Mini Flume Technical Factsheet

Background

The mini flume is a model of the flow of water in a simple channel, driven by a system of recirculating pumps.

It shows scale models of typical engineered structures such as weirs, bridges, culverts and debris screens.

The mini flume is particularly useful in helping to understand some of the causes of flooding and how good design and maintenance of rivers and drainage channels can help to manage flood risk.

Demonstration capabilities

The flume is self contained and is able to demonstrate the following concepts:

- Open channel flow
- Impact of blockage on culvert flow
- Trash screen hydraulics
- Hydraulic jump
- Hydrobrake
- In-line weir and skewed weir (both modular and non-modular)
- Sluice flow (free and submerged)
- Arched culvert flow

Watch the film!

This short film on our website shows a typical demonstration using the original flume mounted on a trailer: www.jbatrust.org/how-we-help/physical-models/hydraulic-flume-trailer/

If the JBA Trust models would be useful for your work with students, professional groups or communities, please contact us to discuss how we could share our models.

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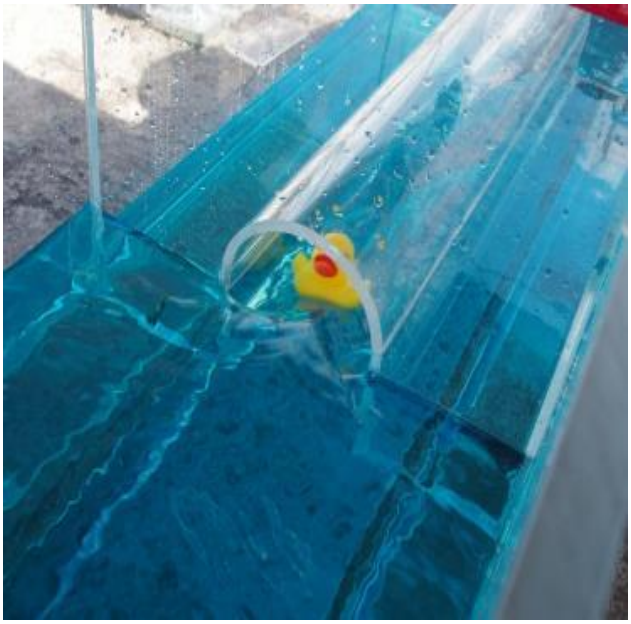

Facilities required

Demonstration space with enough room for the audience to gather around.

Access to water (the mini flume needs around 100 litres to operate) and a drain to empty the tank at the end of the demonstration.

Buckets and a hosepipe are used so the tap/drain doesn't need to be near the demonstration but it helps!

Within 50m of a 13amp/240v mains socket to power the pump.

Specifications

Dimensions (approximate): Channel length: 1200mm; Channel width: 200mm; Height when channel is on water tank: 1200mm.

It can be transported in the back of a large car and can be set up inside, for example in a classroom or office.