

Ground water investigations at the Wannon Water South Otway Pump Station Response from the Project Team, November 2017

Members of the project team from Wannon Water, the Department of Environment, Land, Water and Planning, the Corangamite CMA and Southern Rural Water reviewed and discussed the findings of the investigation on 10 November 2017.

What this investigation means for the project:

Separation of the aquifer from surface water – Good separation between the target aquifer and the surface water around the test bore location indicates that if all other parameters were favourable, it may be possible to pump ground water from this location instead of pumping from the river to **result in improved flows in the river**. However, the pump test also revealed that the aquifer is not confined at other locations and is likely to outcrop (come to surface) further downstream. The outcropping aquifer could be the source of a spring or be an aquifer recharge zone (take water from river or stream). Further hydrogeological investigation would be required to determine potential environmental impacts. The water quality and yield were also poor, see details below. These factors add to the cost estimate of substitution at this location.

Acid Sulphate Soils (ASS) –The investigations confirmed the presence of potential acid sulphate soils in the area requiring further investigation if regular substitution with groundwater were proposed.

Yield & Depth- The yield from the test bore was lower than hoped for (only 2.2 ML per day compared to the target of 6ML per day). The bore depth was 250 m compared to the expected 120 m depth. These factors significantly increase the cost of achieving the target substitution volumes.

Water quality – the water quality at the test bore was also not as good as we hoped for and would require onsite treatment to remove iron, manganese and phosphorous. This further increases the cost estimate of substitution from this location.

Over-all implications for the “South” and the “North” options from the 2016 options analysis ([link](#)):

- The above factors significantly increase the cost estimate of the “S6, S12 & S18” options of substituting 6 – 18 ML/day of river water with groundwater at the Wannon Water South Otway Pump Station area.
- The presence of potential ASS throughout the area has also highlighted the potential environmental risks of increasing pumping from the Wannon Water Northern Otway Pump Station area (from 6ML to 12 or 20 ML per day - the N12 & N20 options). More extensive ASS and hydrogeological investigations would be required than previously envisaged, increasing the cost of the northern options.

State geological maps – the data produced by this investigation changes the previous understanding and assumptions of the hydrogeology of the area. This information will be used to update Victoria’s groundwater database.

Next steps proposed by the project team:

1. Given the risk of environmental impact and the yield and water quality issues, it is unlikely the South Otway options (above) will be pursued.
2. By early next year, Wannon Water will update the cost estimates of all the substitution options incorporating information revealed by this investigation.
3. The project team will meet with the Stakeholder Reference Group as planned on the 28 November to discuss the findings and answer questions about the investigation. At this meeting, the project team will also seek input on any additional options for inclusion in the revised options analysis.