning for the region

TasWater has created nine regional Master Plans to share our 50-year vision for infrastructure investment in water, sewerage and recycled water.

The boundaries of the nine regions consider council areas, population, availability of water, the existing network, economic growth and industry investment potential.

These plans are based on a detailed review of how well our current infrastructure and operations meet minimum service standards. We considered issues like how our regions are growing, how well our systems are performing, and climate change.

We then explored different options to make sure we can meet communities' current needs and long-term expectations – all in line with our Corporate Plan. Our aim is to invest in the right infrastructure, in the right places, at the right times to provide the most benefit to Tasmanians and our environment.

Our Master Plans are flexible, and we will adjust them as new information comes to hand. At key points in time, we will seek feedback from our customers, communities and stakeholders so that we don't lose sight of what's important to you.

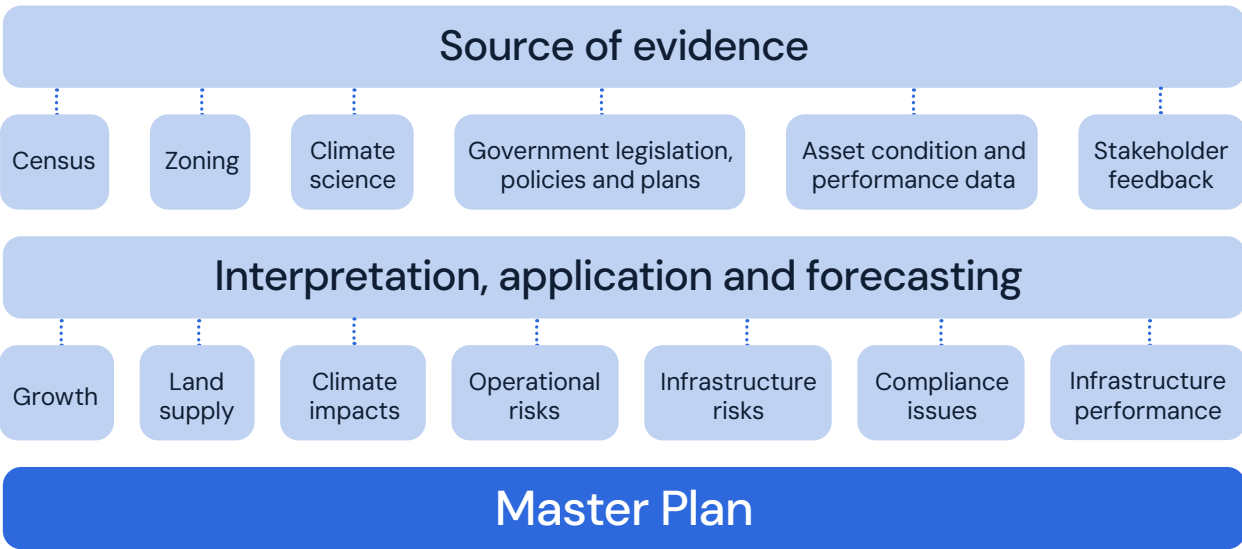
Our process

At TasWater, our infrastructure planning begins with gathering reliable data – including census figures, zoning, climate science, government policies, asset performance, and stakeholder feedback. This helps us understand current conditions and identify future needs. We then forecast growth, land supply, climate impacts, and infrastructure risks.

These insights guide our master planning, where we assess options and plan for future infrastructure upgrades or new assets. The process will be continually refined over decades as conditions change, ensuring our plans remain

responsive and aligned with community needs, environmental goals, and regulatory requirements.

We will continue to update our planning as new information becomes available, including through ongoing engagement with councils and stakeholders. The process is iterative, with a full review undertaken every four years as part of our Price and Service Plan development. This ensures infrastructure priorities are aligned with both our annual budgeting and long-term capital planning, helping us deliver infrastructure that is timely, cost-effective, and responsive to community needs.



About the region

Tasmania's North West region combines coastal fishing, forestry, farming, and industrial communities with wilderness areas dotted with mining towns.

The region includes the port City of Burnie, seaside towns like Smithton and Stanley, and the grazing and agricultural community of King Island.

The region has five water and 13 sewerage systems, and a recycled water scheme to support the region's residents, businesses and farms. This includes servicing of major dairy and vegetable processing operations in towns like Wynyard and Smithton. These major businesses are high water users and produce high volumes of industrial sewage (trade waste).

Much of the region's water and sewerage infrastructure began as part of small, localised systems that were once fit for purpose. However, over time there has been underinvestment in our infrastructure as well as changing community expectations about how we manage growth and operate sustainably.

That's why in areas like Smithton, we have upgraded the main pump station in town to support residents, small businesses and big industrial customers, while reducing the risk of overflows into Duck River. We know that many other smaller towns also need investment in projects to reduce our environmental impact and support growth. This is part of our plan.

Growth areas

While over the next 50 years, the North West region's population is not projected to grow, we have identified a possible 4,700 lots of land in our service areas which could be developed if zoning allows.

Future growth areas are likely to be around Burnie, Somerset, Wynyard, Sisters Beach, Boat Harbour Beach and Stanley.

However, there are a range of scenarios which make forecasting growth difficult. For example, several major food processing customers in Burnie, Wynyard and Smithton contribute most of the trade waste flows into our sewage treatment plants. It is difficult to predict if these businesses will expand in future, and how this would affect TasWater services.

While we can't know for sure when and where development will occur, TasWater will continue to monitor data that informs our Master Plan and be ready to adjust our strategy as needed.



North West region key statistics



 CASE STUDY

New spillway for Pet Dam

Pet Dam, south of Burnie on the Pet River, plays a vital role in supplying water to the Burnie region. The dam is gravity fed by the Pet River and nearby Guide Dam, with water flowing into the adjacent water treatment plant before being distributed to the Burnie community.

Originally built in 1956 and raised a decade later, Pet Dam stores up to 4,210 megalitres of water behind an earth embankment. Its spillway runs from the dam to a basin and bridge culvert under Circular Road.

A Dam Safety Review identified that Pet Dam no longer meets industry best practice, with concerns around the condition and capacity of

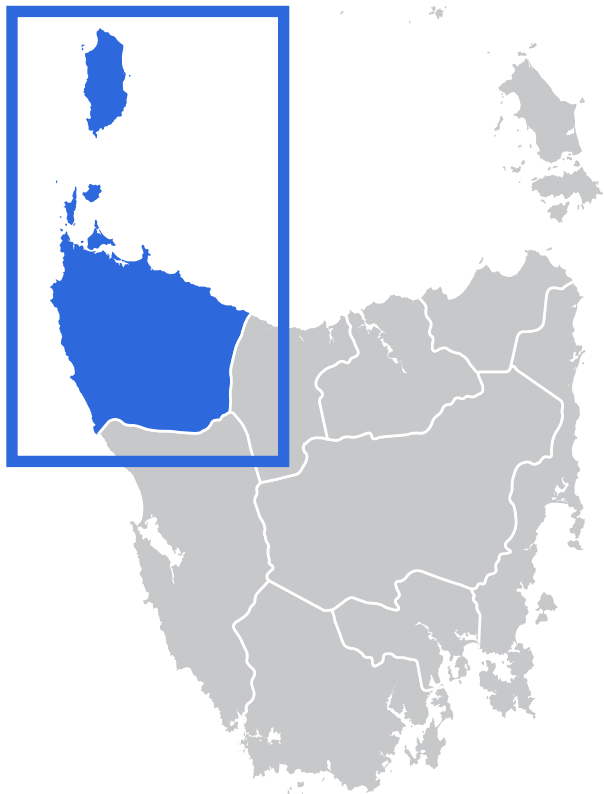


the spillway, as well as potential seepage risks along key structures. These risks were highlighted during a flood event in June 2016 which caused significant damage to the spillway.

TasWater is upgrading dam infrastructure including replacing the spillway and Circular Road bridge, and improving the embankment and pipework.

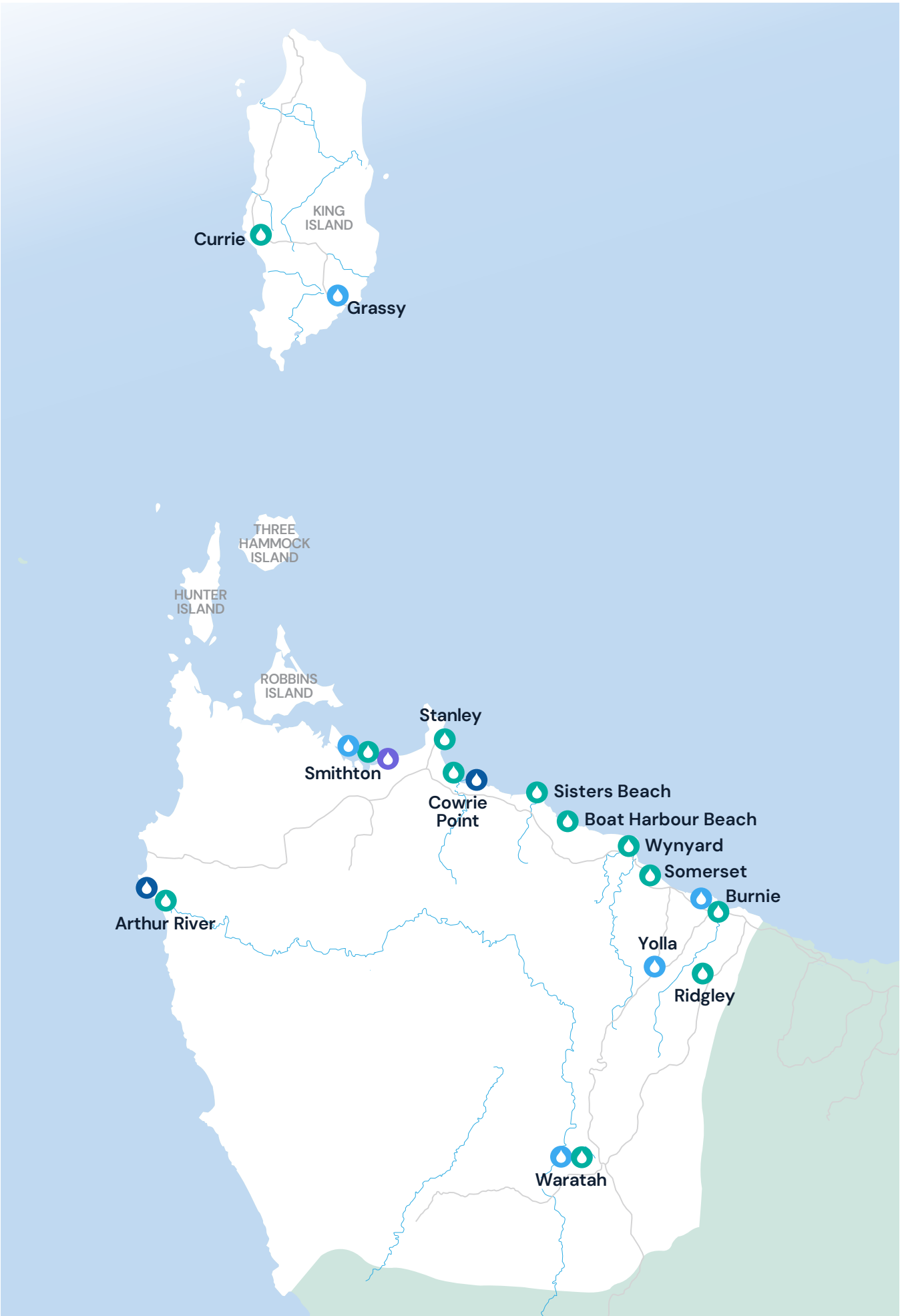


How we service the region today



Legend – infrastructure

-  Water treatment plant
-  Sewage treatment plant
-  Recycled water scheme
-  Absorption effluent disposal



Challenges and opportunities

In developing our Master Plans, we have considered challenges that our state will face in future, as well as ones that are unique to the North West region. We also thought about the flip side – what opportunities are there for us to better support local people, our environment, cultural heritage and the economy?

The big issues



Ageing infrastructure, with many assets in poor condition



Turbidity in raw water sources



Variable water quality



Inundation of coastal assets as the climate warms and sea levels rise



High risk discharges from some sewage treatment plants



Opportunity to produce more recycled water

Climate change

Based on past trends and climate modelling, Tasmania is expected to keep getting warmer and we may face rising sea levels and more droughts, bushfires and intense weather.

A warmer climate affects how much water we have, its quality and how much our customers need to use. This puts extra pressure on our water supply.

Changes to the seasons – like shorter winters and longer, hotter summers – can also affect water quality. When there are algal blooms and low oxygen levels in our rivers and dams, water can be harder to treat and there can be changes in taste, smell and appearance.

For our sewerage systems, like those in Cowrie Point and Smithton, rising sea levels and more storms and floods put treatment plants and pump stations at risk of inundation. This also increases the likelihood of sewage overflows when stormwater gets into our pipes.

Climate change could mean we need to build new infrastructure, operate our systems differently or find other ways to manage water.

Water security

Our drinking water comes from dams, rivers and groundwater bores around the region before it's treated and delivered to our customers.

Already, many rivers that supply our water treatment plants have periods of low flow and the licensed water allocations we receive are not enough to keep up with demand.

If we continue to see drier conditions, river flows and groundwater levels could drop further – making it harder to meet unrestricted water demand.

To help us avoid water restrictions, we will need to continue to make sure we have enough water to go around and encourage our customers to value and conserve water at home and work. TasWater has a [Water Security Strategy](#) in place to guide our long-term water management.

Keeping up with growth

If the region's population grows over the next 50 years, our pipes, pump stations, reservoirs and treatment plants won't have the capacity to keep up.



CASE STUDY

Rehabilitating the Currie wetlands

To help protect King Island's coastal ecosystem, TasWater is rehabilitating the wetlands at Currie Sewage Treatment Plant.

This staged project, to be completed by the end of 2028, will clean and rejuvenate the seven wetland ponds on site to help restore their natural treatment function.

Wetlands play a vital role in keeping our water clean. At Currie Sewage Treatment Plant, the wetlands are part of the final stage of our treatment process. The treated water from the plant is 'polished' by the soil and vegetation in the wetlands to naturally remove nutrients before it is released into the environment.

In recent years, the Currie wetlands have been affected by increased flows, sludge build-up, weeds and overgrown vegetation.



By cleaning, restoring, and replanting the ponds, we're helping the wetlands bounce back to full health so they can support our environment and community for years to come.

Our infrastructure is ageing, with some of it approaching the end of its intended operating life.

We will need to upgrade or replace many of our assets so we can continue to deliver safe, reliable services. This comes at a high cost, so improvements will have to be prioritised based on criteria like development timing, community benefit and compliance with laws and performance targets.

In some areas there may be a need to connect unserved communities to water and sewerage systems for the first time. This may be to support new development, address climate change or environmental impacts, or enhance water reliability or sewage treatment in smaller towns. As outlined in our Service Introduction Charges Policy, service introductions are only considered when there is community support, and if servicing costs can be recovered.

Water where it belongs

Around 24 per cent of the water we produce in the North West region doesn't end up reaching our customers. We call this 'non-revenue water' and we are working to cut these losses. Non-revenue water is from pipe leaks, theft, metering errors or uses like firefighting or system flushing.

We are also working to reduce the amount of stormwater that gets into our sewerage systems and can cause overflows. This infiltration can come from leaks, breaks and incorrect private plumbing connections.

If we reduce these problems, we may be able to delay costly infrastructure upgrades. This means we can provide services to more people using the same infrastructure for longer.

Achieving compliance

Like all water utilities, TasWater is subject to a range of environmental and health-based laws and targets.

Health-based targets help us to assess the quality of the water we supply to customers while environmental licenses set limits on any discharges from our infrastructure into the surrounding environment.

We know that due to age and underinvestment in our treatment plants, pumps and pipes over a long period, some of our infrastructure does not meet compliance targets. We are working to close the gaps and have made great progress in areas like water quality and reliability requirements.

Our 50-year vision for the region

After looking at a range of options to guide our long-term investment in water and sewerage infrastructure, our preferred approach balances climate resilience, water security, customer expectations, environmental and health compliance, and cost.

This Master Plan is based on what we know today – it’s a guide only. The location, timing and cost of new and upgraded infrastructure is not set in stone and we will remain flexible and adapt as the region continues to evolve.

Our plans for the region’s water and sewerage systems are outlined in the following pages. We have provided a summary of the current situation, the initiatives we propose to address key challenges, when works may occur and the outcomes we hope to achieve.

We are excited about the potential to build on what we have now to protect and enhance the Tasmanian way of life.

You are welcome to let us know what you think. Visit the TasWater website and look for the [Your Say](#) page.

What will it cost?

Initial estimates have been developed to help understand what it will cost to roll out improvements identified in the North West Region Master Plan. The total cost could be around \$396.8 million for sewerage infrastructure and \$143.2 million for water infrastructure over the next 50 years.

We will continue to work with our stakeholders and customers to make sure any spending is on the right things at the right times. We believe our approach represents a wise investment in the region’s future because it:



Tackles the most urgent issues right away



Delays major spending until later, helping manage budgets and adapt to future changes



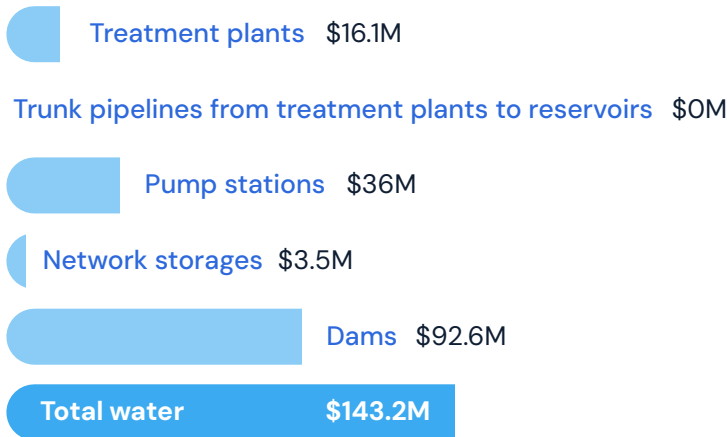
Reduces the need for, and number of, complex projects like new dams, treatment plants and long pipelines



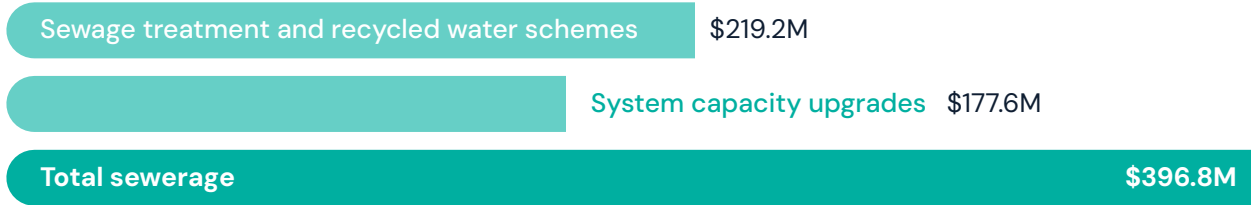
Has a lower long-term cost (net present value) and development cost (capital cost) when compared with other options considered.

Estimated cost (\$million over 50 years)

Water



Sewerage



Note: Costs shown are 2025 budget estimates for major infrastructure projects and programs, and are subject to change. They do not include allowances for maintenance, renewal or replacement of ageing assets, or general infrastructure operating costs. There are expected to be additional costs allocated to raw water entitlements, system investigations and monitoring infrastructure after technical assessments are completed.



Our water plan

Area	The situation	What we plan to do	Outcomes
Greater Burnie including these systems: • Waratah • Burnie • Yolla	Our systems are well supplied by dams and the Waratah River, although water allocations under license from the river may not be enough to meet future demand. Periods of high turbidity in Burnie’s raw water supply can make the water hard to treat, and more raw water may needed in the long-term. Old water treatment technology and other ageing infrastructure affects water quality in all systems. In particular, there have been issues with water odour and taste in the Yolla area.	Upgrades to the Pet Dam spillway and Burnie Water Treatment Plant (WTP) are needed to enhance the reliability and quality of drinking water. This should also assist with harvesting more of the water in Pet Dam for treatment in future. Upgrading of Pet Dam and Burnie Water Treatment Plant are needed by 2035. The Yolla Water Treatment Plant may be replaced as part of the Regional Towns Water Supply Improvement Program. Additional water allocations will need to be secured for Waratah in future. Pending full technical assessments, Yolla Water Treatment Plant could be replaced and Waratah Water Treatment Plant upgraded or replaced by 2035.	 Enhanced water quality  Water security  System efficiency and reliability  Dam Safety
Circular Head and King Island including these systems: • Grassy • Smithton	Operation of the Smithton Water Treatment Plant is affected by turbidity in the raw water supply. On King Island, the Grassy Water Treatment Plant is not working efficiently and is at risk of failing to meet future demand.	We propose to upgrade Smithton and Grassy Water Treatment Plants to enhance their reliability and efficiency, and improve Mikany Dam spillway in line with current standards. We may replace the Deep Creek raw water pump station to improve drinking water reliability and quality. Treatment plant upgrades may begin once planning and approvals processes are in place, and the Mikany Dam spillway upgrade is needed by 2027. Deep Creek raw water pump station could be replaced by 2033, pending a condition assesment of connecting pipelines.	

North West water

① King Island

- Improve treatment plant efficiency.

② Smithton

- Upgrade treatment process to address raw water turbidity spikes.

③ Yolla

- Address drinking water quality.

④ Burnie

- Upgrade treatment process at Burnie WTP.
- Increase raw water supply.

● Immediate / short term (by 2035)

● Medium term (2035 to 2050)

● Long term (2050 to 2070)

● Progress at any time if/when the opportunity or need arises



Our sewerage plan

Area	The situation	What we plan to do	Outcomes
Greater Burnie including these systems: • Waratah • Burnie • Ridgley • Somerset • Wynyard • Boat Harbour Beach • Sisters Beach	While there is capacity in our existing systems to manage projected growth, our assets are ageing. Wynyard Sewage Treatment Plant (STP) receives large volumes of trade waste and is already operating beyond capacity. Treated water discharges from this site pose a high risk to the receiving environment.	We propose to build a new sewage treatment plant at Wynyard on a site further away from the airport. This would enable closure of the Somerset Sewage Treatment Plant and transfer of flows to Wynyard. We will also consider transferring some flows from Burnie to Wynyard to take pressure of that system and delay major trunk sewer upgrades. If Burnie expands further south, there is the potential to close Ridgley Sewage Treatment Plant and transfer flows to Burnie. Recycled water schemes may be expanded where there are enough customers and costs can be recovered. Upgrades of Somerset and Wynyard Sewage Treatment Plants are required by 2035, with a new plant built at Wynyard and flows from Somerset transferred in the long-term.	 More sustainable infrastructure  Environmental compliance  System efficiency and reliability  Improved climate resilience  Reduced community impacts
Circular Head and King Island including these systems: • Cowrie Point • Arthur River • Grassy • Stanley • Smithton • Currie	Climate change, with rising sea levels and more frequent flooding, poses a risk for all coastal assets including the Cowrie Point and Smithton Sewage Treatment Plants. Treated water discharges from the Smithton plant also pose a high risk to the receiveing environment. While systems are set up to manage growth, our assets are ageing. This includes Grassy Sewage Treatment Plant which needs upgrading but is on a constrained site, close to residents.	We propose to build new sewage treatment plants at Grassy and Smithton on more suitable sites. The site for Grassy will need to be further away from homes, and the Smithton site less flood prone. Recycled water schemes may be expanded or introduced at Stanley and Smithton where there are enough customers and costs can be recovered. New sewage treatment plants are needed for Grassy by 2050 and Smithton in the long-term.	

North West sewage

1 Smithton STP

- Undertake desludging of the lagoons. Buffer effluent in the final lagoon to allow controlled discharges on the high/outgoing tide. Investigate options to expand the existing recycled water scheme. Assess impact of these changes and impact on the environmental risk assessment.
 - Continue to monitor potassium in trade waste and work with customers to reduce this to a level appropriate for irrigation on diary farms.
 - Establish a recycled water scheme.
 - A new site will be required in the future to address the poor condition of the lagoons and to move the site away from the future sea level rise inundation area.
- ## 2 Scottsdale
- Provide power to site and install aeration.
 - New inlet works and disinfection to be considered.
 - Potential recycled water scheme.
 - A new site should be considered in the long term if additional treatment capacity is required.

3 Sisters Beach and Boat Harbour STPs

- At both sites monitor, maintain and upgrade as required.
- ## 4 Somerset/Wynyard Strategy
- UV disinfection at Wynyard STP.
 - Interim upgrades at Somerset STP.
 - Seek a new STP site near the existing Wynyard site away from the flight path to reduce the impact of height restrictions on a new construction. The new STP is expected to use the existing outfall.
 - Construct a new Wynyard STP, transfer Somerset flows and decommission Somerset STP.

5 Burnie (Round Hill) STP

- Upgrades to inlet works, odour control, and dosing control.
- In conjunction with the transfer of Somerset to Wynyard there may be opportunities to redirect some of the western catchments of the Burnie network to Somerset to free up capacity at the Burnie STP and to reduce the need for network capacity upgrades through the CBD.
- Potential recycled water scheme.

6 Ridgley STP

- Filtration and UV may be required.
- Potential recycled water scheme.
- Decommissioning of the STP and transfer to the Burnie network may be investigated further in the future, particularly if development in Burnie extends the network further south towards Ridgley.

7 Currie STP

- Improve septic waste receipt and treatment.
- Upgrade/augmentation of treatment capacity.

8 Grassy STP

- Address risks of the open-drain discharge through private land.
- A new STP is expected to be required to renew the existing assets. A new STP site and discharge location should be investigated as the existing site is constrained, and the discharge location is inadequate.

9 Arthur River STP

- If the serviced area is expanded to the south of the river, then a new STP would be required. Monitor, maintain and upgrade as required.

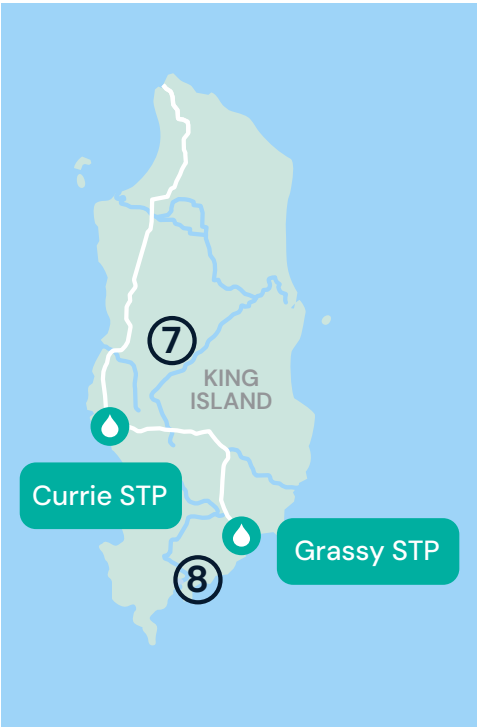
10 Cowrie Point STP

- Monitor, maintain and upgrade as required.

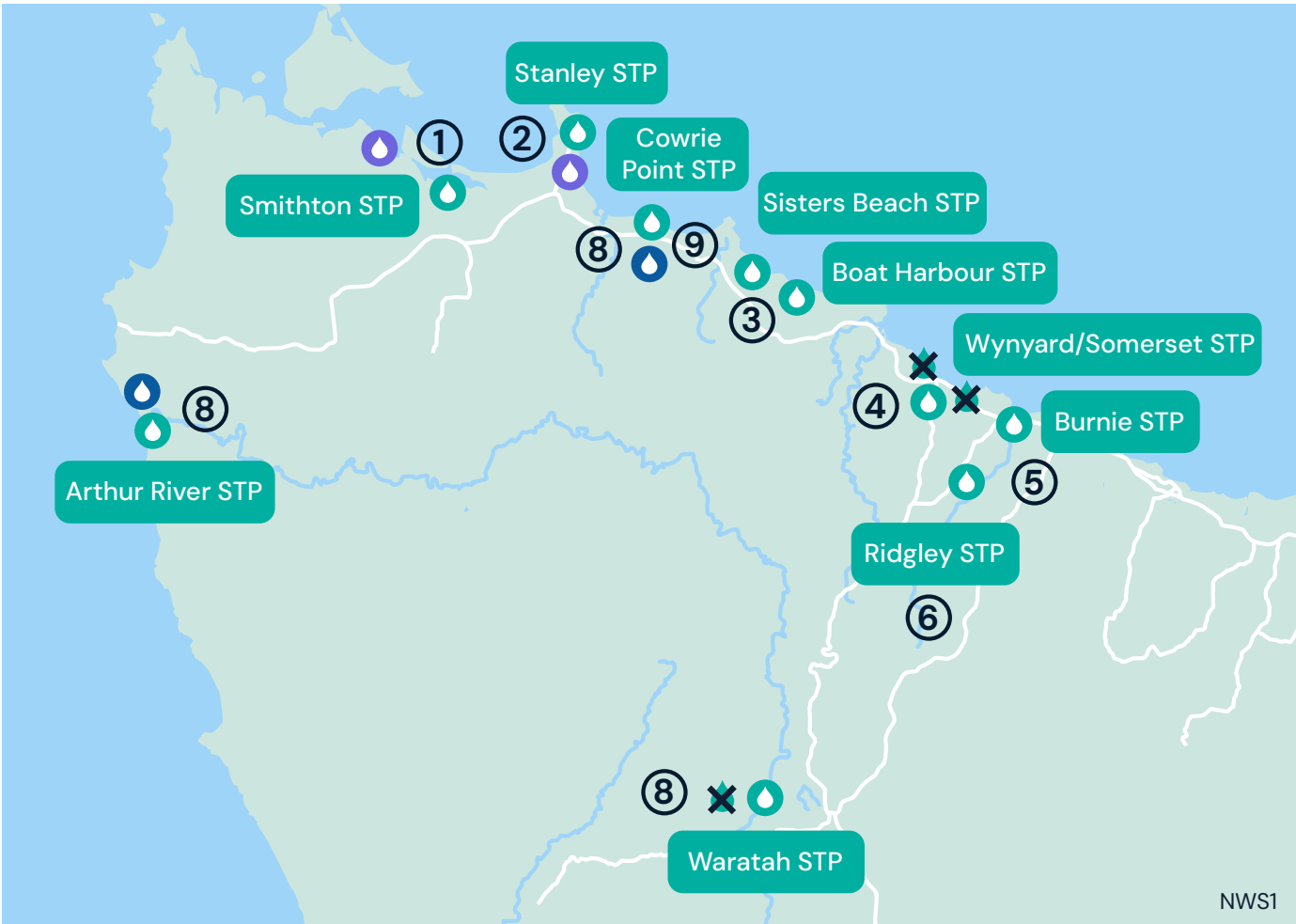
11 Waratah STP

- A new STP is expected to be required to renew the existing assets. A new STP site and discharge location should be investigated as the existing site is constrained.

- Immediate / short term (by 2035)
- Medium term (2035 to 2050)
- Long term (2050 to 2070)
- Progress at any time if/when the opportunity or need arises



- Sewage treatment plant
- Recycled water scheme
- Absorption Effluent Disposal
- Decommissioned STP





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