Peel Alliance Forum April 2024

"Reliably supply water in a climate challenged world, to benefit our Members"

Agenda

About Harvey Water

Harvey Water as a Regional Partner

Sustainability Challenges

Evolution of the Project

Unlocking Water Efficiency - The “Wellington Dam” burning platform

The Transformative Project – Policy Alignment & Funding

Project Outline

Peel Alliance

Questions, Comments & Future Follow-up

About Harvey Water

Founded in 1996 following COAG decision and agreements

A co-operative, "while focusing on member needs, work for the sustainable development of their communities through policies accepted by their members"

Owned by members

Not for profit (any profits reinvested to benefits members)

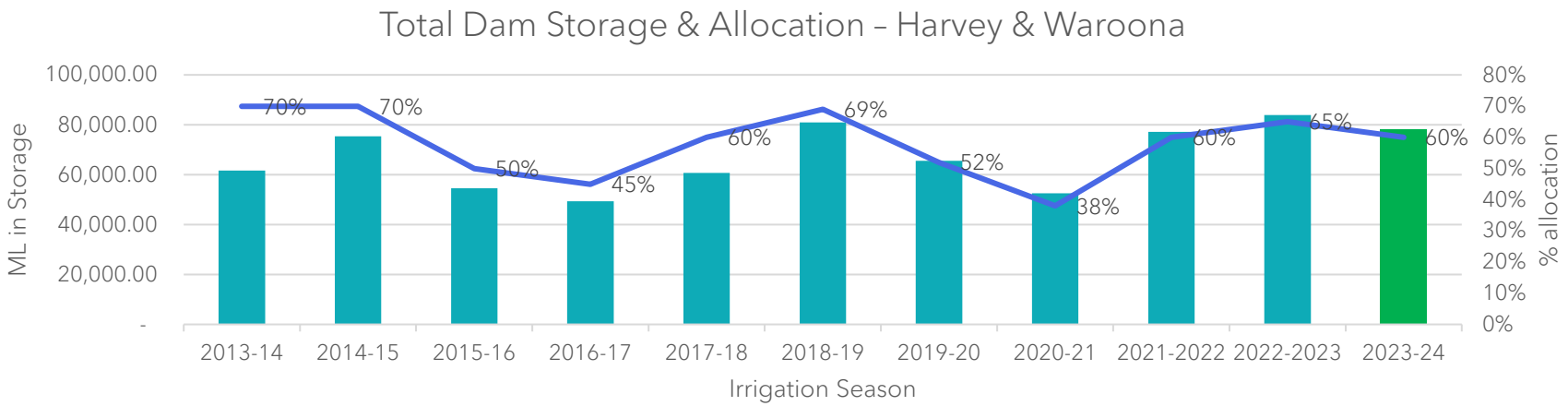
Governed by members through elected directors

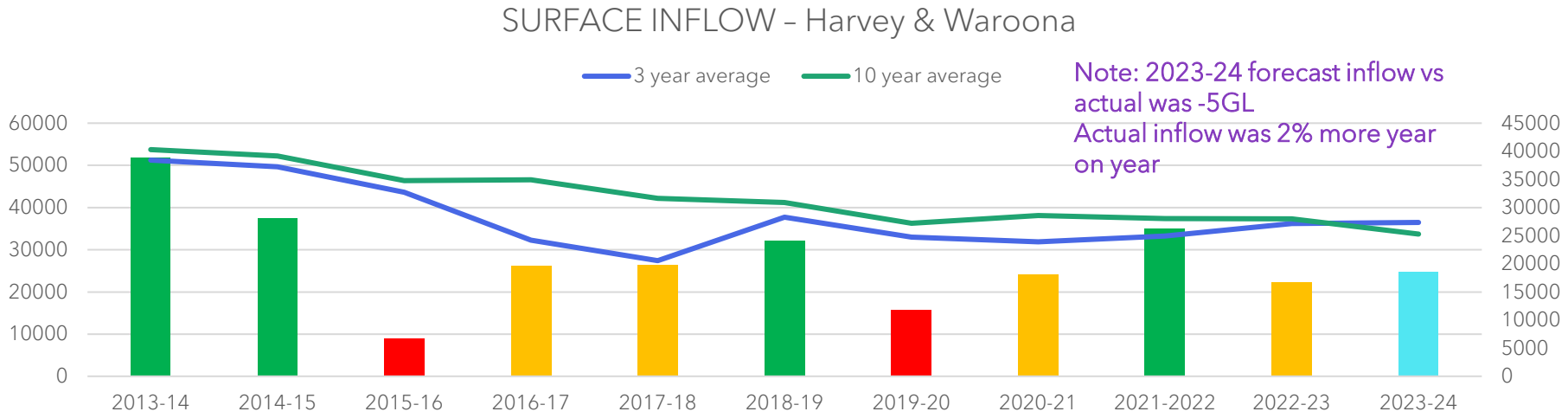
Reliably supply water in a climate challenged world, to benefit our Members

Regional Partner - Why Harvey Water?

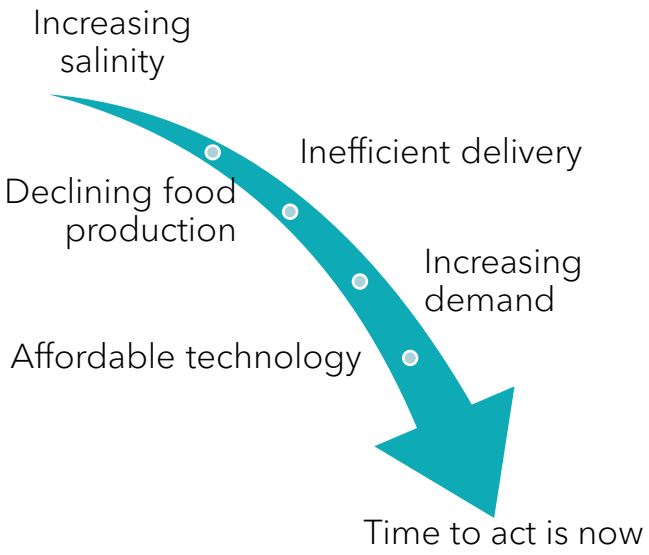
- Ethical supply – fit for purpose water for irrigation/industrial use
- Very low carbon footprint – gravity and green energy
- Licenced regional supplier of non-potable water 136GL
- Proactive and responsible custodian of water
- Demonstrated capability
  - Flexibility in supply
  - Positive working relationship
  - Supporting agriculture, community and industry
  - We get things done, safely, on time, on budget

Sustainability challenges: How to Meet the Growing Demand in a Climate Challenged Region

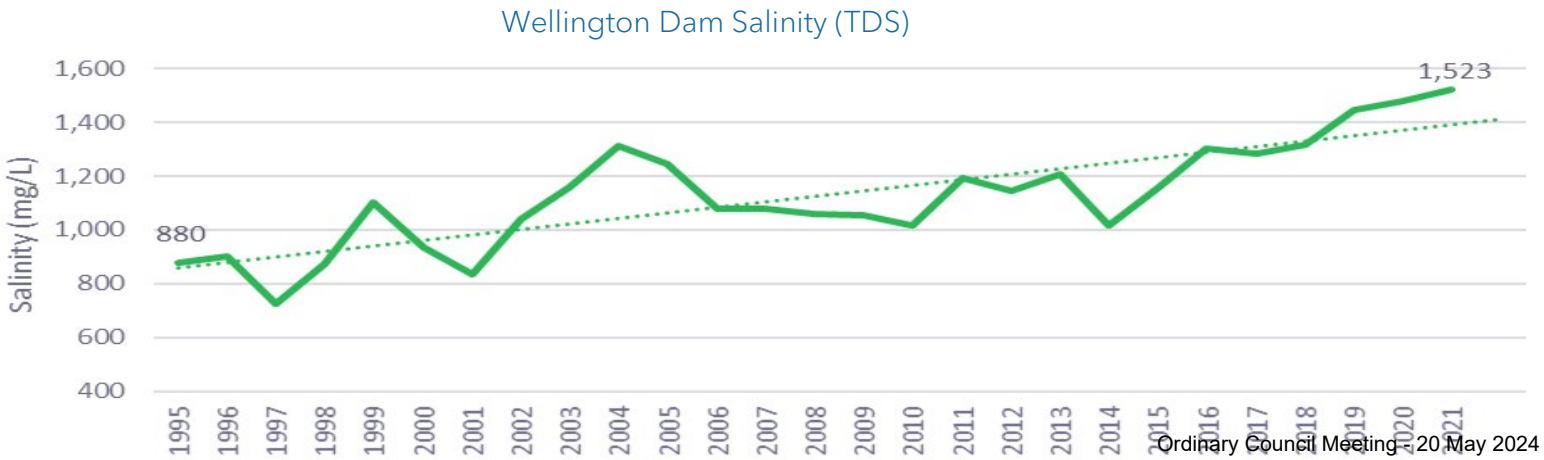




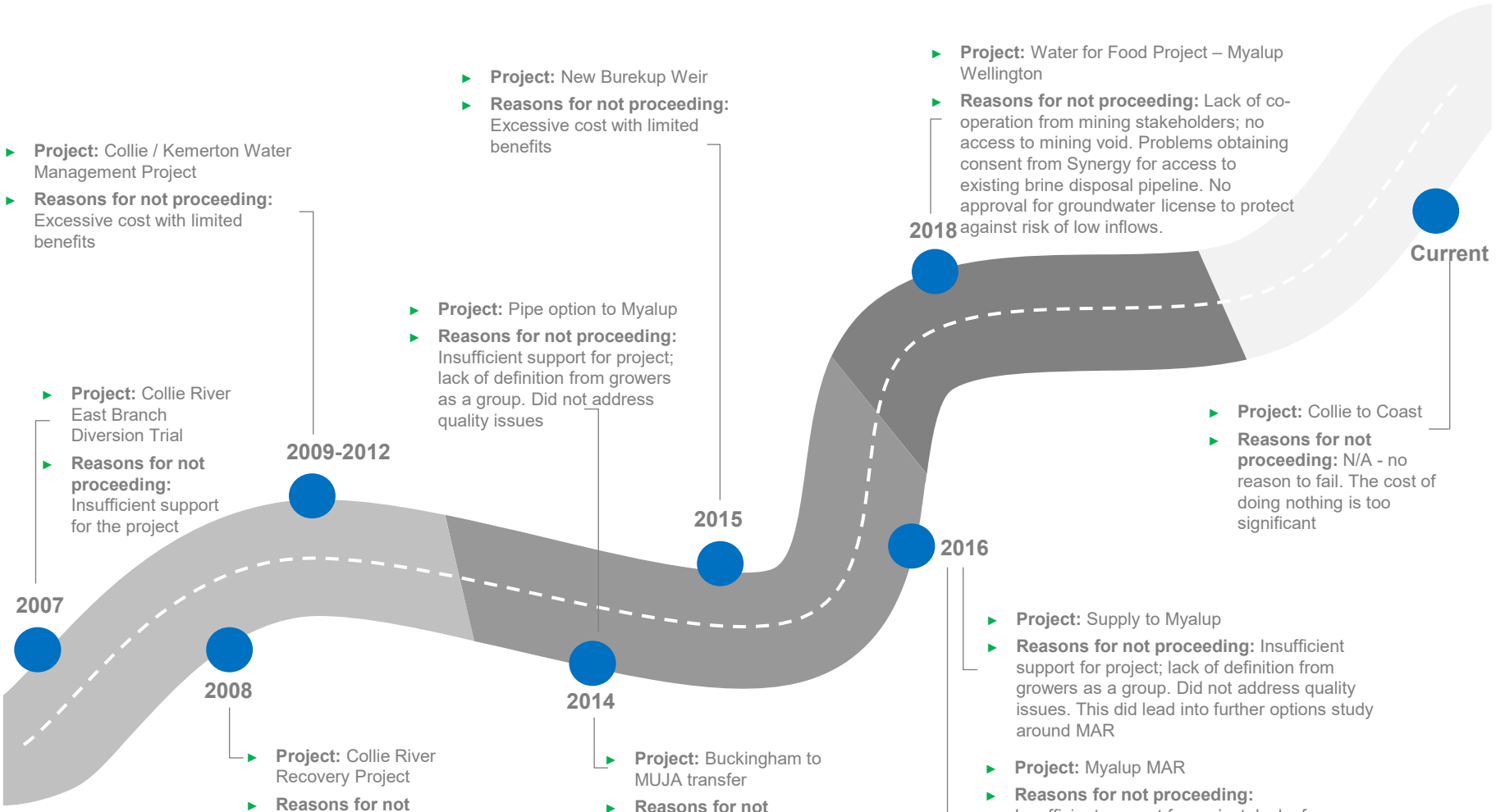
The "Wellington Dam" burning platform: the "time to act is now" to be smarter with our largest water resource



- De-forestation and land clearing has led to increasing salinity levels
- Water quality is posing detrimental to soils due to the high salinity level
- Less run-off, loss of resource, lower water allocations

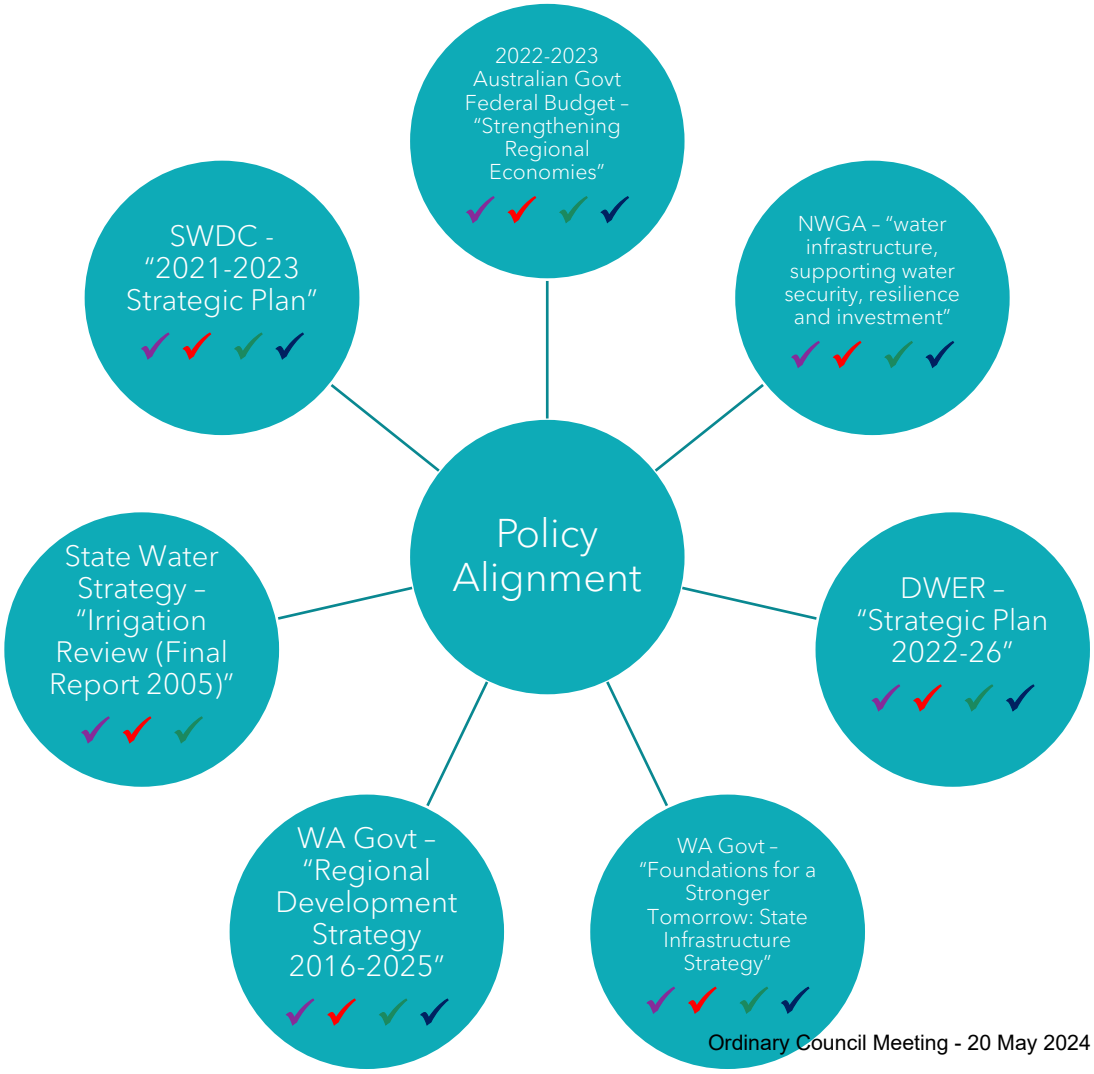


This project is not a new idea: Harvey Water has learnt from past projects to define a deliverable scope



Policy alignment: broad based policy alignment at the Federal, State and Local levels

- ✓ Maintain the region's non-potable water service offering
- ✓ Improve the quality of water delivered and provide future certainty
- ✓ Provide more reliable access to water
- ✓ Minimise impact to the local environment



NWGA ELIGIBILITY FOR FUNDING CONSIDERATION

NWGA Objectives:	Improving water access and security **for agricultural, primary industry and industrial use**	Providing certainty of water supply for **regional** and remote communities	Building **resilience and supporting sustainability**

Desalination and Water Recycling

- The system will have the capacity to desalinate 50ML/d and deliver 100ML/d
- Recycled water to augment the water balance

Dams

- Once completed, the project will integrate delivery from the 5 existing dam assets into one delivery system

Aquifer Recharge and Groundwater Storage

- Coolup groundwater and stormwater project
- Potential Myalup storage (DPIRD trial)

Pipelines and Off-farm Irrigation Networks

- Over 350km of pipe
- Automated delivery system

Weirs

- Enhance instrumentation and capability for more accurate release

Town Water

- Harvey Water has supply points throughout the irrigation area for use in firefighting, Shire works, POS, Industry and other incidental uses

Water balance: short term delivery efficiency gains to be supplemented by additional sources now and into the future

CRID pipe demonstrates the efficiency gains 20GL delivered to the water balance, enabling new entrants and growth

Additional Sources

Now:

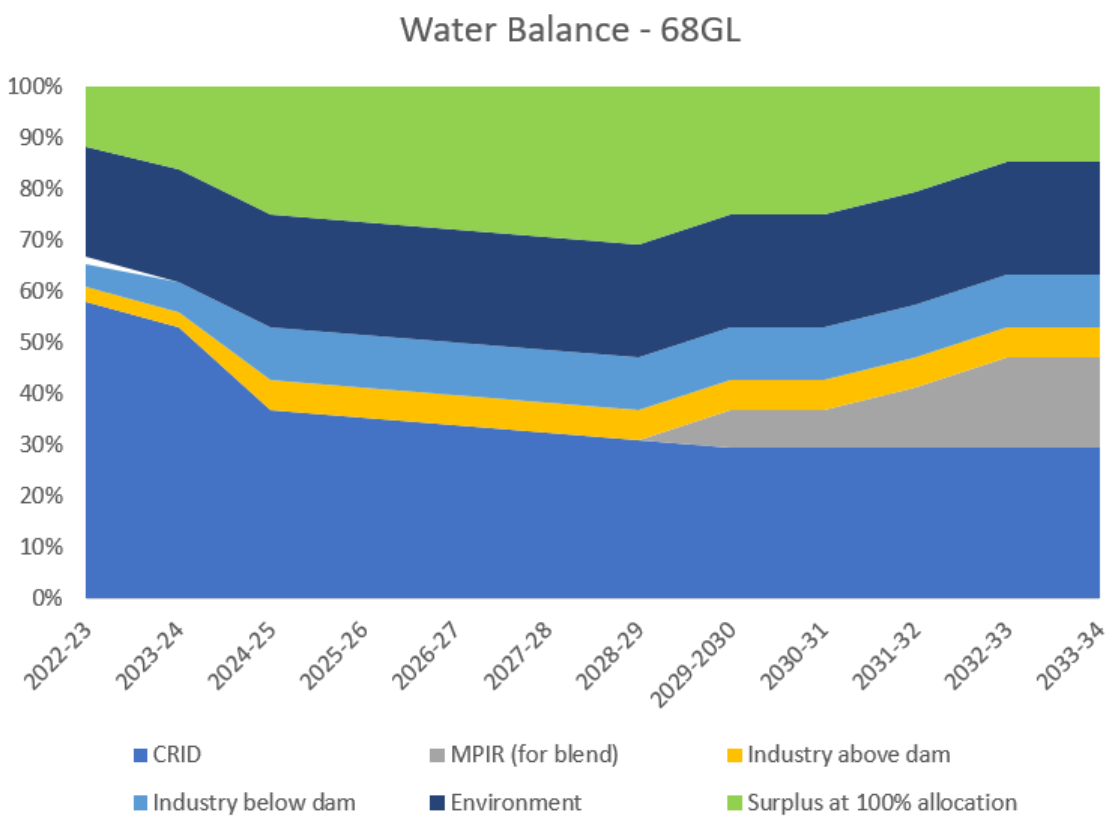
- Recycled water pilot
- Aquifer Storage study
- Groundwater

Future:

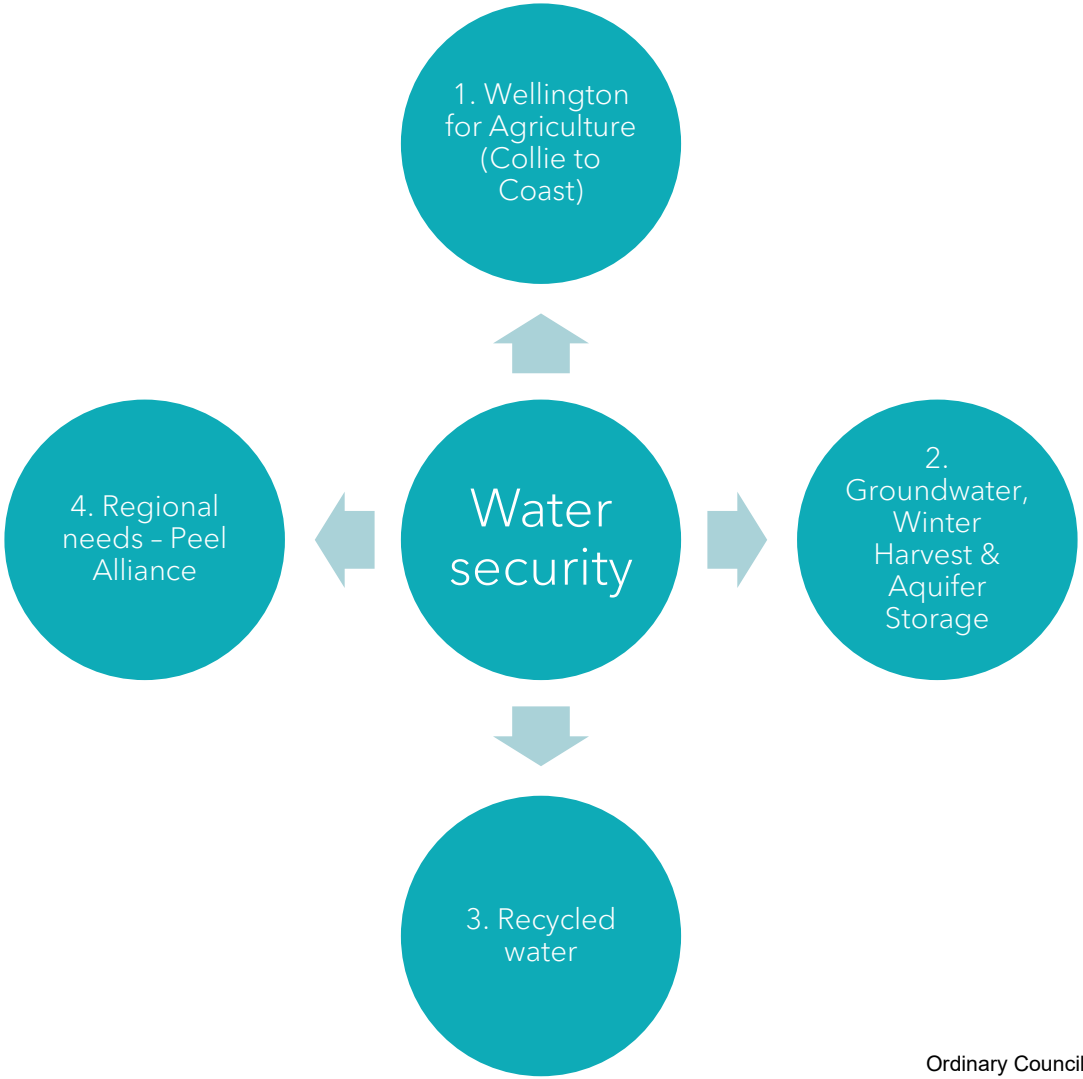
- Recycled water
- Aquifer Storage
- Redundant dams

Opportunity

- Irrigation efficiency
- Pipe & Technology - eliminate delivery loss
- Regional growth investment
- Aboriginal participation
- Community services



Projects addressing water security: climate independence and diversification is key



1. Wellington for Agriculture: - increase water availability, reduce salinity, powered by clean energy

1. Increase available water through water efficiency measures

   a. 12-15% of water released from the Wellington Dam is lost in the 12km stretch to the Burekup Weir; and
   b. 30-35% of water released into the channel system for farm gate delivery is lost through seepage, evaporation and run-off in the channel system

   An increase in delivery efficiency will be achieved through piping the CRID, therefore eliminating the delivery losses, saving 20GL

2. Enhance water quality through desalination

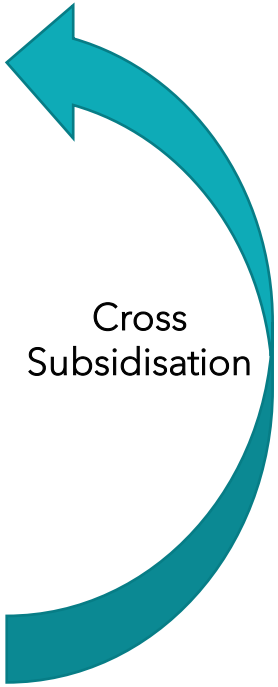
A reduction in salinity to <700mg/L can be achieved through desalinating up to 50% of the stream flows below the Wellington Dam and then blending this treated water with the stream flows below the Burekup Weir

3. Clean energy

Enhancing water quality and delivering via a pressurised system consumes significant energy. Solar, pumped hydro, batteries and green energy from the grid to minimise the carbon footprint and control operational costs

1.1 Beneficiaries: water delivery savings, new sources, on-farm efficiencies and recycling water deliver a broad range of benefits to the regional Peel & South-West communities

Food Security	• Cooperative Members • Myalup: existing and new • New Members: Coolup, Meelon, Pinjarra and Boyanup
Environment	• Water recycling • Net zero project •Continued release to maintain ecological values
Heritage	• Continued engagement and understanding the needs of the Traditional Owners • No new impact on natural water flows
Community	• State Government • Local Government • Fire Authorities
Tourism	• Wellington Dam • Agricultural / horticultural • Environmental
Industry	• Agricultural processors: Abattoir, Dairy Processors and Packers •Research & development • Other industries
Residential	• Third pipe – appropriate use of water • Public open space • Semi-rural lots not serviced by Water Corporation



1.2 Collie River Irrigation District (CRID): Investing in an existing irrigation precinct today provides the opportunity for productive growth and food security tomorrow

Today

- Irrigation water is limited in its use
- Minimal horticulture due to water quality

Tomorrow

- Significant organic growth across the sector e.g. increased demand from food processors
- Horticulture – berries, seed production and vegetable
- Attract new investment – e.g. horticulture, hemp, etc
- Compare to growth in the existing pipeline area of Waroona & Harvey

2. Groundwater & Aquifer Storage: building sustainable groundwater reserves

- Combine winter drain water with groundwater to develop a sustainable source of fresh non-potable water
- Capture nutrient run-off
- Developed the first production bore and draft the H3 report for DWER
- MAR package – drain check, energy stage 2, pumps and filtration March 2026
- Connection pipeline to Harvey & Waroona pipelines Q3 2026

3. Recycled Water: changing mindsets to unlock this valuable resource

Drying climate impacting water availability

Consistent with Guidelines for the Non-potable uses of Recycled Water in WA, "Wastewater can no longer be considered a 'waste' product to be discarded but a resource ….."

Aligned to the Harvey Water strategy, leveraging climate independent sources

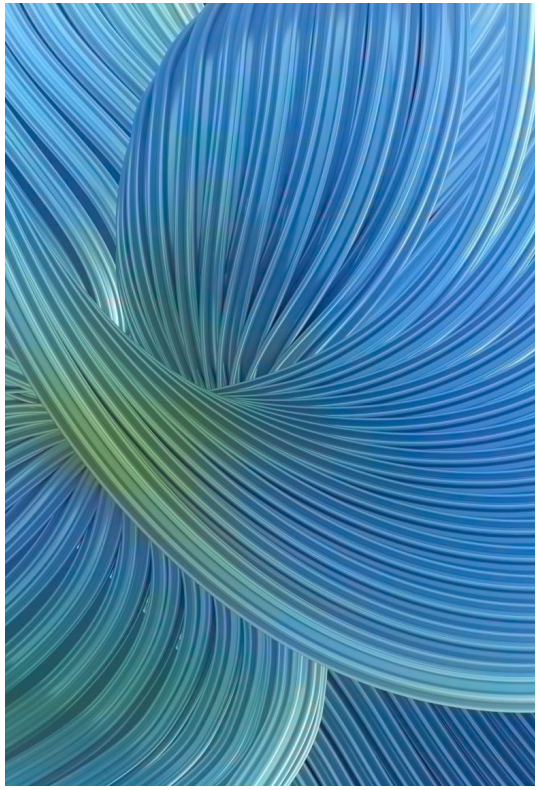
Harvey Water is a non-potable water provider

Managing stakeholder relationships including regulators (DWER, DOH), our Customers and the community

Build the Water Balance, Manage & Monitor

Engage the Community

Identify high volume source



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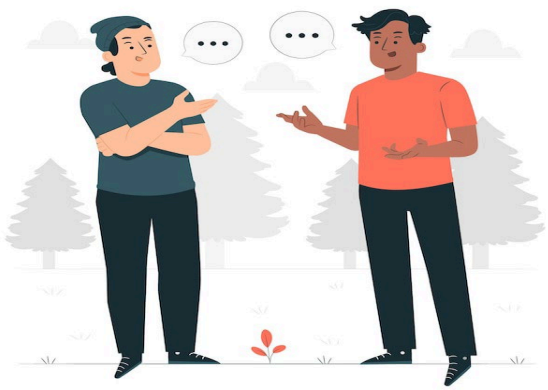
4. Peel Alliance

Communication

1. Identifying demand (WQ & volume)
2. End use value
3. Matching source to demand
4. Determining delivery capacity & capability
5. Approvals & contracts



Opportunity

1. Water use efficiency projects
2. Water sources
3. “Two-way” pipe infrastructure
4. Over-design for the future
5. Lobby government & state agencies
6. WQ for appropriate use

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