

Portfolio 3

Surface water

(traditional sources)



This portfolio includes:

- Water conservation
- Recycled water (for non-drinking purposes)
- Groundwater
- Rainwater tank scheme
- Dam enlargement:
 - Enlarge Mangrove Creek Dam by 80 gegalitres 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 \$3.30 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.
- **Existing uncertainty exists for biodiversity offset costs associated with raising Mangrove Creek Dam. These costs are currently excluded from the \$3.30 per kilolitre and will likely be significant.*

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).

Water conservation



Recycled water (non-drinking)



Groundwater



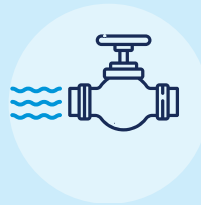
Rainwater tank scheme



Dam enlargement



Water transfers



Capital Cost (4)

\$6.6M

\$0.48M

\$224M

\$155M

\$108M

\$3.30/KL



Targeting customer take up of up to 45,000 subsidised RWTs over 10 years, across the Central Coast Council area



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