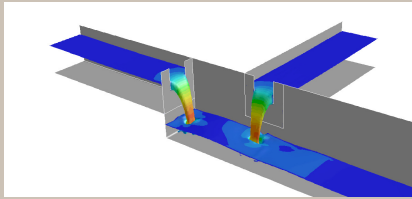
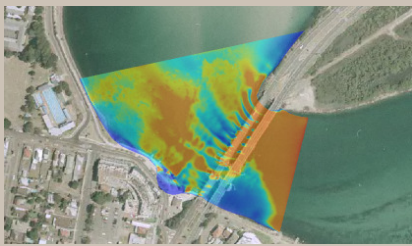


“Where will our knowledge take you?”

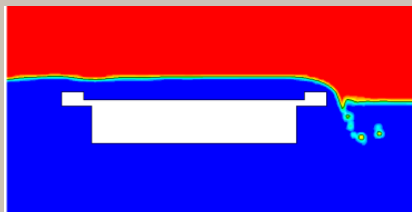
Computational Fluid Dynamics (CFD) in Water Environment



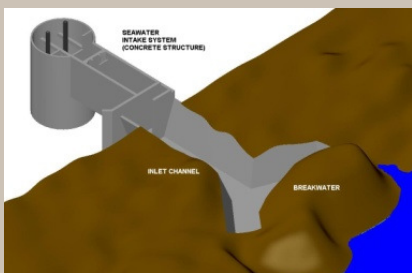
Open channel flow. Flow over the weir junction



Bridge river bed scouring problem investigation



Flood water flow over the bridge



Seawater intake system design support

Environmental Impact Analysis

With the growing need for environmental protection, state-of-the-art technology is becoming increasingly important in all aspects of environmental water management. Computer simulation is now routinely used for conducting Environmental Impact Assessments (EIA) in relation to flooding, pollution control and sediment erosion and deposition.

BMT WBM provides a comprehensive range of environmental services and specialises in the application of Computational Fluid Dynamics (CFD) in support of environmental monitoring and regulation, EIA and environmental design and management.

CFD analysis can provide significant cost benefit when assessing engineering designs with environmental concerns. Engineers and designers can make quick and confident early decisions based on the CFD analysis and limit the environmental impact, whilst optimising the hydraulic performance and minimising any operational risks.

BMT WBM has extensive capability for modelling both near field and far field conditions in natural open channels and hydraulic structures such as bridges, weirs and overflow systems. Our environmental CFD services include:

- Pollution control and water quality management
- Flood water management – collection, storage, transport and discharge
- Flushing, dredge plumes and sediment transport
- Reservoirs dynamics – including sedimentation, stagnation and flow short circuiting
- River flow impact analysis for bridges, piers and pontoons
- Riverbed scouring investigation and rock fill scenario optimization
- Storm water weir and overflow system design optimization
- Desalination plant water facility design support
- Fish passes and cave wave impact analysis

To communicate with a CFD specialist at BMT WBM please contact:

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