

Low Water Crossing Model Instruction Manual

Prepared for the City of Austin Emergency Management
By Explore-It! LLC
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Low Water Crossing Model

Instruction Manual

Introduction

The Low Water Crossing Model (LWCM) is a portable simulation system designed to demonstrate the hazards of low water crossing in the Austin, Texas area. Three basic scenarios are possible using the model: typical low water crossing similar to bull creek, culvert, and creek overflow similar to the Shoal Creek @ Lamar area between 12th & 15th. Other scenarios such as rescue and drowning may also be demonstrated. The instructions are given for a single person, although it is a good idea to move the model with two people when possible.

Parts

The LWCM consist of the following parts:

- ≈≈ 4'x4' dense foam landscape (model) with riverbed, residential, park, roads, and water flow control
- ≈≈ Cover
- ≈≈ Modular base
- ≈≈ Pump, hoses, drain cap, culvert plug, and water drainage control
- ≈≈ Water basin (doubles as carry case)
- ≈≈ 'Sticky' glue for setting people in place
- ≈≈ Extra houses, trees, cars, table, chairs, swing set, and people
- ≈≈ Floatable car and pickup truck
- ≈≈ This manual in paper and CD-ROM format

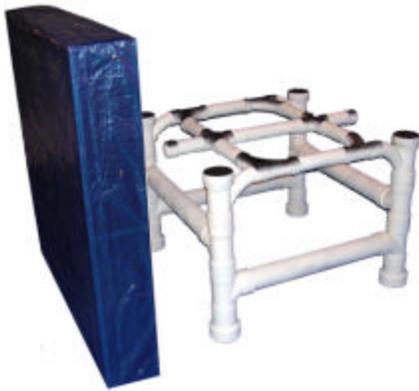
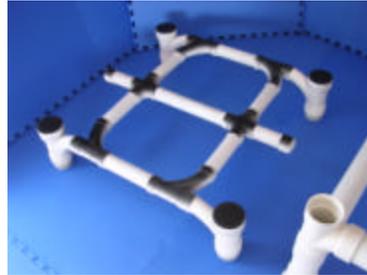
Transport & Setup

The model should be stored and transported with the cover on. This will protect the model and keep it clean. A shoulder strap on the bottom may be used for carrying by one person. The modular base may be carried one piece at a time, by stacking pieces together or partially or fully assembled – depending on your strength and route to navigate (doors, stairs, etc). Note: the drain plug extends below the flat bottom of the model – it is a good idea to lay the model on the base pieces or stand the model on it's side temporarily against a wall. The cover should only be removed when the model is sitting on its base.



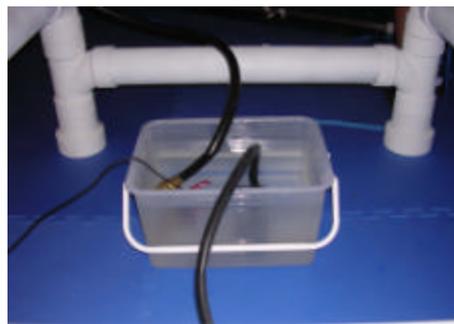
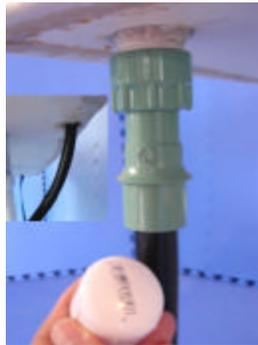
Base assembly:

The base may be assembled at various heights to accommodate your audience and facilities. Stack desired number of sections as shown below and placing the top piece in place with its cross bar over the open space of the previous section. If you have trouble keeping the lower sections square (to allow top piece to fit), you may try assembling in a corner or start with the top piece upside down then turn over when you are finished.



Model Assembly:

Place the model evenly on the base and remove the cover by carefully sliding it up and off. Place extra houses, trees, people and cars in place. Fill the basin with water 2/3 full for normal low water simulation or full for flooding the commercial area. Remove drain plug and attach the pump hoses as shown and place the pump in the basin. **DO NOT PLUG IN PUPMP UNLESS IT IS FULLY IMMERSSED IN WATER.**



Operation

Plug in the pump and adjust the flow control to the desired setting. Demonstrate vehicle movement (using floatable car and truck). You can adjust the water level using the culvert plug and/or adjusting the drainage valve. Vehicles should move through the water without alteration in direction at lower stages and begin to float away at higher stages and/or water force. The culvert simulation and commercial area flood will require higher water levels than the common low water crossing.



Breakdown:

When finished, unplug the pump and drain the remaining water by tilting the model to allow it to run into the creek and then out the drain hole. Replace the drain cap and empty the hoses and the basin. Remove extra houses, trees, cars, people, and hoses and place them in the basin. Wipe any remaining water with a cloth or squeegee. Note: wiping with paper towels may leave undesirable residue on the model by catching and tearing on rough surfaces. Place the strap side of the cover next to the railroad track. Slide the cover over the model until it is flush with the bottom, being careful to avoid hitting trees or snagging the edge of the model. Make sure strap comes out just a few inches from the edge. Slide the model off onto the floor and onto the strap side - then set it next to a wall or lay it on the floor while breaking down the base. Use the strap underneath to carry the model by adjusting length so you can bend slightly then raise it off the floor. Use your opposite hand to steady the top side. Break the base down as much as needed to transport – optionally restacking the sections vertically. Note: although the joints are polished, they may be difficult to remove. If needed place your foot on the lower piece and ‘whack’ the upper piece upward. Once you have one side out, you may also use a twisting motion to free the other.

**Maintenance & Storage**

Keeping the model clean and dry between uses will prolong the life of the model. Only the normal water areas surrounding the creek, roadways and main commercial area are sealed to be waterproof. Although the underlying foam will resist any water remaining on the model, the paint and other materials may not withstand prolonged exposure to moisture.

The model may be stored on its side or laying down at least 1” off the floor or shelf (to allow clearance for the drain cap). The base may be stacked in any configuration as desired. All remaining pieces should be stored in the plastic basin with the top on.

Notes:

You can access this manual plus any updates on the web at:
www.explore-it.tv/portfolio/lowWaterXing