

THE WATER FILES — EVIDENCE CARDS

One set per team, face down. Open each file only AFTER the prediction is locked in the handout. Long-term averages, rounded; sources: Bureau of Meteorology, Water Corporation.

FILE 1 • EVIDENCE

The South West dams

- Perth's traditional supply: forested catchments and dams in the hills of the south-west corner.
- Rainfall in south-west WA has been declining for decades — the drying trend is one of the clearest in Australia.
- Less rain means far less streamflow into dams: a small drop in rain makes a big drop in water caught.

Key fact: The 'safe' backyard source is the one that's been shrinking — which is why Perth now also drinks the ocean (two desalination plants).

FILE 2 • EVIDENCE

Lake Argyle & the Ord

- In the far north-east Kimberley sits one of the largest artificial lakes in Australia — vast beyond easy imagining.
- It refills in the wet season, when months of rain can arrive in weeks.
- It waters the Ord irrigation area — but it is thousands of kilometres from Perth, the Goldfields and most mines.

Key fact: Enormous volume, wrong address: water is heavy, and moving it is brutally expensive.

FILE 3 • EVIDENCE

The Goldfields pipeline (1903)

- Gold was found at Kalgoorlie — in country receiving about 265 mm of rain a year.
- WA's answer: pump fresh water $\approx$ 560 km from Mundaring Weir near Perth, uphill, in steel pipe — opened in 1903.
- Engineer C.Y. O'Connor designed it; it still supplies the Goldfields today, over a century later.

Key fact: The driest resource region in the state runs on a single engineered artery — built before cars were common.

FILE 4 • EVIDENCE

Pilbara groundwater

- Under the driest-looking country on your map sit ancient aquifers — water stored underground over very long spans of time.
- Mines pump it for processing, dust control and drinking; some pits sit below the water table and must be dewatered.
- Some aquifers recharge over centuries — your Lesson 1 'It Depends' card, all grown up.

Key fact: Invisible, ancient, and locally finite: fine this decade — the fifty-year question is the hard one.

FILE 5 • EXTENSION

Desalination — drinking the ocean. Perth now sources a major share of its water from two seawater desalination plants. Advisor's challenge: is desalinated water “renewable”? What's the catch — and what would you need to know before betting a city on it?

