



Large Wave Flume

The Large Wave Flume is the largest of its kind in North America. Because of its size and ability to operate in high Reynolds regimes, the flume is ideally suited for :

- Scaled hurricane and storm wave conditions in shallow water
- Tsunami generation
- Active wave absorption for large reflected waves
- Minimizing tank seiching for long duration coastal erosion studies

In 2009, the site received \$1.3M through an NSF MRI award to install a long-stroke, high performance piston-type wavemaker built by MTS Corporation.



rendering courtesy of MTS corp.

Example applications include:

- Cross-shore sediment suspension and transport
- Wave forces on floating and fixed structures
- Wave breaking, swash dynamics, and undertow
- Tsunami inundation and overland flow
- Tsunami structure impact, debris and scour
- Pollutant mixing and transport
- Scour, pipeline stability and outfalls
- Liquefaction, cohesive sediments
- Wave runup, reflection, and overtopping
- Ocean wave energy systems

Wave Basin

- Length: 104 m 342 ft
- Width: 3.7 m 12 ft
- Depth: 4.6 m 15 ft

Wavemaker

- Type: Piston-type, Hydraulic Actuator Assembly
- Wave types: Regular, Irregular, Tsunami, User defined
- Period range: 0.5 to 10 seconds
- Max wave: 1.6 m (5.2 ft) @ 7 sec
- Max stroke/vel: 4m, 4 m/s

Instrumentation Carriages

- Powered carriage with full traverse for instrumentation
- Carriage tow speed: 0 – 0.5 m/s (1.5 ft/s)

Model construction and materials



Variety of fixed and floating structures or moveable bed models

