Portfolio 5
Traditional transitioning to climate independent

love water use it wisely

Central Coast Council

This portfolio includes:

- Water conservation
- Groundwater
- Recycled water (for non-drinking purposes)
- Dam enlargement
  - Enlarge Mangrove Creek Dam by 40 gigalitres of storage
- Purified recycled water
  - 6 megalitres of water per day
- Desalination
  - 20 megalitres per day production capacity.
  - The desalination plant operating triggers (on/off) would be set to manage time in restrictions and water security risks.
  - The operating triggers can then be increased as demand continues to grow to manage time in restrictions and water security risks.

Environmental impacts

- Additional studies required to confirm impacts on ground dependent ecosystems and aquifer health
- Less treated wastewater released to ocean outfall
- Impacts on terrestrial and aquatic biodiversity in and around dam and transfer pipeline
- High energy use, however, we have included offsets for greenhouse gas emissions for desalination to manage this impact.

Social impacts

- Some temporary disruption for local residents during construction of dam
- Potential Indigenous and European cultural heritage impacts in the dam inundation area based on preliminary investigations to date
- Some temporary disruption for local residents during construction of pipelines and treatment plants

Reliability and system resilience

- Desalination, purified recycled water, and recycled water for non-drinking purposes do not rely on rainfall - which increases the reliability and resilience of our system
- Desalination is adaptable to be upgraded over time. It also provides flexibility to respond to a long and severe drought by bringing forward the construction of the desalination plant (if required)

Cost

- The estimated average incremental cost for this portfolio is $2.43 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

- Towards the end of the planning horizon (2051) this portfolio introduces the same technology as the emergency drought supply which means we could respond to a long and severe drought simply by bringing forward the construction of the next stage of the desalination plant. This means that the requirements of the drought management plan (if triggered) will be lower if this portfolio is implemented, compared to other portfolios.

Medium social impact

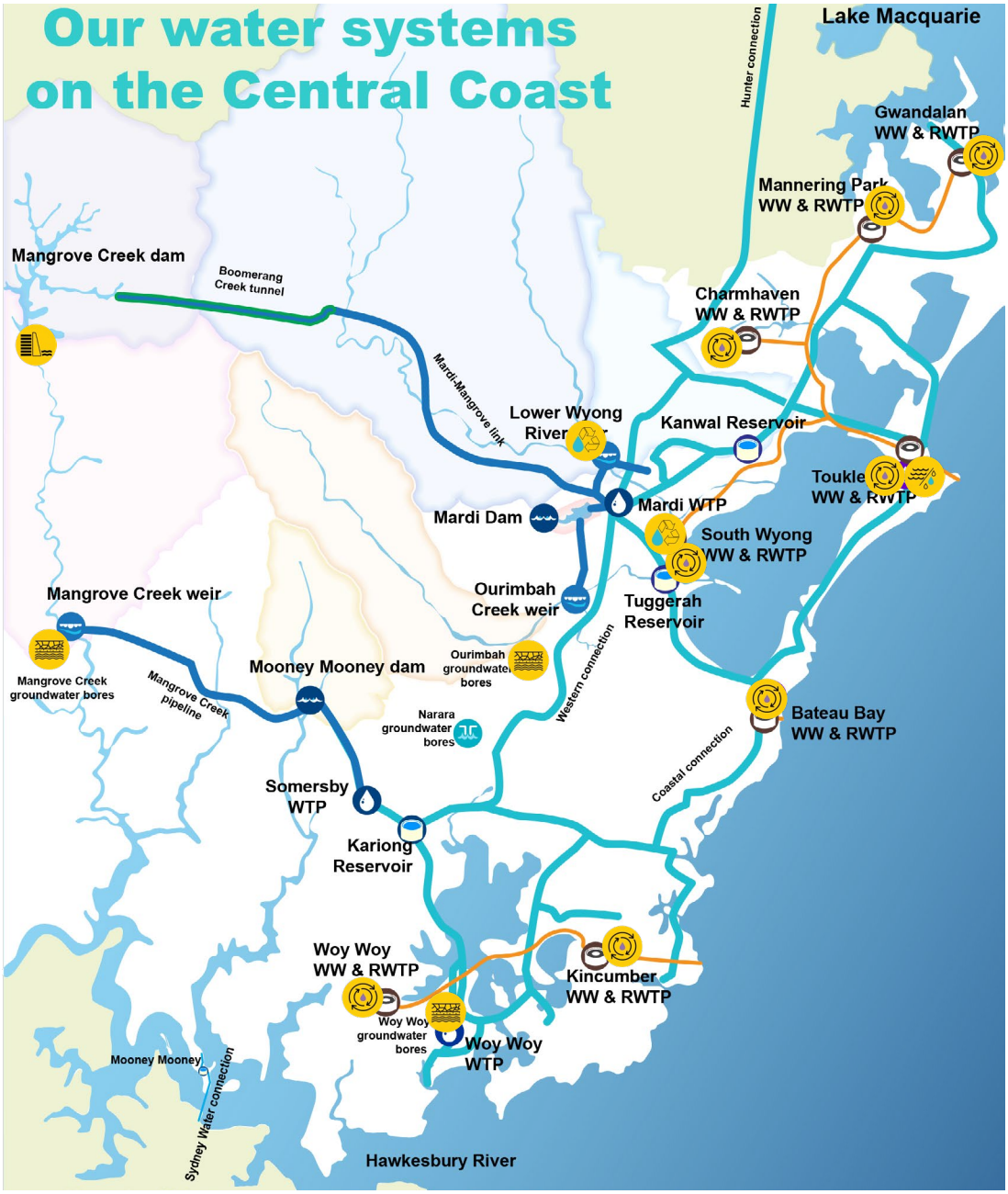
High environmental impact

Reliable supply

Capital Cost ($)

Water conservation	Groundwater	Recycled water (non-drinking)	Dam enlargement	PRW	Desalination
Not currently costed	$0.5M	$6.6M	$134M	$48M	$206M

$2.43/KL



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