

South East Queensland Floods 2011

Overview of the flood event

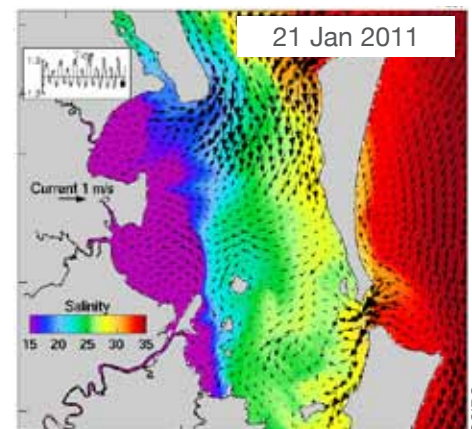
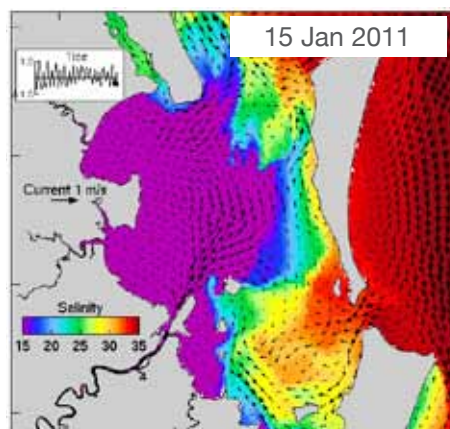
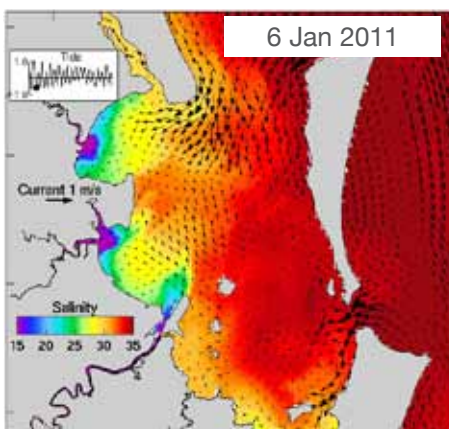
Newsletter #1, February 2011

The 2011 Queensland floods were devastating to the people and economy, with lives lost and homes and infrastructure destroyed. As communities across Queensland rebuild their homes and businesses, the impact of the floods on the ecosystems that support commercial and recreational activities of the state are unknown. The flood has already had a short term impact on water quality in the rivers and Moreton Bay, with increased risks associated with human contact and shipping.

This newsletter is the first in a series that will provide an overview of the environmental impacts of the January 2011 floods on the catchments and waterways. The impacts of sediments, nutrients and toxicants delivered to Moreton Bay by the flood plume may influence both the ecosystems and the ecosystem services. This newsletter will provide information on the location of the flood plume, the types of impacts expected, and the frequency of flood events.



UQ - MODIS Image



CSIRO

A pilot hydrodynamic model of the Moreton Bay region developed for Healthy Waterways has been run throughout the flood and recovery period. Although the model is not yet fully calibrated, maps of the salt content of the water (salinity) generated by the model appear to provide a useful predictor of the flood plume (low salinity flood plume = purple color).

HEALTHY WATERWAYS

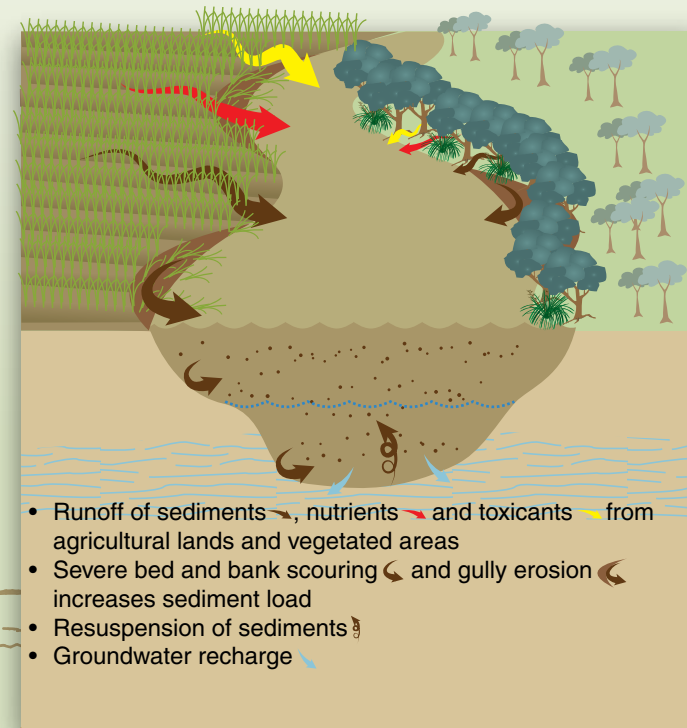




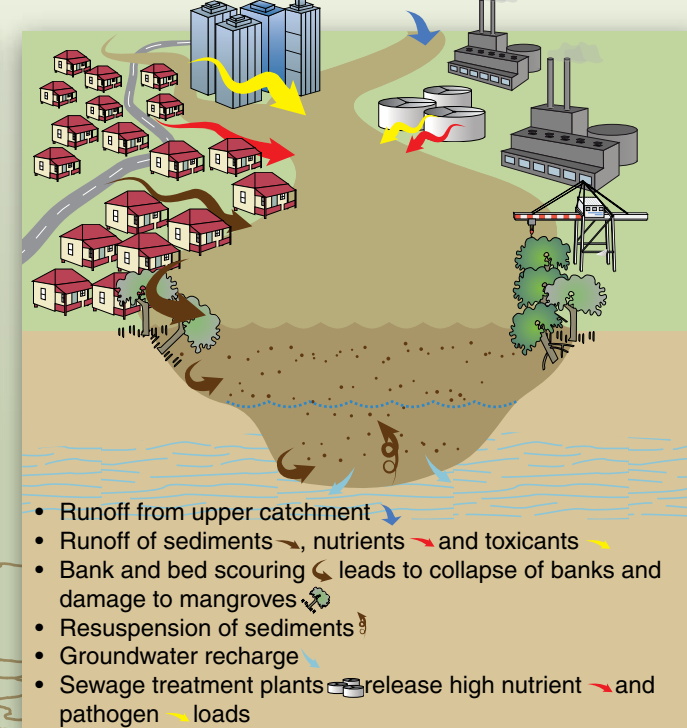
Snapshot of South East Queensland during the flood

A conceptual diagram of the South East Queensland flood event is depicted, illustrated with aerial photographs taken during the flood. The diagram was developed by the Healthy Waterways Flood Response Taskforce. This conceptualisation includes the impacts and effects on rural and urban landscapes as well as Moreton Bay. The basic principles depicted in the diagram are applicable throughout the east coast of Queensland, including Hervey Bay and the Great Barrier Reef.

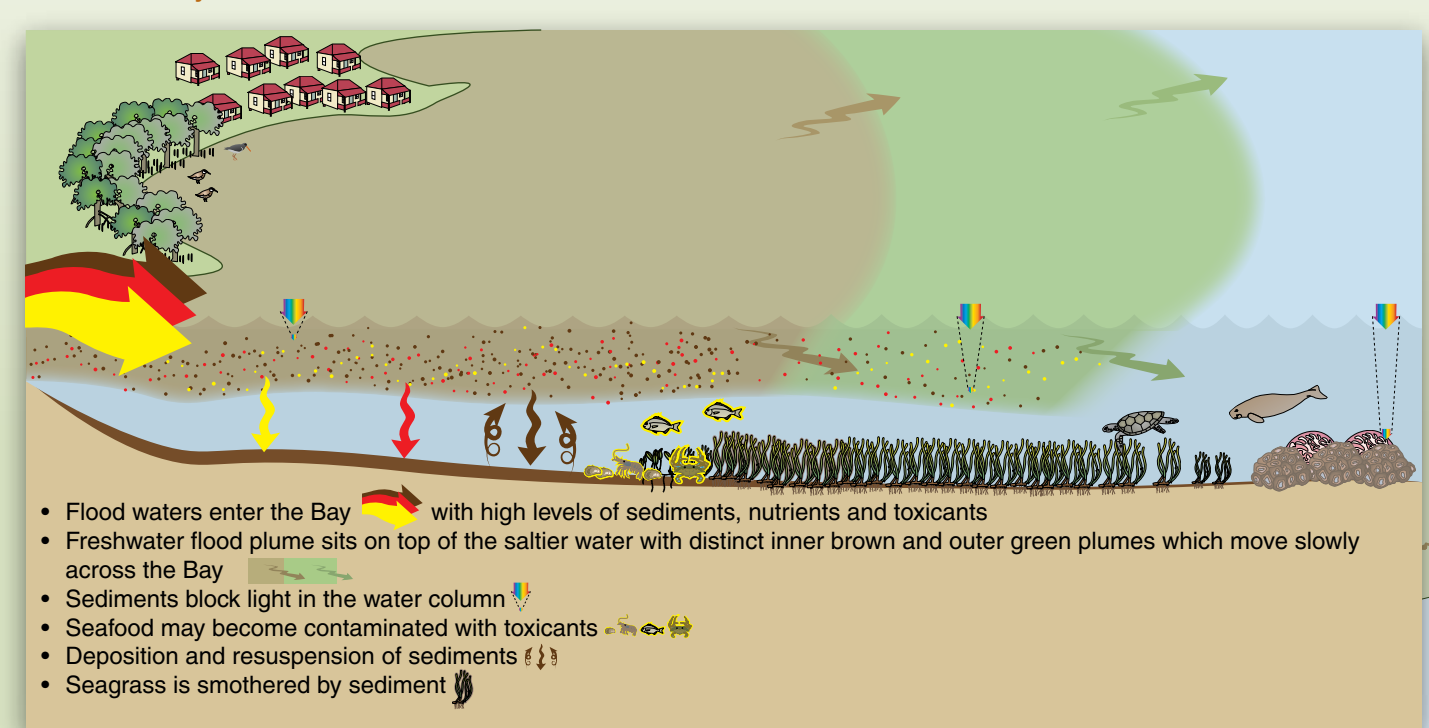
Rural areas



Urban areas



Moreton Bay



Historical flood events

Australia's climate means that drought, punctuated by intense rain events, will lead to future flooding. The El Nino/Southern Oscillation climatic pattern results in cycles of drought and intense rain in Queensland. This pattern will likely be exacerbated by climate change. Thus flooding is something that South East Queensland residents, businesses and governments will need to cope with now and into the future. In addition, the rivers, estuaries and embayments of South East Queensland will be threatened by more frequent and severe floods.

The January 2011 flood was only the ninth highest flood since recording began in the 1840's. Even before recording began, in 1824, the explorer John Oxley noted evidence of recent flooding near the juncture of the Bremer and Brisbane Rivers. While flooding is a regular and natural occurrence in South East Queensland, the substantial amount of infrastructure damage by the 2011 flood is unique. Previous floods have also had devastating impacts, with bridges, homes and buildings destroyed. But the growth of Brisbane, particularly in flood prone areas, makes the 2011 flood especially damaging.

Upcoming newsletters

- Creeks, riverbanks and paddocks
- Impacts on the Bay

Flooding in Brisbane city

