



# Physical Modelling

## Background

Since 1944 MHL has been constructing and testing physical models of water infrastructure projects for NSW. The Laboratory is located at the base of Manly Dam where waters are directed over scale models before returning to Manly Creek.

## Services Provided

The physical modelling facilities comprise random and monochromatic wave flumes and basins. These range from small to large and may include water level sensors, wave and flow measuring devices. The wave basin and wave flumes are housed in buildings that remove wind effects during testing.

Over the last 60 plus years MHL has undertaken a diverse range of physical model projects including:

- analysis of plume dispersion from ocean outfalls
- seawall stability testing
- design of stormwater structures, road kerb inlets, dam inlet and outlet works and fountains
- analysis of river floods and design of flood mitigation structures
- testing of flow patterns around bridge piers
- design of harbour and lake flushing
- design of dam and weir spillways and fishways
- all varieties of research such as sediment transport and beach response to different wave climates.

## Key Features

MHL has the resources to provide a comprehensive physical modelling service to the water industry in NSW and beyond.

## Benefits

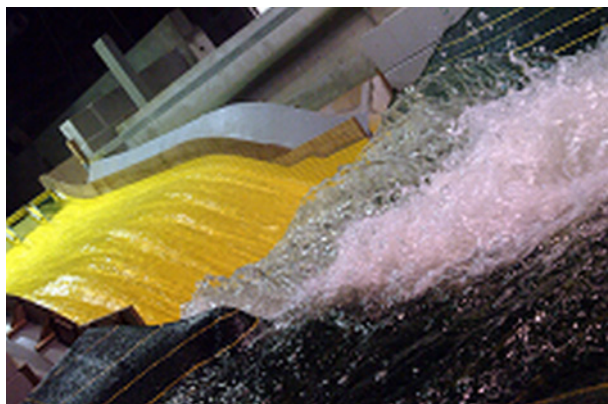
The laboratory is a unique resource for the water industry, allowing physical models of water projects to be constructed, tested, modified and re-tested at scale prior to adoption and construction.



Model of Port Hacking estuary



Eden breakwater and the random wave flume



Burrendong Dam spillway under test