



## Planning review for Exmouth's next drinking water source

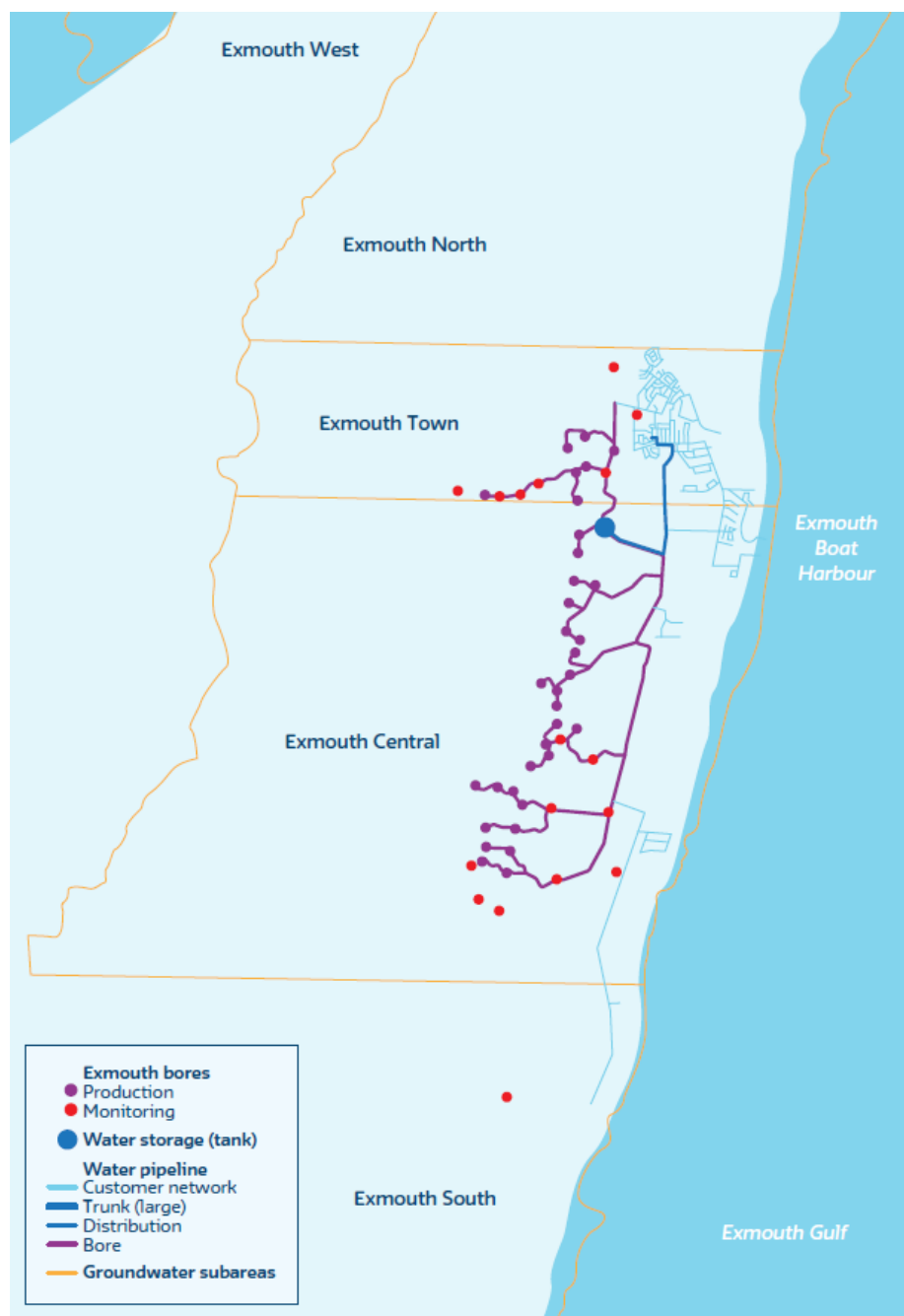
Water Corporation is commencing water source planning for the Exmouth Water Supply Scheme to meet projected future demand. The aim is for the new source to cater for future demand, account for climate change and secure water supply for the future.

### Where does Exmouth's drinking water currently come from?

The Exmouth Water Supply Scheme currently sources water from 34 production bores from a groundwater aquifer. The borefield extends for 10km, comprising 6 bores within the Exmouth Town Groundwater Subarea and the remaining 28 bores within the Exmouth Central Groundwater Subarea, located further south of the townsite.

Water Corporation has water allocation licenses with Department of Water and Environmental Regulation (DWER) for these two groundwater subareas, which are due for renewal in January 2027. There are three other groundwater sub areas in Exmouth, to the north, south and to the west of the existing borefield, from which Water Corporation does not abstract water.

The existing borefield is designed and operated to abstract water at low rates to mitigate saline water intrusion and maintain conditions to support stygofauna habitat across the borefield. This is achieved using low-yielding bores aligned parallel to the coast.





## How much water do we use?

Water Corporation is licensed to take up to 1.032 gigalitres (1.032 billion litres) per annum from the Exmouth borefield, which relies on cyclones or heavy episodic rainfall events for recharge.

Current scheme demand is greater than 95% of our water allocation. As demand may exceed the abstraction licence after 2027, source expansion will be required to provide an additional 0.5 gigalitres (0.5 billion litres) per annum to meet future demand to 2050. This may be increased pending review of the Exmouth aquifer allocation by DWER.

## What water source options has Water Corporation considered?

When planning, we ensure the water sources we use will meet our asset management objectives of being reliable, compliant, cost effective and safe. External considerations include the environment, sustainability, heritage and community. Options already considered in a planning study completed last year and ruled out based on these criteria, include:

- Expansion or increased abstraction of the current borefield groundwater areas – This was considered not a viable option due to allocation and environmental impact.

## What water source options are being considered for the Exmouth scheme?

Options being considered for further investigation to meet future demand following the planning study include:

- *Expansion into the groundwater subarea to the south* – accessing up to 0.5GL/year of the 4GL/year currently available in DWER's allocation plan for the Exmouth South Groundwater Sub Area.
- *Develop a climate independent source using seawater desalination*
- *Explore third party opportunities.*

## What are the next steps in the planning review?

We will consult with key stakeholders and the community to understand social, environmental, cultural, heritage and operational requirements with each option and identify possible locations for consideration for a potential seawater desalination plant and related infrastructure.

Following thorough engagement, we plan to progress environmental and heritage surveys and studies to inform option selection and progress approvals with support of stakeholders to ensure the source can be developed to meet forecast demand.

We are committed to working closely with stakeholders and the community throughout the entire process.

## What will be the timing?

Engagement will begin in March 2023 and continue throughout the year. A decision on the preferred option (borefield expansion or seawater desalination) is anticipated to be made by late 2024, allowing three years to deliver first stages of the preferred option by 2027.

## What needs to be considered when planning a seawater desalination plant?

The infrastructure required when building a seawater desalination plant includes:



- An intake location where the seawater feeds into the treatment process. An intake that captures good quality clean seawater is important in reducing the complexity of the treatment process, its environmental footprint and improving the reliability of water supply. This can be achieved by an open seawater intake, subsurface water intake or beach well intake.
- A location to build a desalination plant to treat the seawater.
- A brine outfall which disposes of the salty wastewater following the treatment process into the ocean.
- Power supply, with the aim to utilise renewable power to align with Water Corporation's objective to be net zero by 2035
- Transfer infrastructure (pipes and pumps) to connect the treated drinking water to the scheme.

### **How will we encourage water conservation?**

Water Corporation is undertaking work to reduce scheme demand including additional district water metering and demand management activities with the intent of deferring the target delivery date of 2027. Water Corporation will also continue to provide support to the Shire of Exmouth to reuse recycled water from the wastewater treatment plant.

Short term scheme demand spikes are being managed through Water Corporation operations.

### **For more information:**

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