

Groundwater Pumping Impact Assessment

The objective of the Groundwater Pumping Impact Assessment is to identify potential impacts associated with groundwater extraction from Barwon Water's Anglesea borefield. This will compare the outputs from the groundwater model with the baseline condition report to identify the changes that could occur as a result of operating Barwon Water's Anglesea borefield. Any changes identified as part of this work will be used to inform the following three components:

Ecological risk assessment

The ecological risk assessment will use the baseline condition report and modelling outcomes to assess the potential risks to groundwater dependent ecosystems within the Anglesea River and Salt Creek catchments.

This will include consideration of the resilience of these systems to various stressors (eg. climate, extreme weather events, changes in land use, surface or groundwater use), together and in isolation.

Assessment of impacts on acid generation in the swampland

While the work to date has indicated the presence and activation of acid sulfate soils within the Anglesea River and Salt Creek catchments, sampling has also revealed that significant potential acidity remains, particularly within the upper swamp lands.

Should groundwater pumping activities result in changes in water levels within the Alluvial Swamp Aquifer, this could result in further oxidation and subsequent mobilisation of acidity and metals.

Subsidence assessment

The subsidence assessment will use the baseline condition report and modelling outcomes to predict where and to what extent subsidence may occur, as a result of a pumping. This will then be used to ensure we're not having any impact on surrounding landholders, buildings or roads.

How does this help?

All of these elements will help inform how we sustainably operate the borefield, and determine if any changes are needed to the monitoring and assessment program or associated triggers.

Our environmental triggers have been set at a conservatively low level to ensure we receive an early alert, prior to any detrimental impacts occurring. This will remain a key focus of our bulk entitlement review.



Image: Spring monitoring 2019