

Technical paper factsheet: Decision making framework

To help guide the development of the draft Central Coast Water Security Plan, Central Coast Council also developed a decision-making framework.

This framework incorporated both financial and non-financial considerations and were aligned with the guidance provided under the Department of Planning Industry and Environment's Integrated Water Cycle Management Framework.

Figure 1 shows an overview of the decision making framework.

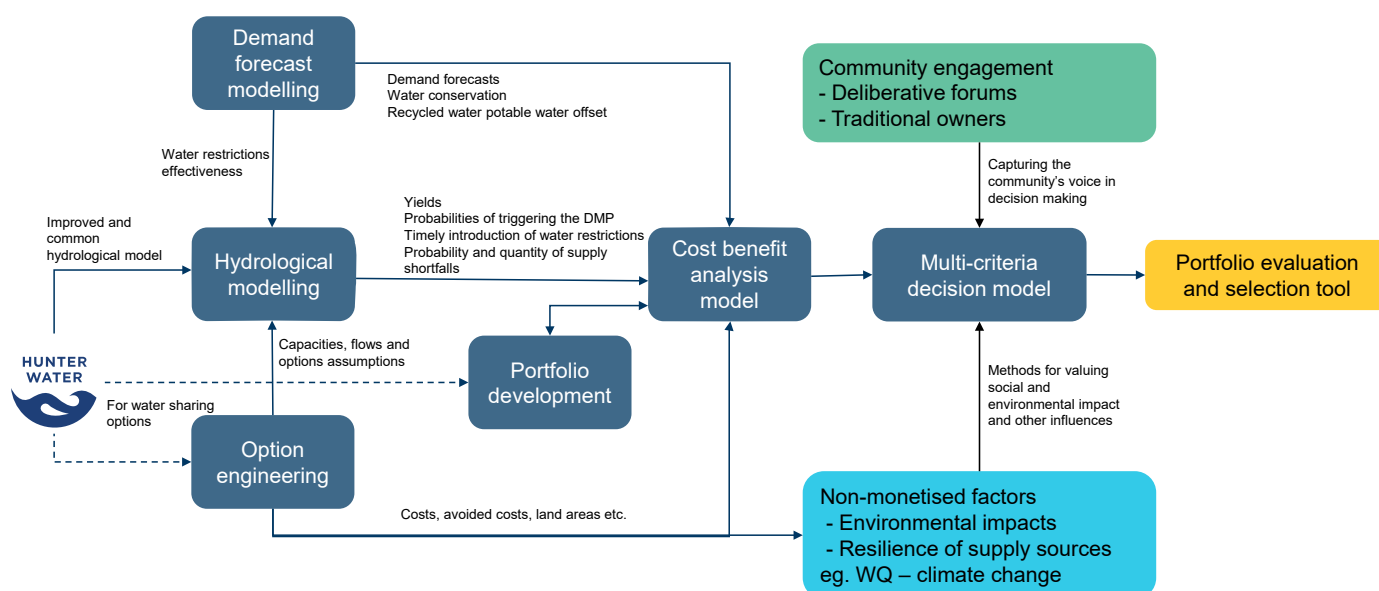


Figure 1 CCWSP Decision making inputs

Cost benefit analysis

Council and Hunter Water Corporation (HWC) engaged Frontier Economics to prepare Cost Benefit Analysis (CBA) models for their respective water security plans. The common methodology is consistent with NSW Treasury requirements and took a whole of NSW perspective to relevant costs and benefits, as well as preparing a utility specific financial analysis.

The outcomes of the cost benefit analysis

The assessment identified that portfolios 1 and 2 represented the least cost portfolios to Council to meet the required levels of service to the community. The expected net present value of costs for each of the portfolios, and their respective Long Run Marginal Cost (LRMC measured in \$/kL) is shown in **Figure 2**.

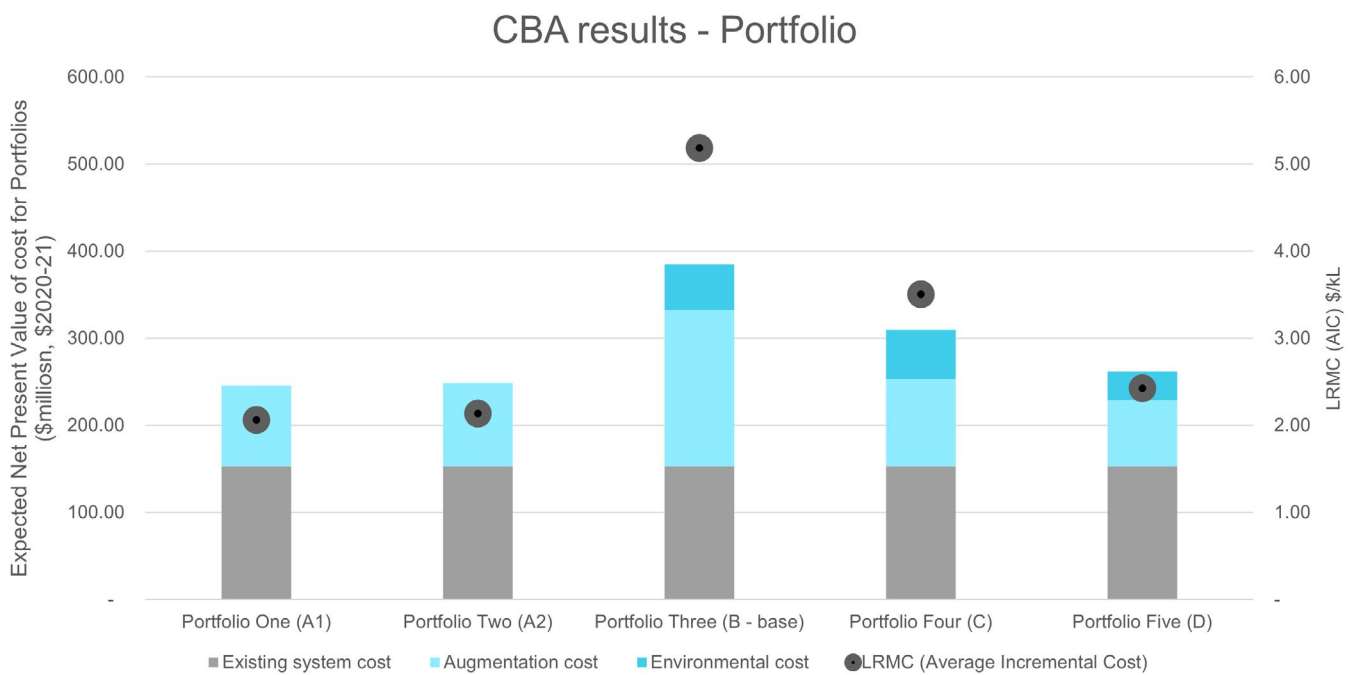


Figure 2 – The Central Coast’s water supply and demand forecast

Multi-criteria analysis

In addition to financial considerations, we also wanted to consider additional non-financial inputs into our decision-making framework. To do this, we worked with consultants GHD to develop a multi-criteria analysis tool. This tool utilised the goals and objectives of the CCWSP to develop a list of assessment criteria that fall under the categories of community, benefits and costs. An outline of the criteria used is provided in **Figure 3**.

This process, alongside a series of sensitivity analysis, identified portfolios 1 and 2 as being the most preferred. **Figure 4** shows the overall scores for each portfolio.

As described in the summary of the community engagement undertaken for this plan, portfolios 1 and 2 were identified as having the highest level of community support.

The decision-making framework identified that there is no need to trade-off between community, financial and technical drivers. Each of the key processes identified the climate independent portfolios as the preferred approach for the Central Coast supply scheme.

Portfolio 2 was identified as the most supported during the community engagement sessions and as having greater merit in the MCA process. This was mainly due to its higher yield which provides improved resilience to future drought and climate change.

Further investigations into the feasibility and financial impact of staging are now recommended to ensure the community achieves the most effective method of providing the required capacity.

Vision	CCC Focus Areas	"IWRP Theme"	Goal	Agreed criteria
To provide a resilient and sustainable water future that seeks new opportunities, contributes to regional health and prosperity and is supported by the community	Green	Environment	Protect & restore our ecosystems and biodiversity values	Net nutrient discharge Savings Delta KG/ML
				Biodiversity impacts - consensus
				Circular economy principles - judgement
	Belonging	Social	Provide services that are supported by our community and promote its needs, health & wellbeing	Customers - preferences
				Heritage impacts - consensus
	Liveable	Resilient	Provide a system that can adapt and respond to future uncertainties and will withstand system shocks while continuing to meet the needs of our community in a sustainable manner	Yield (GL/YR) Flexibility and adaptiveness Resilience
Levelised cost / Long run marginal costs				
Smart	Financial	Provide affordable & high- quality services that support the region's economic prosperity		
Responsible	Leadership & strategy	Provide transparent, collaborative and integrated strategic planning		
				Key
				Community
				Benefits
				Costs

Figure 3 CCWSP Vision – goals and agreed assessment criteria (Source GHD)

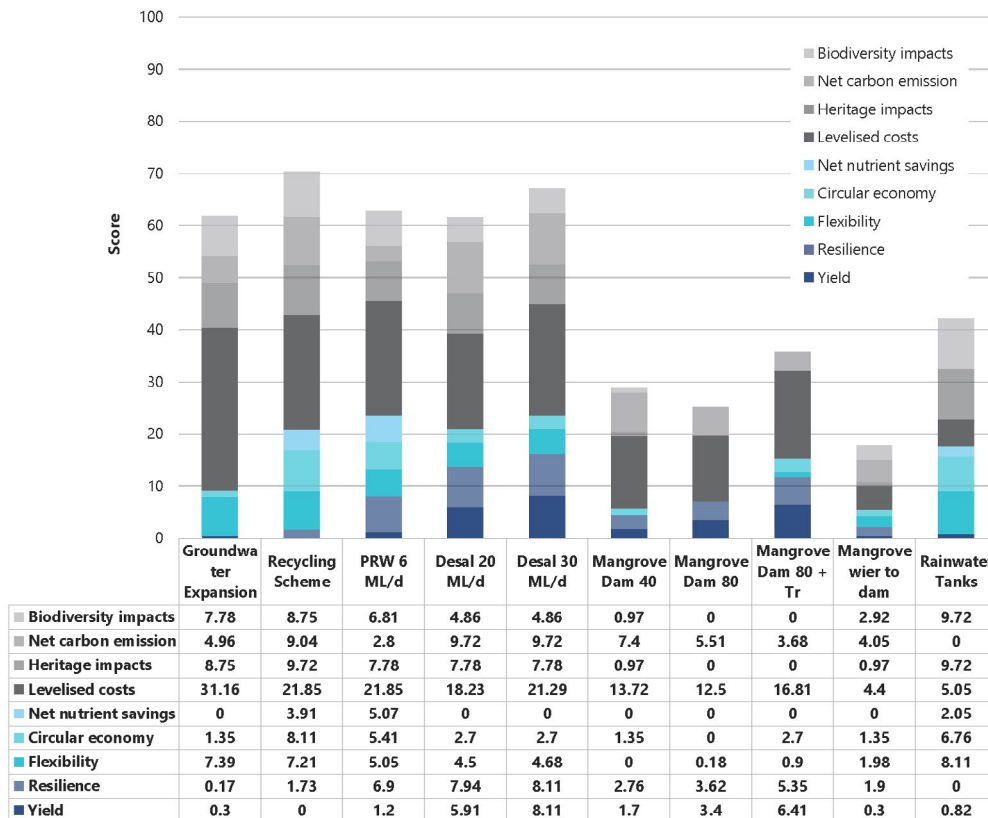


Figure 4 MCA portfolio results

This factsheet is a summarised version of a technical paper used to inform the development of the draft Central Coast Water Security Plan.

If you would like to read the full technical paper, please contact us to request a copy.
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