

Groundwater level monitoring

Barwon Water's Bulk Entitlement has been set up to ensure that operation of the Anglesea borefield does not adversely affect groundwater dependent ecosystems, including the Anglesea Swamp Perched Water Table (PWT).

If the groundwater levels in the PWT remain within the likely range of natural variation, then operation of the Anglesea borefield should not be causing adverse impacts to surface water flow, acid generation processes and ecology.

What we are doing

Barwon Water has 42 observation bores across the catchment in the:

- Upper Eastern View Formation (UEVF)
- Lower Eastern View Formation (LEVF)
- Perched Water Table (PWT)

When the borefield is in use, monitoring of groundwater levels is conducted on a daily basis for the first 6 months of pumping, and subsequently on a minimum monthly frequency. This is with the exception of bores P8 (PWT), P17 (PWT) and P19 (UEVF), where daily monitoring continues during operation of the borefield to ensure protection of the Anglesea Swamp.

Trigger levels

The groundwater trigger levels have been established to:

1. Identify drawdown in the UEVF that is a result of operation of the Anglesea borefield; and
2. Identify drawdown in the Anglesea Swamp PWT aquifer that is a result of operation from the Anglesea borefield.
3. If drawdown occurs in both the Anglesea Swamp PWT and the UEVF because of pumping from the borefield then pumping must be reduced or stopped to prevent impact on the Anglesea Swamp.

What we have found

Monitoring of groundwater levels has shown that there is significant fluctuation of groundwater levels in the PWT due to seasonal climatic variation. Understanding this trend allows us to identify when additional drawdown of groundwater levels in the PWT is due to operation of the Anglesea borefield and, therefore, pumping must be reduced or stopped to allow the water levels to recover.

