

**DEC 2014**

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## Upcoming Events

**Saturday 6<sup>th</sup> Dec, 6PM at Anakie Gorge Picnic Area** End of year BBQ and spotlight walk

**Sunday 8<sup>th</sup> Feb, 10AM at Anakie Depot** Activity to be advised.

No activity in January.

Note that on days of Total Fire Ban, activities will be cancelled. Brisbane Ranges is in the Central fire district.

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## End of year BBQ and evening walk

Saturday 6<sup>th</sup> December 6PM

BBQ at the Anakie Gorge Picnic Area. Snags, burgers, bread, sauce and soft drinks provided. Please bring a salad or dessert to share, eating utensils and any extra special goodies for the BBQ if you want them.

We'll take a walk along the gorge after sunset and spotlight for critters large and small. Please bring a torch for walking, we'll provide the spotlighting stuff. We might see some interesting stuff.

Please RSVP with numbers attending and any special dietary requirements to [friends\\_br@yahoo.com.au](mailto:friends_br@yahoo.com.au), 0417 770 765 or 5286 1252 by 2<sup>nd</sup> Dec.



# WaterWatch Report

**Deirdre Murphy**

This month, salinity monitoring by FoBR at Sutherlands Creek is explained.

## What is salinity and why does it matter?

Electrical conductivity (EC) measures salinity in solution. EC is the total concentration of a range of dissolved salts. The Barwon River, for example contains chlorides, bicarbonates, calcium, magnesium, potassium and other dissolved ions, all of which contribute to the salinity of the water. When you measure salinity you are recording the EC of the water sample. An increase in salts in the waterways means an increase in EC.

While it is a necessity for aquatic plants and animals to obtain an appropriate concentration of salts, salinity beyond the normal range can cause severe stress and potentially death.

## Sources of salinity

There are a combination of natural and unnatural factors that can influence the amount of salinity found on the land and waterways. Some are:

- geology of the landscape
- clearing of deep-rooted vegetation, altering the natural water balance and causing a rise in the water table
- runoff from salt affected land
- polluted stormwater
- reduced water flows
- drainage and diversion schemes can also influence the salinity of a waterway.

## For your diary!

### Join us

#### Saturday 6th December

End of year BBQ and evening walk at Anakie Gorge Picnic Area, 6PM.

#### January 2015

No activity. Resume February.

#### Sunday 8th February 2015

To be advised

**Your articles:** We would love to publish your stories of bushwalking and other activities in the Brissies.

Send in your contributions to [friends\\_br@yahoo.com.au](mailto:friends_br@yahoo.com.au)

## Effects of increase in salinity

- reduction in water quality and the diversity of flora and fauna able to survive change in salinity
- sensitive species within the aquatic macro-invertebrate community may die and tolerant species dominant e.g. brine shrimp suggests the level of salinity has increased
- reduction in nutrients available for plants, causing plants with low tolerance to die off and stunt the growth of others
- salt tolerant species e.g. spiny rush become more dominant as they can survive high levels of salinity
- high salt levels can also limit what the water can be used for.

## What has the Waterwatch testing at Sutherlands Creek found?

In the cleared hills and coastal plains of Victoria late summer EC can be typically 1000-1500 EC and after prolonged dry periods, this level can rise to 3000-5000 EC.

Sutherlands Creek at the gorge below Steiglitz has shown an increasing EC trend. The reduction in rainfall recently has probably had a significant impact on salinity and this will reduce the number and diversity of species present. Trends in the aquatic macro-invertebrate surveys conducted at this site will be discussed in the next newsletter.

To learn more about electrical conductivity and salinity, visit [http://www.vic.waterwatch.org.au/file/file/Data%20Interpretation%20Manual/Pages%20from%20WW\\_DI\\_MANUAL\\_PART%20B%20\(p\\_19-35\).pdf](http://www.vic.waterwatch.org.au/file/file/Data%20Interpretation%20Manual/Pages%20from%20WW_DI_MANUAL_PART%20B%20(p_19-35).pdf)



Testing point at Sutherlands Creek.  
Photo: Deirdre Murphy