

Sarah Lawson

Randolph College/ Rainwater Management Solutions

# **A tour of Virginia and regulations in other states**

---

# Agriculture

- Farmville, VA
- Collecting from two poultry houses
- Water is used for cooling





# Institutional

- Western Virginia Regional Jail
- Rainwater collected from 264,000 ft<sup>2</sup>
- Estimated saving of over 3 million gallons per year





# Residential

- Potable rainwater harvesting system
- Water is filtered and disinfected before use



# Municipal



# Rules

- Where can you find rules about rainwater harvesting?
  - Legislation
  - Health regulations
  - Stormwater regulations
  - Plumbing code

# Colorado - Legislation

- House Bill 09-1129
- Authorized ten pilot projects of rainwater harvesting for non-potable use
- Senate Bill 09-080
- Creates an exemption allowing rainwater harvesting on some private residences

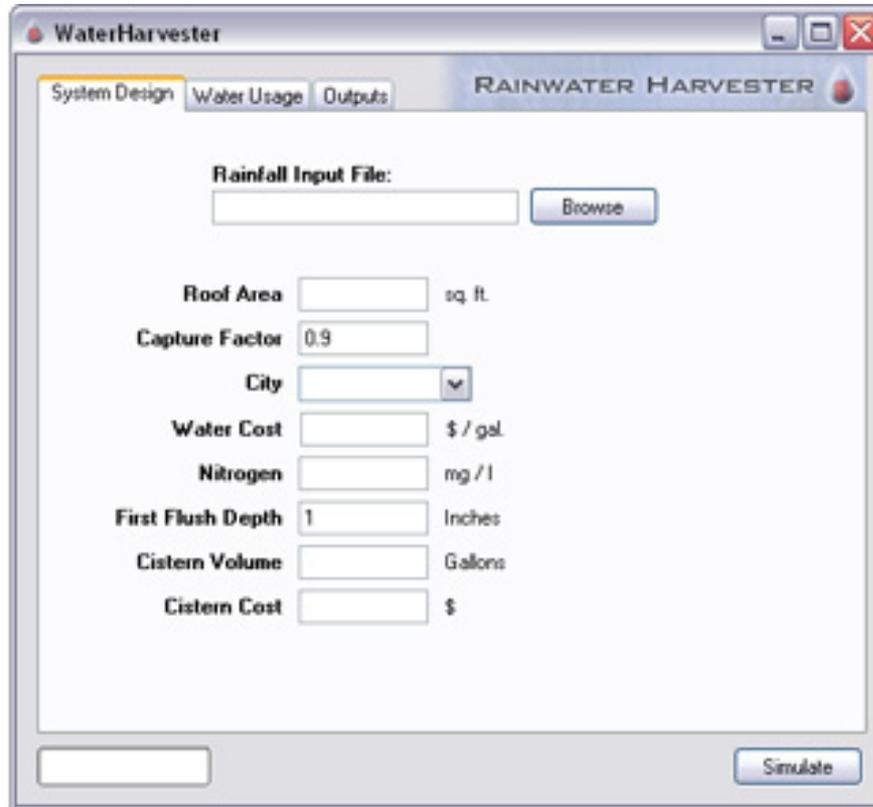


# Department of Health Regulations

- Ohio – **3701.344** Private water systems
- Los Angeles County, CA – divides outdoor non-potable use into 4 tiers
- The role of the Department of Health varies significantly from state to state.

# Stormwater regulations

- North Carolina – requires that rainwater harvesting system be modeled



The screenshot shows the 'WaterHarvester' software window. The title bar reads 'WaterHarvester'. The window has three tabs: 'System Design' (selected), 'Water Usage', and 'Outputs'. The main content area is titled 'RAINWATER HARVESTER'. It contains the following input fields and controls:

- Rainfall Input File:  Browse
- Roof Area:  sq. ft.
- Capture Factor:  0.9
- City:  ▼
- Water Cost:  \$ / gal.
- Nitrogen:  mg / l
- First Flush Depth:  1 Inches
- Cistern Volume:  Gallons
- Cistern Cost:  \$

At the bottom right, there is a 'Simulate' button. At the bottom left, there is an empty  field.

Image from  
<https://www.bae.ncsu.edu/topic/waterharvesting/model.html>

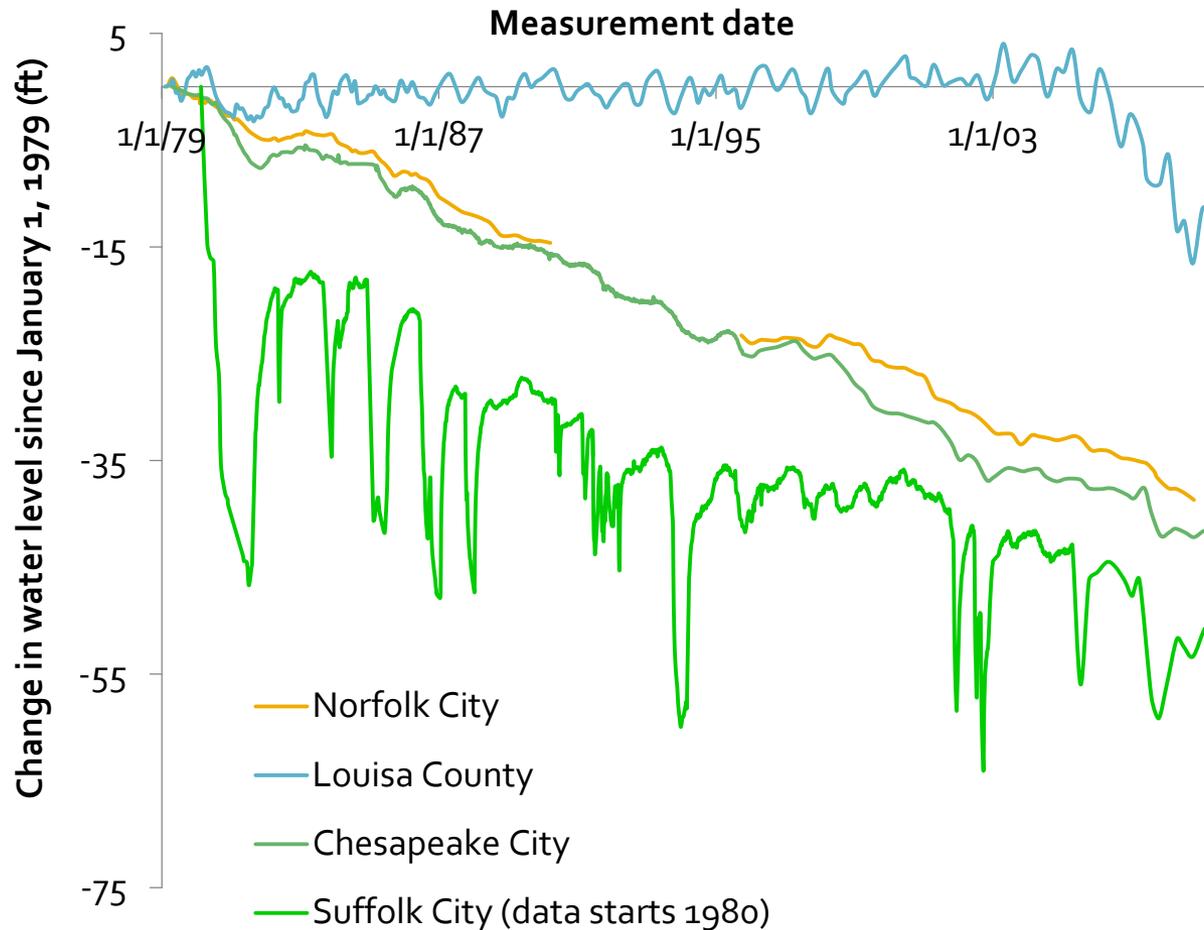
# Plumbing code

- Oregon – potable and non-potable guidelines
- Washington – specifically allows use for urinals, water closets, hose bibs, irrigation and industrial applications
- Georgia – allows the above uses and clothes washers (City of Atlanta specifically allows potable use in single family residences)



Georgia Rainwater Harvesting Guidelines

# Virginia Groundwater



Changes in groundwater levels at monitoring wells at four sites in Virginia. These well all show declining water levels. Data are courtesy of the USGS and available through (<http://www.epa.gov/WaterSense/pubs/supply.htm>).

# Contact

---

slawson@rainwatermanagement.com

434-242-0298