



Value of recycled water for non-residential use from the Subiaco Wastewater Treatment Plant

1 The Backstory

Perth's water supply is under ever-increasing pressure due to climate change and population growth

Recycling **treated wastewater** and **stormwater** could make a big difference to Perth's water security, sustainability and liveability



Subiaco Wastewater Treatment Plant

2 The Subiaco WWTP

Subiaco Wastewater Treatment Plant (WWTP) services a catchment of ~240 000 people, and includes the Perth CBD

Less than 10% of the 21.9 million kL of **wastewater** that is treated annually is currently recycled

None of the 1.5-3 million kL of **stormwater** that runs underneath the plant each year is currently recycled

Together, these sources could supply an additional **4-5 million kilolitres** annually, or ~13-16% of annual water consumption of the catchment

4 Our Approach



Face-to-face interviews with existing and potential non-residential users of recycled water in the suburbs surrounding the Subiaco WWTP

Contingent valuation survey to estimate the willingness-to-pay (WTP) for recycled wastewater and stormwater of non-residential users

Payment card value elicitation format

3 Motivation and Questions

Motivation: To explore current and future non-residential **demand** for recycled water from the Subiaco WWTP

Questions:

- 1) How are **land** and **water currently** being used? How might this change in the **future**?
- 2) How much are non-residential users **willing to pay** for recycled wastewater and stormwater across a range of different **non-potable** uses?



5 Pilot Test Results

There could be **substantial** demand for recycled water for the **irrigation** of **sports ovals** and **golf courses**, but **little** demand for **other uses** (e.g. indoors, industrial processing)

WTP for recycled water mainly depends on the ongoing **security** of groundwater availability and **costs** of groundwater abstraction

WTP does **not differ** between recycled wastewater and stormwater, provided **water quality** standards are met

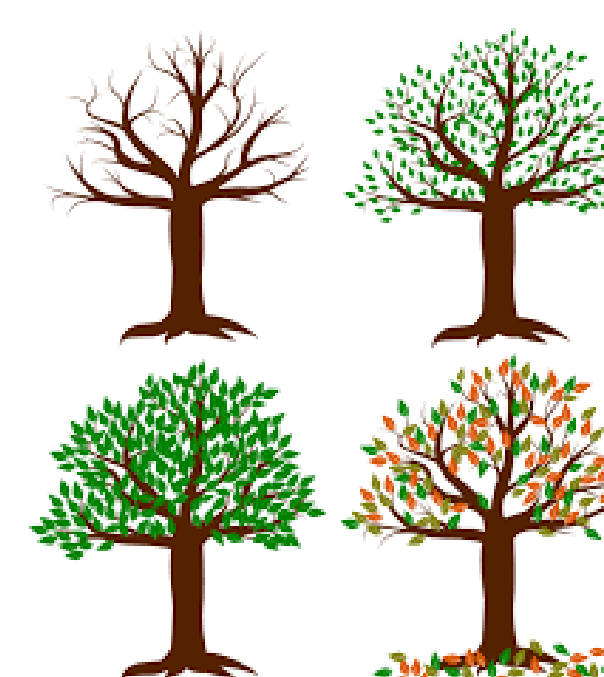


McGillivray Playing Fields

6 Expected Contributions

Once completed, this study is expected to:

- 1) Fill a knowledge gap in the literature with regards to the value of recycled water to urban non-residential users
- 2) Offer policy-relevant insights, for example that:



Demand for recycled water is likely to be highly **seasonal**, with high demand in summer, and low or no demand in winter

Storage of recycled water during the winter months could therefore be an important issue to resolve