A DEVICE (GIZMO) TO MEASURE MAXIMUM WATER TABLE LEVELS

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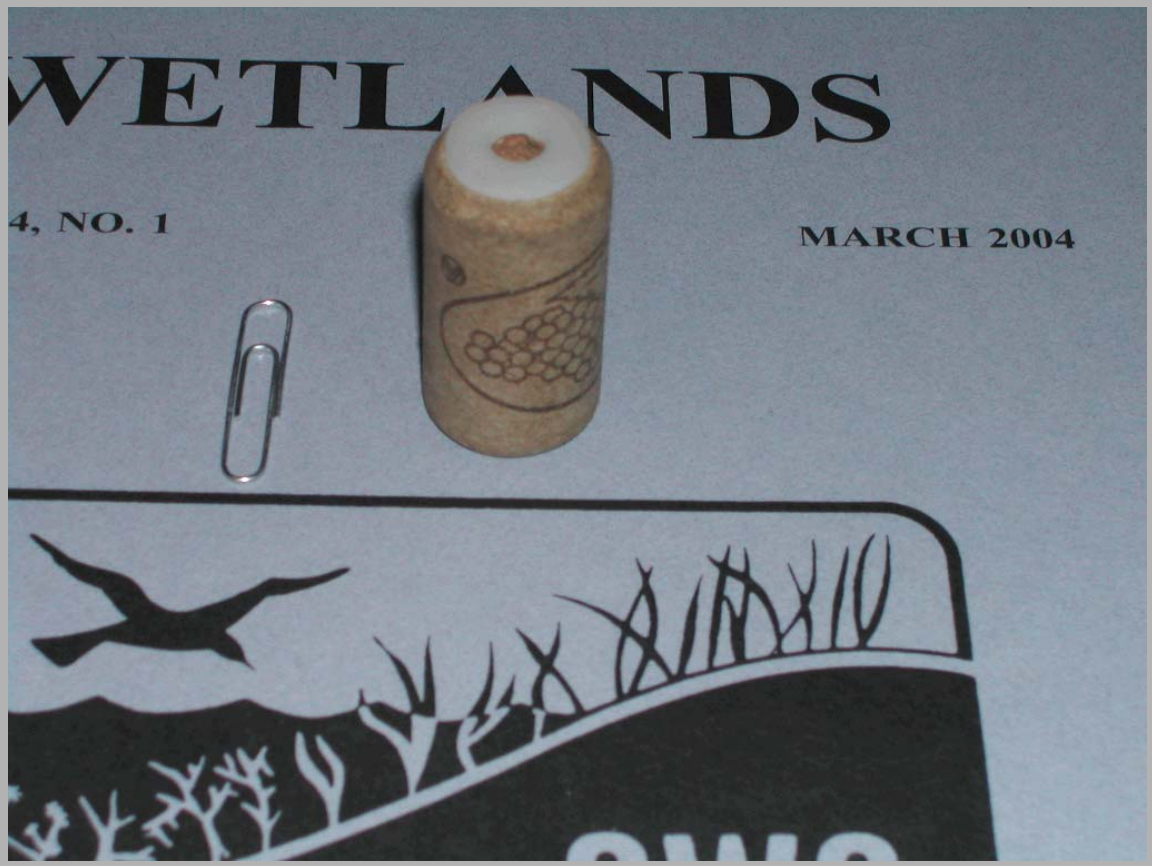
For an abstract of the paper titled “A COMPARISON OF SEVERAL APPROACHES TO MONITOR WATER-TABLE FLUCTUATIONS” visit:
http://soil.scijournals.org/cgi/content/abstract/68/2/562

Here is the steel rod and the well that make up the majority of the device.

The well is 1.25” inside diameter and the steel rod is 3/16” in diameter.

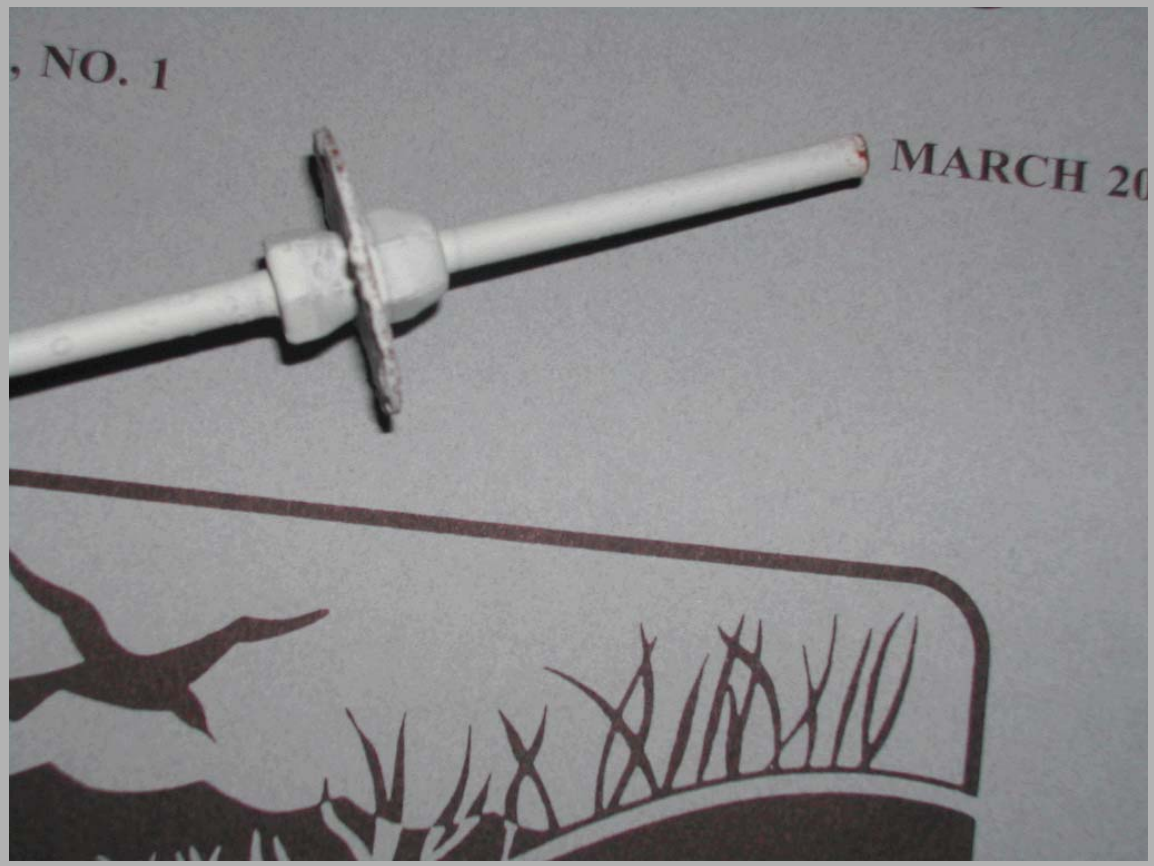
This is the well point on the bottom of the screened well. We screened everything except the upper 30 cm of the well that was below the soil surface. Any type of well would work but we purchased these from Atlantic Screen.



This is a wine bottle cork and a plastic washer that ride on the steel rod. The washer should be glued to the top of the cork. The washer allows the cork to push the magnet up without catching in the hole in the cork.

This shows the cork washer and magnet on the steel rod. The magnet is a Fisherbrand micro-stirring bar (10 mm x 3 mm dia.). Cat #14-511-69.

When the water table rises the cork pushes the magnet up to the maximum water table level.



This is the washer that is placed at the bottom of the steel rod to keep the cork from sliding off when the Gizmo is taken out of the well.

The washer also insures that the steel rod is centered in the middle of the well to keep the cork from hitting the sides of the well when it rises or falls. The washer is held in place with 2 screw nuts.

This is another picture of the rod, washer, and screw nut assembly.

All have been painted with a rust inhibiting paint (Rustoleum).

A well cap is place on the top of the well. The cap has a hole drilled in the center to keep the steel rod aligned in the center of the well.

Well, well cap, and steel rod.

To measure the maximum high water level carefully remove the well cap, pull out the Gizmo, and measure from the black mark on the steel rod to the magnet position.

Charlie Morgan holding the steel rod.