

BERG AGM 2021

## **EstuaryWatch, WaterWatch & Sedimentation Report**

### AGM 1

EstuaryWatch and WaterWatch are on-going citizen science projects carried out in partnership with Melbourne Water. BERG participation now spans many years and the accumulative data collected contributes to a baseline understanding of water quality in Balcombe Creek and the estuary.

### AGM 2

WaterWatch coordinator, Sue Milton, and her volunteers test water samples collected from Balcombe Creek near the Uralla Road footbridge and from within the Briars. This includes a sampling of macro invertebrates.

### AGM 3

EstuaryWatch samples water at the picnic-ground jetty, Ferrero Oval and the Augusta St footbridge. All results are uploaded to the Melbourne Water website and are readily available to researchers and the public.

A short video explaining EstuaryWatch and WaterWatch activities is now available via a link on the BERG website.

### AGM 4

Covid-19 restrictions have severely disrupted activities over the last two years, but we are hopeful of resuming regular activities in the very near future.

### AGM 5

Out thanks to regular volunteers Jan Jones, Colin Wilkinson, Helen Carroll, Barbara Novotny, Franc Amendola, John Inchley and Margaret Mackie.

### AGM 6A

A major success this year was the installation of a 24/7 water quality monitoring station on the picnic ground jetty. BERG was able to convince SE Water to partner with Bio2Lab Pty Ltd and contribute \$20,000 to fund initial installation and maintenance. The station continually monitors rainfall, water temperature, salinity, pH, dissolved oxygen and ammonia levels. The results are live streamed to nominated devices and shown on a dashboard.

### AGM 6B

Currently only BERG and SE Water have access to the dashboard, but it will become more widely available for community education purposes later this year. One of the features currently being set is the threshold alarm for each parameter. When any out of the ordinary readings are detected, alerts will be sent to all stakeholders. This will ensure a more a more focussed and rapid response to any environmental concerns such as sewerage spills or overflows.

BERG built a network of partners including the Mornington Peninsula Shire and Mount Martha LSC to co-sponsor the grant submission and we are grateful for their support.

#### AGM 7A

Via EstuaryWatch and WaterWatch BERG has also contributed to some other innovative citizen science programs throughout the year.

We assisted researchers from the Arthur Rylah Institute with their short-finned eel tagging program. Electronic transmitters were fixed to several eels migrating out of the estuary and into the bay earlier this year in order to better understand their incredible journey along the east coast of Australia to the Coral Sea.

#### AGM 7B

And, BERG MM successfully applied to partner La Trobe University researchers in a ground-breaking study that uses environmental DNA to identify aquatic life. This non-invasive technology has the potential to detect the presence of wildlife without direct observation. We sent water samples, strained through a syringe micro-filter in the field, to their lab for analysis.

Further water samples from the creek and estuary were provided for the 2020 state wide Pesticide Detectives program. We were pleased to learn that no pesticide residues were detected.

And, in the coming months we will be assisting BERG member, Franc Amondela, with his honours degree studies, focussing on base metal levels at 13 different sites along the creek and in the estuary.

#### AGM 8

Of course, as you know, the estuary faces many ongoing challenges, none more pressing than the steady sedimentation of the estuary basin. BERG has been on the case for many years. We have been warning the relevant authorities that urgent action is required.

#### AGM 9

We have worked closely with the shire engineers on a project that will reduce sediments from the Henley Avenue outfall. The screen baffle bypass pit is slated for installation later this year.

#### AGM 10

In the meantime, we are assisting the shire with development of a Long Term Sediment Reduction Plan that covers all of the Balcombe reserves.

#### AGM 11

BERG MM has installed a trial Sedimentation Pin within the Henley Ave sediment delta to see if the rate of deposition can be better measured over time.

#### AGM 12

Artificial openings of the sand berm that hold back the estuary waters are a continuing problem. This increases estuarine salinity and disrupts fish spawning cycles. Signs warning that this is an offense are obviously ineffective so we must re-double our efforts at community awareness and education.

#### AGM 13

Balcombe Creek and the estuary face many challenges, as do all natural ecosystems in heavily urbanised contexts, so we are extremely fortunate that BERG continues to harness the energies of the local community in a such wide range of projects aimed at protecting and enhancing this precious asset. We are always keen to encourage more of our members come along and enjoy EstuaryWatch and WaterWatch activities. Hope to see you soon.