**FLUME CONSTRUCTION**

**Materials:**

* Plywood baseboard (~24 inches², thickness = at least 0.5”)
* Metal hinges
* Materials for the ‘box’ (construction wood, including another baseboard, screws and nails, etc.) or a premade plastic container of suitable dimension
* Caulk
* Plastic liner or garden trash-bag
* Plastic buckets
* Tubing (1/2 cm – 1 cm diameter)
* Funnel
* Some type of clamping device (with which to modify flow through the tubing)
* Nails (to mark the boundary grid nodes along the sandbox)
* String (enough to tie a grid across the nails for elevation measurements)
* 5 lbs of fine sand (playground sand works well; could experiment with other grain sizes)

**Final Product:**

The example wooden box that holds the sand is approximately 22 by 22” with a depth of 6”. The “hinterland” portion of the box is adjustable for height as the opposite end is mounted to a board with hinges. The box is lined with plastic and drains water through an outflow pipe that is fixed to the lower, hinged end of the box. Water is filtered through a sieve, which catches the sediment that leaves the system. Discharge is generated by directing water from a reservoir bucket, which is elevated above the landscape, through a funnel onto a bowl shape made of clay, which prevents scouring at the point of impact and can be molded to direct flow in the downhill direction.

Figure 1 – Top view of the flume setup.

Figure 2 – Side view of the flume setup.