

Portfolio 3

Surface water

(traditional sources)



This portfolio includes:

- Water conservation
- Groundwater
- Recycled water (for non-drinking purposes)
- Rainwater tank scheme
- Dam enlargement:
 - Enlarge Mangrove Creek Dam by 80 gigalitres of storage
- Water transfers
 - Transferring water from Mangrove Creek Weir to Mangrove Creek Dam

Environmental impacts

- Impacts on terrestrial and aquatic biodiversity in and around dam and transfer pipeline
- Medium energy use and associated greenhouse gas emissions
- Reduced urban stormwater runoff due to utilisation of rainwater tanks
- Additional studies required to confirm impacts on ground dependent ecosystems and aquifer health

Social impacts

- Some temporary disruption for local residents during construction of dam and pipeline
- Potential Indigenous and European cultural heritage impacts in the dam and pipeline areas based on preliminary investigations to date
- Acquisition of easements may be required for pipe sections on privately owned property
- Operation and maintenance cost of rainwater tanks transferred to customers



Medium social impact



High environmental impact



Reliable supply

Reliability and system resilience

- An enlarged dam increases the time to deplete our storages in droughts which improves the robustness of our supply system
- Dams and transfer pipeline relies on rainfall and will not ensure ongoing supply of water in a long and severe drought
- The lead time for dam raising is around 10 years including approvals and construction
- Decentralised rainwater tanks have reliability risks for ongoing maintenance required by the owners
- Additional studies required to confirm the long term sustainable yield of the groundwater systems

Cost

- The estimated average incremental cost for this portfolio is \$5.19 per kilolitre*. This is the total cost of the portfolio on a kilolitre basis across a 40 year period.
- This includes both upfront costs to build and ongoing costs to operate the new assets across the 40 year period.
- The incremental cost for this portfolio is heavily affected by high estimated biodiversity offset cost associated with raising Mangrove Creek Dam.

Drought management plan

- As the options within this portfolio are generally climate dependent (e.g. a dam relies on rainfall for it to fill up), this portfolio offers no added benefit to our drought management plan, which means in a prolonged and extreme drought we will still have a large drought management gap to fill (additional investments in a 20-30ML/day desalination plant would be required).

Capital Cost (\$)

Water conservation



Not currently costed

Groundwater



\$0.5M

Recycled water (non-drinking)



\$6.6M

Rainwater tank scheme



\$224M

Dam enlargement



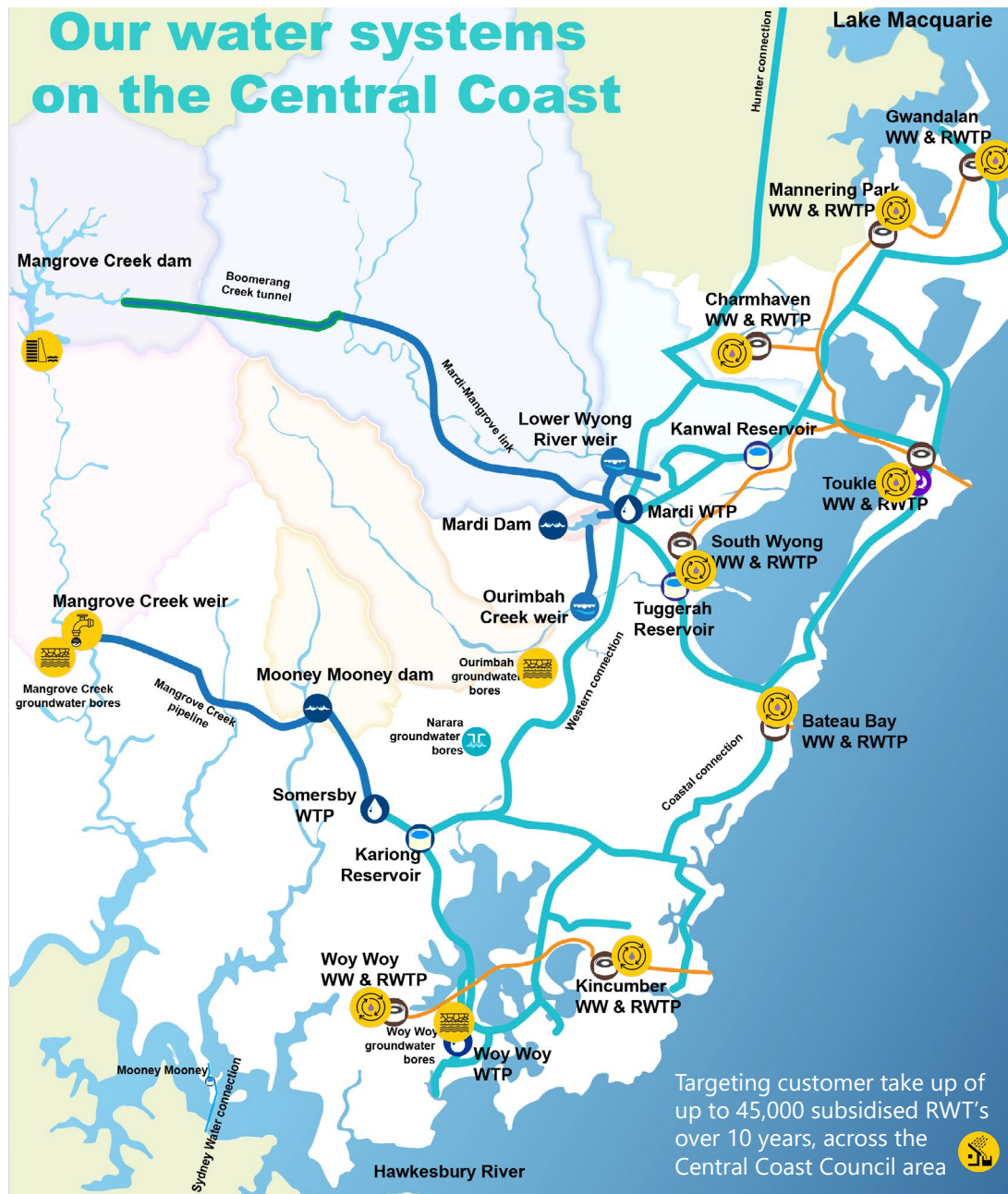
\$259M

Water transfers



\$108M

\$5.19/KL



For more information on how we are planning our water future on the Coast visit yourvoiceourcoast.com