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University Extension's Role in OnSite WasteWater Treatment Education

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Introducti
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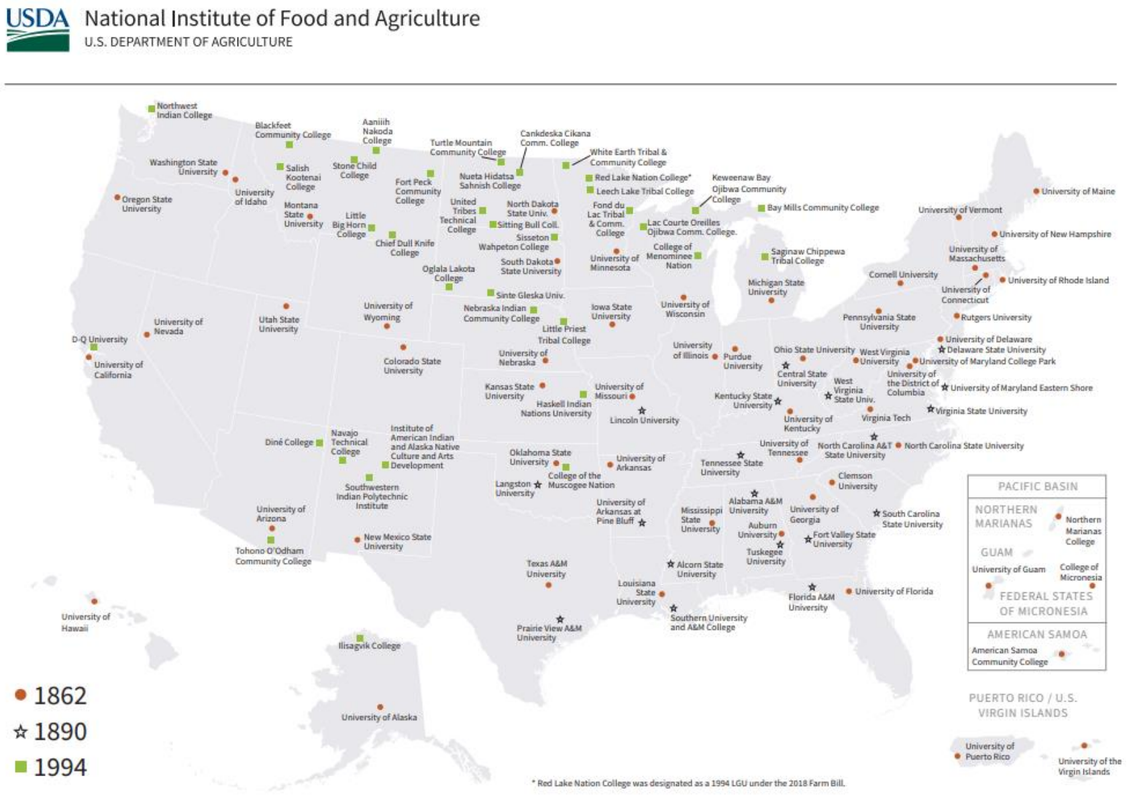
University Extension



- **Research**
- **Education**
- **Extension**
  - **Educators, Agents, Specialists**
  - **4-H Youth Development**
  - **Agriculture and Natural Resources**
  - **Family and Consumer Sciences**

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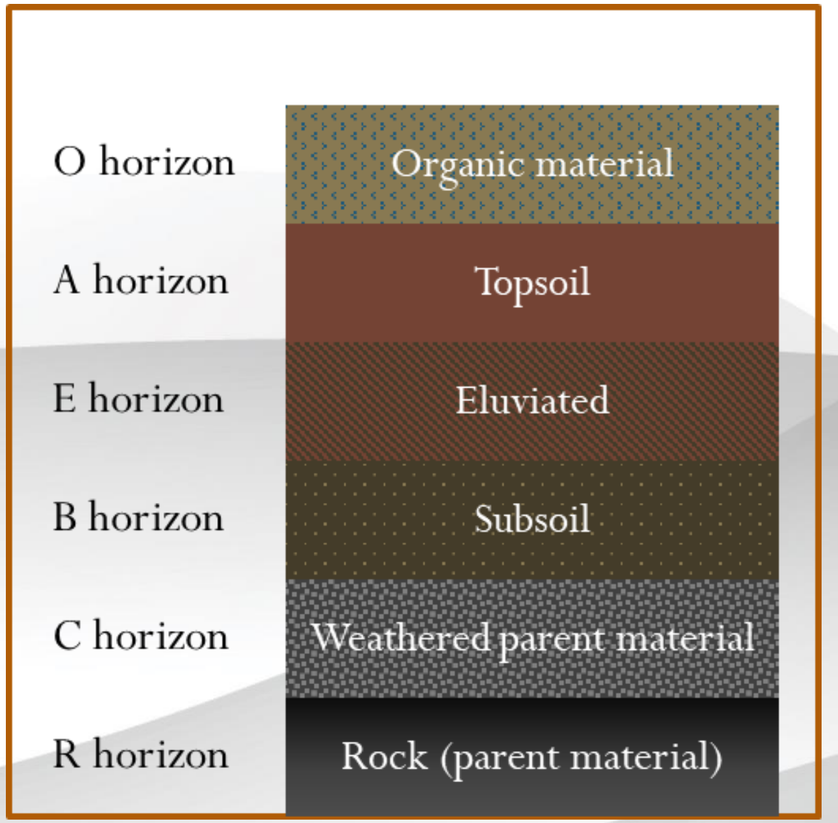
Soil Testing

- **Soil Fertility and pH**
- **Layer measurement**
- **Percolation testing**



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Partners

- State Government
- Local/County Government
- University System
- Land-Grant University

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Activities

Educati
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School Based Education

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College Course Based Learning

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Professional Training

GEORGIA DEPARTMENT OF PUBLIC HEALTH

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Routine Extension Programming

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Extension Outreach

A BEGINNER'S GUIDE TO SEPTIC SYSTEMS

Ellen Bauske | Mussie Habteselassie | Mark Risse

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Many buildings and homes have on-site wastewater management systems, commonly called septic systems. Because septic systems are buried, it is easy to forget about them as they quietly, elegantly and efficiently maintain human and environmental health. Septic systems are the norm in rural areas, but they can be quite common in urban areas as well. It is important to know if your building is on a septic system.

Is Your Home or Building on a Septic System?

The answer to this question may not be obvious. A building that appears to be on a sewer system may actually be on a septic system. It is not uncommon for renters to have little information about the fate of their home's wastewater. Some of the following clues or indicators will help determine if the building has a septic system or is served by a sewer system:

- The city or municipality will charge for sewer service. Take a close look at the water bill and determine if there is a fee labeled "sewer" or "sewer charge." If there is a charge for this service, the building is most likely on a sewer system.
- Look up and down the street and search for sewage access ports or manholes. If a sewer system passes in front of the property, the home is likely to be attached to it. Ask the neighbors if they are on a sewer or septic system. If the houses on either side of your home are on a sewer system, then it is likely that your home is as well.
- However, keep in mind that even if a sewer line runs in front

Locating the Septic Tank and Drainfield

Finding a septic system can be challenging. They can be buried in the front, back or side yard. After a few years the soil may appear just like the surrounding soil, making the system difficult to locate. In dry weather, the grass may be drier in the shallow soil over the tank and greener over the drainfield where the cleaned water is released, but this is not always the case.

Even if you do not know where your system is located, somebody else might. The contractor who built the house should have provided the first owner with a map of the tank and drainfield locations. Check the paperwork that came with your house; it might be in there.

Your local health department would have inspected the installation of the system and any modifications to it. They may have a sketch of the system location and will provide it on request. Unfortunately, if the system is very old, any records associated with it may be incomplete or nonexistent.

Look closely at the building. If the building is on a crawlspace or has an unfinished basement, look for where the wastewater pipes come together and leave the basement or crawlspace wall. This pipe is called the building sewer. Often, the tank is located 10 to 20 feet outside of the home directly in front of the building sewer.

Use re-bar or a similar metal probe to "feel" for the tank. **Before attempting this, call 811 and have the location of your utilities marked. This free service can prevent you from driving a rod through your gas or water line.** The tank may be several feet deep, so a hammer or mallet may be needed to tap the probe into the soil. Try to feel for the tank after a rain when the metal probe will move through wet soil easier.

Begin driving the probe into the ground about 6 feet from the house directly in front of the building sewer. This should be done gently; be very careful not to puncture the building sewer. Once an obstacle is encountered, gently probe again about a foot further out and continue until the probe goes deeper, indicating you have reached the end of the tank. A tank is typically 5 by 8 feet, but sizes can vary. Find both ends of the tank using this method and mark them. Keep in mind that

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Ornamental Plantings on Septic Drainfields

Sheri Dorn, Extension Horticulturist

tings can be attractive and beneficial options for the expanse of open ground designated for a Properly chosen plants help manage moisture and nutrient levels in the soils around the drain- courage activities that may cause site compaction and reduce the effectiveness of the system. hat poor plant choices can create costly maintenance issues, and any septic drainfield repair b planting areas that you value. By following a few simple guidelines, planting in these areas y and practical.

scape plants are broadly grouped into two categories: woody ornamentals and herbaceous ody plants are shrubs and trees whose stems persist above ground year after year. These plants r root systems and mature sizes than herbaceous plants. Roots of woody ornamentals are more with septic drainfields.

s, on the other hand, die back to the ground during the winter and include annuals, perenni- nials, including turf, will return the next year from their roots, but annuals will have to be year. These plants are usually smaller in size and their root systems tend to be shallower and in those of woody plants.

erbaceous plants can be used when landscaping on septic drainfields as long as a few guidelines ember that septic drainfield lines are often very shallow, some no more than 6 inches from the digging, rototilling or other methods of soil preparation for planting can damage these lines.

lanting on a septic

oil periodically (every one to three r soil pH and nutrient levels, correct- for plant selections. Follow the same sting procedures as for other sites Cooperative Extension Circular 896, Home Lawns, Gardens, and Wildlife

of sun and moisture found on your septic drainfield. Salt tolerance is also a consideration, as soil in drain- field areas may have higher salt levels resulting from nutrients in the effluent. Some suggestions include beebalm, daylily and yarrow.

- Do choose non-aggressive plants that are unlikely to invade the drain lines. Herbaceous plants can be planted closest to the drainfield, turf can be planted over the drainfield, and shallow-rooted

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Protecting Georgia's Surface Water Resources

kins, Associate Professor and Water Resource Management and Policy Specialist
Daniel Thomas P.E., Retired Professor

nd tasteless compound ewable resource. It is a een continually recycled own as the hydrologic re 1). Water is recycled ***ation*** and ***precipitation***. being recycled, only a small mans.

ter is available for human to provide a broad-based surface water resources.

ecycled, let's begin with process of converting water plication of heat. The main urface water is the sun. art of the atmosphere. spheric water vapor . When the droplets are clouds. Depending on the precipitation can be rain, Georgia we get all forms imilar pathway, but for se rain.

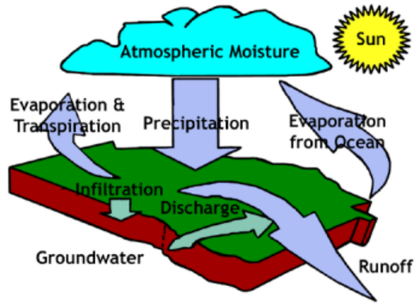

Figure 1. The water cycle (hydrologic cycle) is a process through which water has been recycled for millions of years. (Drawing from Georgia Environmental Protection Division).

downslope usually exits to the surface via seepage in the form of ***springs***. This water then has the potential to begin the cycle over through evaporation.

The remaining 9 inches of the 50 inches of precipitation is surface ***runoff***. Runoff is that portion of water that exceeds the ***infiltration rate*** of the soil where the water falls. This runoff becomes part of surface water bodies such as creeks, streams, rivers, lakes and reservoirs. Impervious areas (e.g.,

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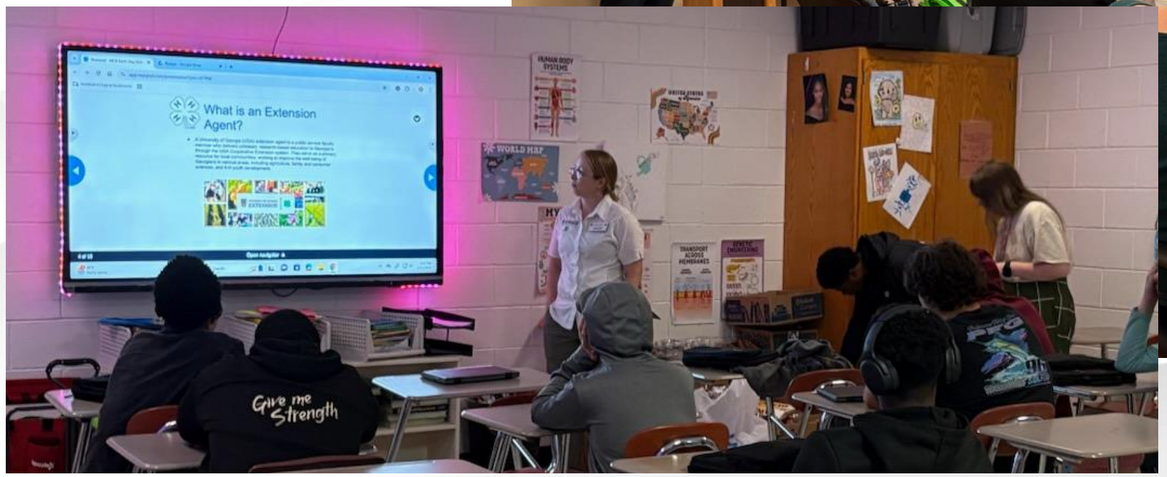
Event Presentations



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Field Days

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Engaging Games

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Flushable or Non-Flushable

- Items Included:
  - Pee
  - Poo
  - Paper
  - grease/oil
  - pills
  - cigarettes
  - plastic
  - dental floss
  - toys
  - slime
  - bolts/nuts
  - cotton swabs/balls
  - dyer sheets
  - hair
  - bathroom cleaner
  - chlorine
  - septic additives

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Model Septic Tank

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Flush! Jar Test

- Water
- Toilet Paper and Facial Tissue
- Small Jar
- 30sec

Other Tools Used

Enviroscape: Water and Wastewater

- Demonstrate water movement
- Replicates “local city”
- Visual representation
- Hands on experience

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Apps Like Kahoot

- **Use Mobile Phone**
- **Competition**
- **Race against clock and other participants**
- **Easy way to offer door prizes**

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Conclusions

Base Programming and Beyond

- Extension goes beyond brochures and handouts
- Reach many learning styles
- In class
- Training for professionals
- Educating homeowners and business owners
- Easily replicateable

NOWRA Extension Feedback

- Tell us what you loved
- What you would love to see done differently
- What you would suggest for new ideas

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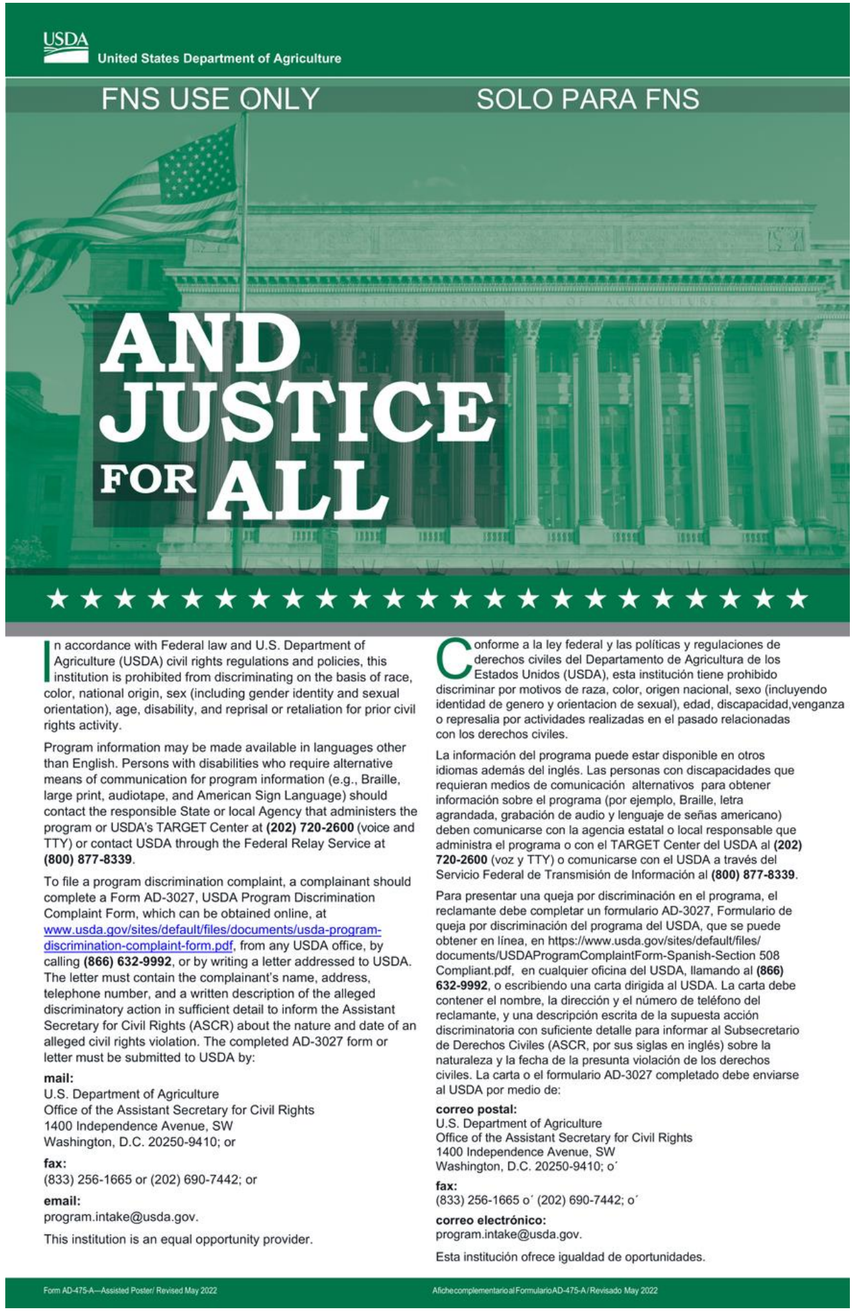

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