

Acid sulfate investigations

The 2013 review of the Monitoring and Assessment Program (MAP) identified the need for further understanding of acid generation within the Anglesea catchment. This includes risk of exacerbating existing issues through groundwater pumping from the Anglesea borefield.

What we are doing

In 2017, Barwon Water engaged Dr. Vanessa Wong from Monash University to conduct a study to investigate the distribution and characterisation of acid sulfate soils (ASS) across the Anglesea catchment. The investigation aims to:

- characterise ASS distributions and concentrations in the Anglesea and Salt Creek Swamplands
- identify potential impacts from acid generation in the Anglesea and Salt Creek Swamplands
- improve knowledge of acid generation and movement, particularly in the Anglesea Swamplands.

The program for assessment of acid sulfate soils developed by Monash University was designed to align with the groundwater level triggers for protection of the Anglesea swamp from drying of the perched water table because of groundwater extraction.

The sampling program involved taking samples from 53 locations across the Salt Creek and Marshy Creek catchments.

What we have found

Preliminary results have indicated that both Salt Creek and Marshy Creek contain substantial volumes of acidity in a form that can be mobilised.

Marshy Creek contains higher concentrations of acidity, which can be transported readily in surface water and groundwater. Salt Creek contains higher concentrations of retained acidity, which can be slowly released over time. This information enables us to understand acid inputs and movement through the system and support agencies in the management of low pH events in the river.