

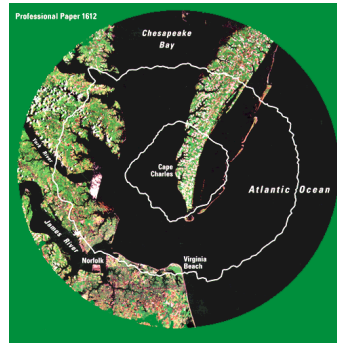
Bite of Science Event – September 26, 2018

Groundwater in Southeastern Virginia: Recent News!

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Chesapeake Bay Impact Crater



Info site:

<https://www.usgs.gov/centers/va-wv-water/science/chesapeake-bay-impact-crater>

<https://www.ndsu.edu/pubweb/~ashworth/webpages/g491/2002presentations/rhondaolson/webpage.htm>

Powars and Bruce 1999 : <https://pubs.usgs.gov/pp/p1612/>

Extensometer study

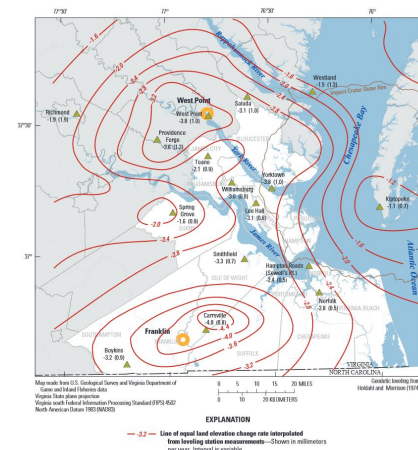
<https://pubs.usgs.gov/circ/1392/pdf/circ1392.pdf>



SWIFT

<http://swiftva.com/>

<http://swiftva.com/wp-content/uploads/2018/05/Potomac-Aquifer-Fact-Sheet.2.pdf>



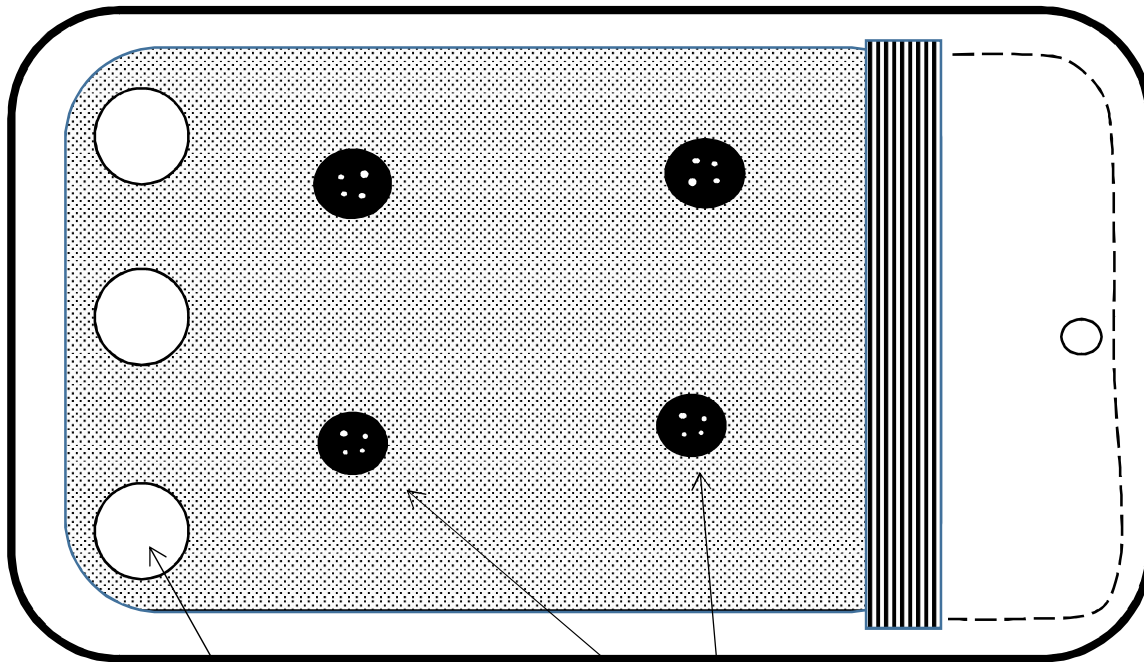
Neo Sci groundwater flow model

https://store.schoolspecialty.com/OA_HTML/ibeCCtpItdspRte.jsp?minisite=10029&item=27640

Groundwater Flow in a Tub

Cut a small drain hole into a plastic tub.

Construct a permeable barrier (e.g. screen door mesh wrapped around several layers of cloth) and tape it in place to hold back the sand.



Large open PVC pipes for adding "recharge." After you saturate the sand, put water in one or more pipes to raise the water levels (hydraulic head) along this side of the model.

Smaller perforated cylinders (e.g. film canisters) resting on the floor of the tub and surrounded by sand. These serve as monitoring wells where you can observe the top of the saturated zone ("water table").

Groundwater will seep from where the water table is highest towards where it is lowest. This surface can be measured with dip sticks, plotted on maps of the model, and contoured. Flow is going "downhill" (from high head to low head), perpendicular to the contours.