

# Physical and CFD Modelling

## Background

NSW Public Works MHL provides a range of data monitoring, numerical and physical modelling and technical services in the field of water and environment. One of our main strengths is the ability to combine information from physical and numerical models with experience and data from prototype installations.

## Services Provided

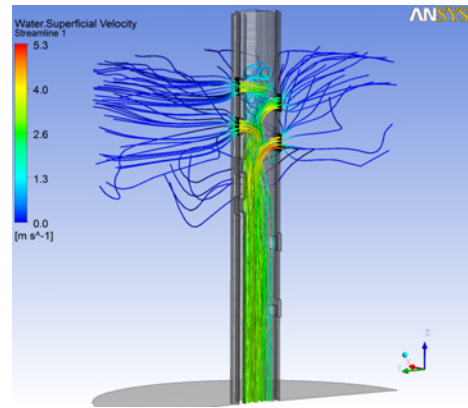
NSW Public Works MHL's well established experience in constructing and testing physical models of water infrastructure as well as with the application of computational fluid dynamics (CFD) in the water industry makes us a unique contributor to the higher level design standard for the client.

## Key Features

Being one of the few service providers who can undertake both physical and CFD model studies, NSW Public Works MHL has an important role in validating the results obtained from these computer models with the physical model results.

## Benefits

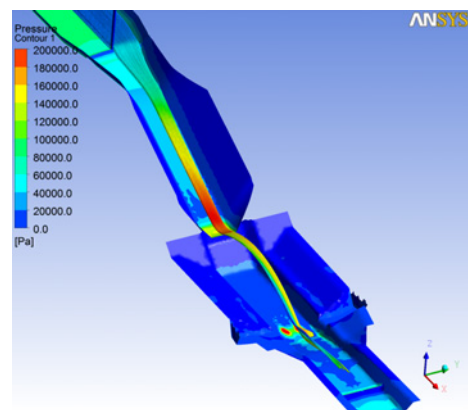
NSW Public Works MHL provides not only services to government agencies but also to clients in the private sector. The laboratory has an extensive range of facilities and expertise available for both physical and numerical modelling. Its ability to undertake physical modelling requiring large water flows is unmatched in Australia, and makes it the only one of its kind in the water industry allowing physical models of water projects to be constructed, tested, modified and re-tested at scale prior to adoption and construction. The unique advantage of offering the option of using numerical models for initial investigation, verification and/or refinement of the physical model provides an invaluable insight to the general hydraulic behaviour of the model.



Intake tower Iso-view contour and vectors of horizontal cross-section of velocity



Physical model of a spillway chute plunge pool



Iso-view of hydraulic behaviour of spillway