

## **RECOMMENDATIONS ESTUARY MOUTH AND BEACH RE-OPENING REQUIREMENTS - 23 July 2021**

### **Estuary mouth management**

During a site visit yesterday (22 July 2021) with representatives from local, provincial and national government it was observed that the uMhlanga Estuary mouth is now partially closed. This means that there is no contact between the estuary and the sea during low tide but marine overwashing is occurring during a part of the high tide. It is likely that the estuary will fully close during the next few days. The estuary team has considered the appropriate actions to be taken based on the event timeline and conditions prevailing during the spill.

When the contaminated water reached the estuary during the 14 – 15th July 2021 rain had occurred in the local catchment, the estuary was still open and flowing strongly at low tide. This means that the pollutants and toxins reached the banks of the estuary. The flow through the estuary carried the contaminants and the affected fish and other animals out to sea. It is uncertain at this stage whether the breach was accelerated by the increased river flow resulting from the factory runoff. The marine currents moved the pollutants and other estuary fish which had been affected, northwards resulting in dead fish and crayfish being washed up along the beaches from uMhlanga through to Umdloti beaches and as far north as the north bank of the uMdloti estuary.

Since the event on the 13 July until Thursday 22nd July the estuary has remained open to the sea and benefitted from the diluting effect of the freshwater flowing in from the entire catchment and the saltwater from the sea. This dilution is needed to begin the restoration process within the estuary environment. The estuary and marine specialist team have recommended that for the moment a natural mouth dynamic is allowed to establish and no interference with the estuary mouth should occur. This means that the estuary should be allowed to remain closed or open for as long as natural flows and sea conditions dictate. This will allow an increase in water levels in the estuary which will serve to reach the marginal higher lying areas and backwaters affected by the toxic water during the 12-15 July.

These areas will hopefully have these residual contaminants diluted and breaching would allow dissipation and scouring of potentially contaminated sediments, which will be flushed out again to sea during the next natural opening. Successive closures, and flushes will serve to dilute and rinse out some of the remaining chemicals and contaminated substrates. It is very likely that many of the substances bound to the sediments will remain within the estuary despite

breaching. However, baseline sampling will be conducted to confirm this state and the results of the sampling will allow the team to recommend appropriate remedial actions.

### **Beach reopening**

The beaches between Salt Rock and the uMgeni estuary mouth, including the rocky shore habitats, remain closed following the decision of EDTEA and eThekweni and KwaDukuza Municipalities on the 16 July 2021. This status should remain, pending the outcome of testing of the marine water and sediments in the inshore beach environment. This will indicate the level of contamination and toxicity, making it possible for a recommendation to be made to the authorities to assist them with a decision to open the beaches for recreational use once again.

The moratorium on harvesting of any marine organisms in the closed area must remain in place until the testing of animal tissues, such as mussels and oysters, is complete.

**Nicolette Forbes**  
**22 July 2021**