



## **Estuary Entrance Management - Q & A**

### **Why do you want to artificially open an estuary entrance? Why don't you just let it open naturally?**

Ideally, we do not want to open an estuary, always preferring nature to take its course. We open the estuary only when flooding impacts could cause long term impacts to adjoining land and infrastructure. Freshwater inflows raise water levels and adjoining land is flooded. Whilst it is a natural process, this pooling of water can negatively affect farmland and infrastructure.

### **Why don't you open an estuary as soon as it closes?**

The closure of an estuary entrance is a natural occurrence. While water levels in the estuary remain relatively low, the closure has no impact on infrastructure.

The inundation of surrounding vegetation/wetlands can have positive ecological outcomes such as bird nesting, fish breeding and invertebrates. Some estuarine plants require inundation to propagate.

Attempting early openings usually do not succeed as the estuary levels do not provide sufficient gradient to flush the entrance channel to the sea.

### **How will you advise the local community that you are considering artificially opening the estuary entrance?**

Notices on EGCMA web site (interested people can subscribe to receive updates) and in regional print media (East Gippsland News, Bairnsdale Advertiser, Snowy River Mail including local newsletters such as Mallacoota Mouth).

Where possible, print media releases will be issued when:

- a closure starts to substantially impact on activities and infrastructure
- an opening is about to be attempted
- an opening has been completed – successfully or unsuccessfully

### **Is there a 'trigger point' (water level in the estuary) at which you will artificially open the estuary entrance?**

There is no 'trigger point' as such. The water level in the estuary is just one of a number of factors that have to be taken into account when considering the artificial opening of an estuary. The minimum level at which an opening is likely to be successful is just one factor that has to be considered.

### **What will you do to ensure that someone does not take it into their own hands to artificially open the estuary entrance?**

Government cannot monitor the entrance constantly as we are not resourced for that.

At the time an opening is imminent we will try to keep a watch on the entrance area if we have staff resources available.

### **What are the penalties if someone artificially opens the estuary entrance?**

Anyone who opens an estuary without authority could be liable to civil action from people affected by damages (e.g., damage to moored boats when water levels drop quickly).

A greater impact could be action impacting other people's safety.

### **Why can't the estuary entrance be kept permanently open by dredging?**

The costs and feasibility of doing so would be prohibitive. The Gippsland Lakes has the only permanent entrance in East Gippsland. Many openings occur naturally following heavy rain in the catchment.

The inundation of vegetation/wetlands can have positive ecological outcomes such as bird nesting, fish breeding and invertebrates. Some estuarine plants require inundation to propagate.

Permanently opening these estuaries would alter the natural processes which maintain these high value environmental assets.

### **Why is the East Gippsland CMA now involved in the artificial opening of estuary entrances?**

The Authority has always been involved.

Agencies conducting openings over the years have always sought prior approval from the Authority. The Authority issues a "Works on Waterways" permit administered under the Water Act (1989).

Historically, there has been confusion about who is responsible to complete the actual opening and who will manage communications.

This has been sorted out resulting in the Authority also responsible for communication and Parks Victoria responsible for completing the opening itself.

### **What monitoring is done regarding water quality to identify the risks associated with an artificial opening?**

The key risk is that, immediately after an artificial opening the oxygenated surface water layer is lost as the estuary drains. This can leave behind water that is low in oxygen in the deeper areas of the estuary or that has drained from the surrounding land. This lack of oxygen can cause fish death.

Monitoring to ascertain the risk to fish is conducted prior to considering an opening. Monitoring locations are typically in areas with a heightened risk where floodplain wetlands are present.

Monitoring is undertaken at intervals in the water column between the surface and the bed of the estuary for the following physical parameters:

- Temperature

- Turbidity
- Electrical conductivity
- Dissolved oxygen.

These parameters are standard on water quality multi-meters.

**What monitoring is done regarding the sand berm to identify the risks associated with an artificial opening?**

- Time of opening
- Berm dimensions (height and width)
- Likely water level difference between the estuary level and the sea
- Tide charts, particularly predicted low tide levels and times
- Estuary water level
- Sea state
- Wind direction and strength
- Atmospheric pressure

**Who does the monitoring at each of the main estuaries?**

The agencies work together to ensure the monitoring is completed.

Parks Victoria is responsible for monitoring water quality, often conducted with the assistance of external contractors and other agencies.

The data is stored by the Authority.