

## Murray Mouth Morphological Study



### Location

Australia

### Client

MDBC & SA Department of Water, Land & Conservation

### Start Date

January 2001

### Office Responsible

Cardno Lawson Treloar

### Responsibilities

Development and calibration of a reliable Estuarine Morphological Model as the basis for providing advice on lower river operations.

### Project Scope

The Murray River is 2,530km long and is Australia's most important river system. It discharges to the sea through a sandy, coastal dune system in Encounter Bay, South Australia.

WBM, together with Cardno Lawson Treloar, have been engaged to set up and calibrate two alternative morphological modeling systems to assist with planning investigations.

Cardno Lawson Treloar are applying the Delft3D Online Sediment system to those investigations. The purpose has been to provide continuing internal peer review of the investigation, an important issue due to the possible outcomes of the study and potential water management issues.

Sediment transport processes at the Murray Mouth are complex, with longshore wave caused currents carrying sand to the entrance and the flood tide having the potential to transport some of that sand into the entrance where it settles to the seabed.

On the following ebb tide, little or no transport back to the sea occurs. Both models have been calibrated successfully.

Investigations have been extended to include dredging plans, lock optimisation and salinity issues.

### Contact

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