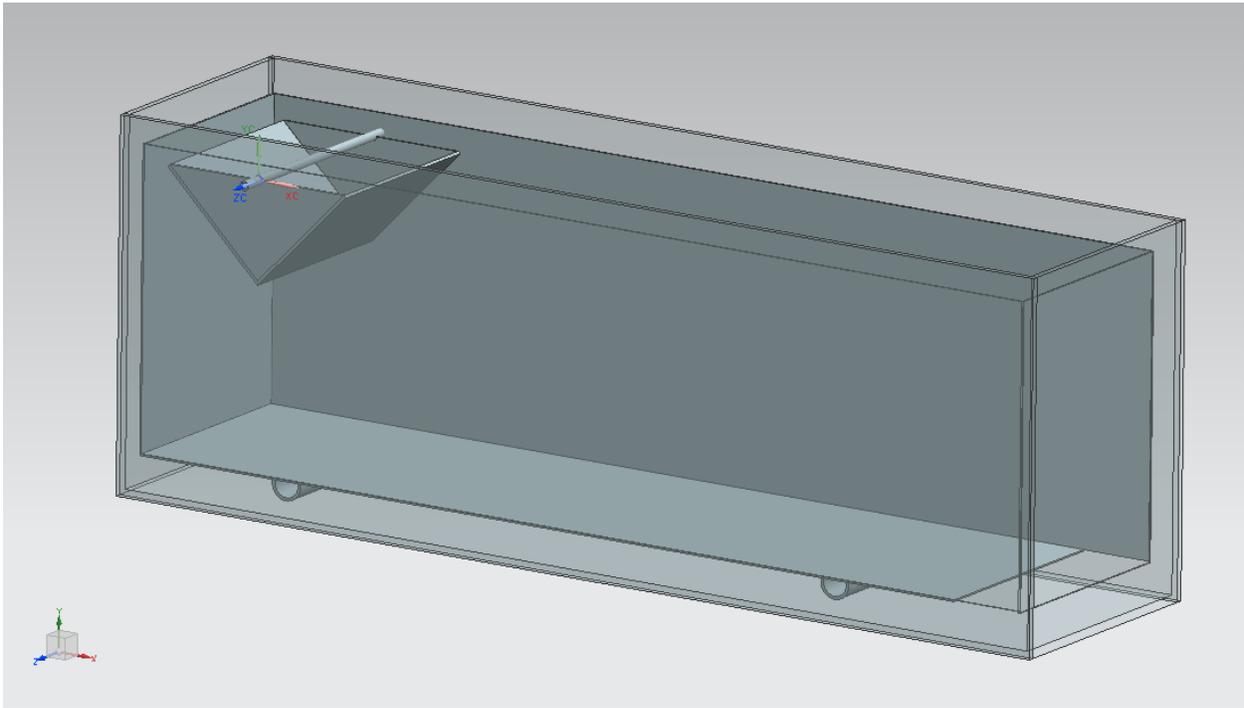


## Standard Dump Bucket



This is a rendering of my first ATS. IT IS FOR REFERENCE ONLY! IT IS NOT TO ANY SCALE. This test version was built as cheaply as possible with left over gray plastic and a 300 watt halogen flood lamp. This lamp was very hot so it caused about a gallon of evaporation per day. It did not cause higher temperatures in the display tank because evaporation actually causes cooling of the water.

It used no metal weights. I did tape an eye dropper bottle to one side to make up for my bad construction methods. I could add or remove just a little water from the bottle to get it to fill closer to the top before it dumped.

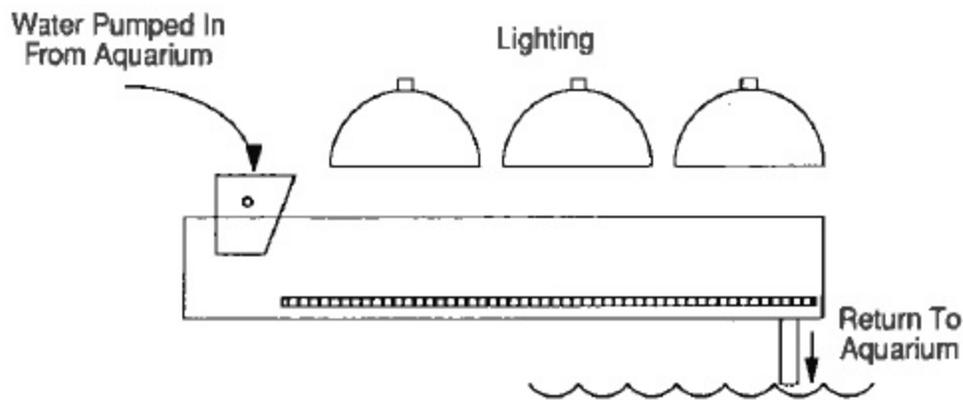
I build a cheap plastic box to fit inside a 30 gallon sump tank. It had no top but had a rectangular hole at the end of the bottom (left). I used some spacers to keep the box off the bottom of the glass tank.

The dump tray was just a simple right triangle with a piece of tubing glued across the top center line. I drilled a hole through both sides of the plastic box so that the tube would fit through to act as an inexpensive hinge.

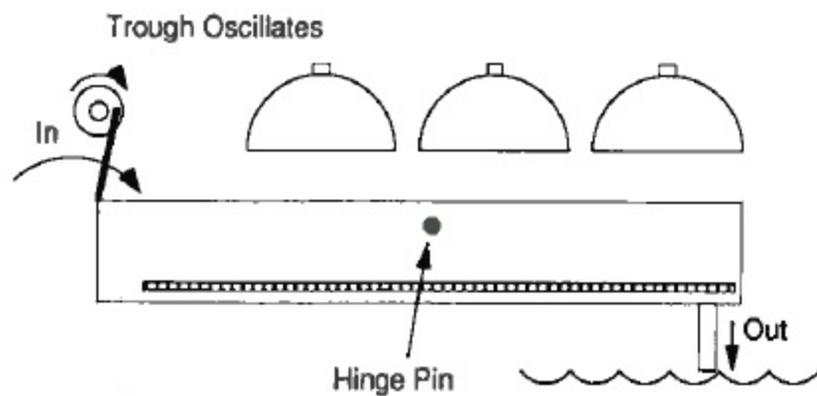
Water from the display tank over flow drained into the triangular bucket (right). When the bucket filled, it became unstable and tipped. The water inside fell and splashed on the bottom of the box where the algae screen laid. This created lots of turbulence that kept the algae strands from clumping.

Agitated water quickly flowed over the screen (mostly from right to left) and out of the hole, into the tank below where there was a submerged power head. The pump sent the water back into the display tank to restart the cycle.

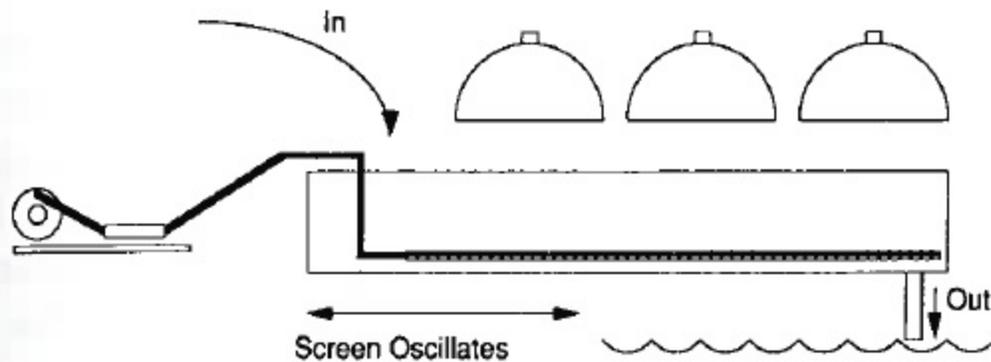
### Standard Dump Bucket



### Directly Driven Wave Oscillator



### Directly Driven Screen Oscillator



### "Perpetual-motion" Scrubbers

