

# Groundwater quality monitoring

A focus of Barwon Water's groundwater quality monitoring program is to assess movement of water between the different aquifers in Anglesea and the potential for saline intrusion given the proximity to the coast.

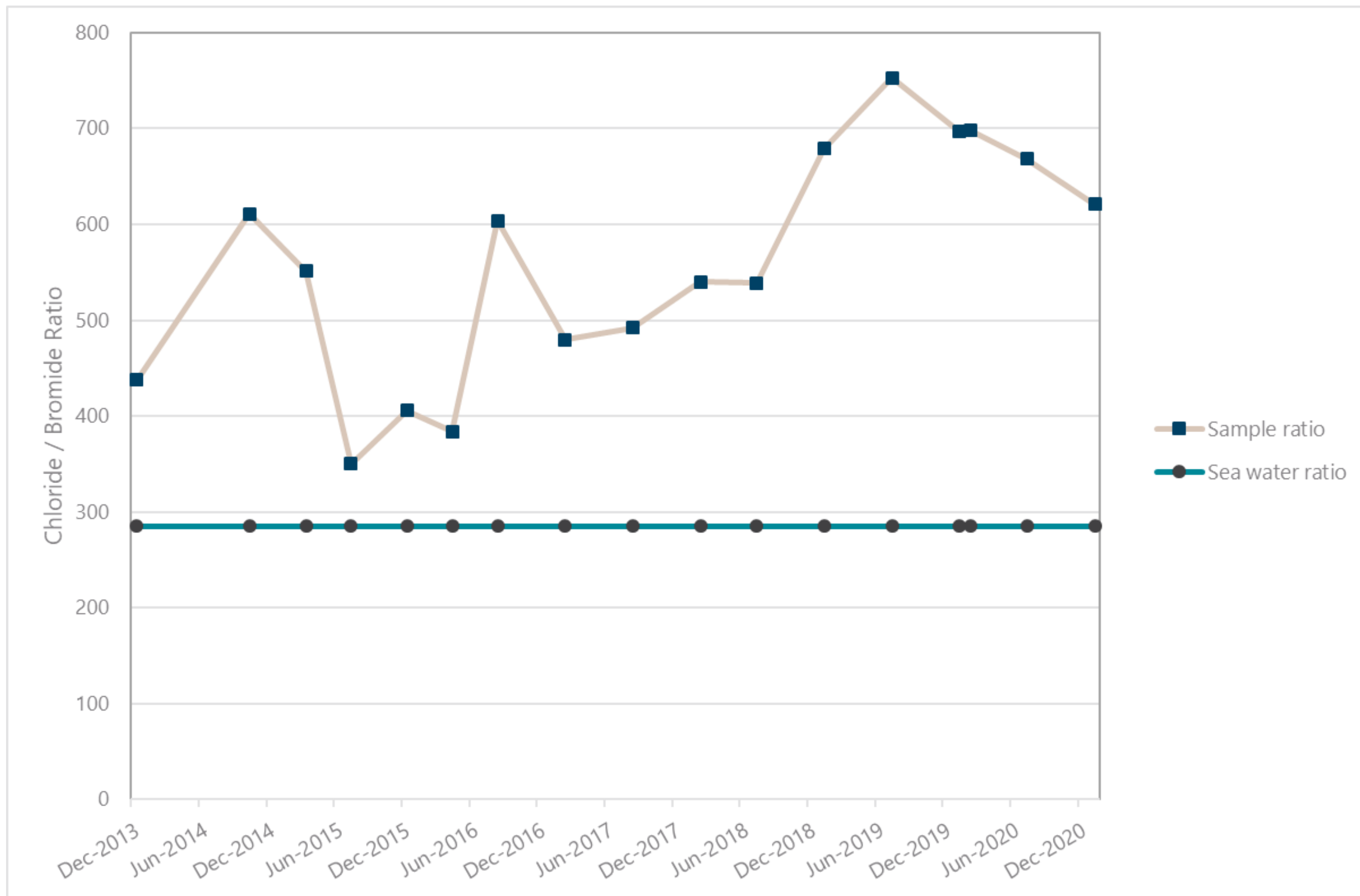
## What we are doing

The Anglesea Monitoring and Assessment Program (MAP) includes monitoring of groundwater quality at 17 bores (of the 42 observation bores) across the catchment twice a year and, at a minimum, on a weekly basis for the seven production bores when the Anglesea borefield is in operation. Monitoring includes analysis of groundwater for the following:

- pH
- Temperature
- Major Cations (e.g. sodium, calcium & magnesium) and Anions (e.g. chloride & sulphate)
- Salinity (TDS and EC)
- Bromide (Observation bore p14 and Upper Eastern View Formation (UEVF) coastal bore only, specifically for indications of saline intrusion).

## What we have found

The graph below shows the chloride/bromide ratios over time. Monitoring for Bromide helps identify any signs of saltwater intrusion into the Lower Easter View Formation (LEVF) from the ocean. This graph shows that there has not been any saltwater intrusion into the LEVF. Variability observed within the data is considered to be within natural variation of groundwater quality.



The tables below provide the typical range for groundwater water quality parameters that has been observed in the Perched Water Table (PWT), Upper Eastern View Formation (UEVF) and Lower Easter View Formation (LEVF).

Anglesea River Catchment	Temp(°C)	pH	EC(µS/cm)	TDS(mg/L)
PWT	10 – 18	3.51 - 5.64	739 - 4120	441 - 2472
UEV	14.1 – 16.5	5.51 – 6.1	1010 - 1420	639 - 764
LEV	18.7 – 19.5	5.6 – 6.14	1050 - 1400	629 - 740

Salt Creek Catchment	Temp(°C)	pH	EC(µS/cm)	TDS(mg/L)
PWT	11.3 – 16.1	5.13 – 6.57	325 - 1120	215 – 1020
LEV	10.6 – 18.7	4.3 – 6.95	326 - 463	219 – 411