

Outfalls and Diffusers

Background

NSW Public Works Manly Hydraulics Laboratory (MHL) offers comprehensive consultancy and technical services specialising in flow simulation requirements in the fields of water and environment. We are a multi-disciplinary organisation that will combine a number of approaches in a single study.

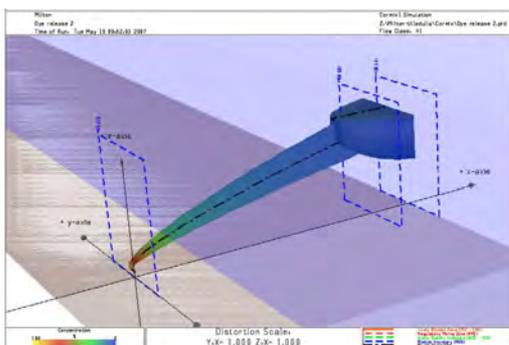
Key Features

NSW Public Works MHL offers a wide variety of approaches and a wealth of experience that can tailor a study approach to client needs.

Services Provided

NSW Public Works MHL has a wealth of experience in dealing with the transport and fate of pollutants in the environment and relating this to the design and operation of water release structures. Options available include:

- Semi-empirical Lagrangian modelling: using software such as CORMIX rapid simulation of diffuser structures can be undertaken. This allows analysis of concept designs and sensitivity in a short timeframe or as a preliminary stage to a more complex study.
- Computational Fluid Dynamics (CFD): using software such as Ansys CFX detailed analysis of diffuser designs can be undertaken in complex hydraulic situations while retaining flexibility in the design.



- Physical modelling: We have extensive experience in the design and construction of physical models and this can be used to conduct detailed physical studies in the laboratory.
- Farfield models: simulation of the transport and fate of pollutants over large distances can be conducted using software such as RMA and either a particle tracking or advection/dispersion approach. This is particularly useful when considering community risk assessments and water quality processes.
- Direct water quality measurement: We can either commission manual sampling studies or install real time water quality logging equipment to examine environmental processes in operation.

Benefits

NSW Public Works MHL has a variety of approaches to satisfy the needs of individual clients. The wealth of experience can be used to recommend the most appropriate approach for a given situation. Our multi-disciplinary nature will combine a number of approaches in a single study to deliver the best results for each client.

