



Family and Consumer Sciences Extension

Housing and the Environment 2006: Water, Energy, and Waste Management

Learning for Life

The University of Georgia Cooperative Extension

The Problem

- Water quality and water use are dependent on each other. When the supply of water is reduced, contaminants that find their way into the water become more concentrated and lower the quality. Solving water supply problems involves conservation efforts at the household, industrial and agricultural levels.
- Water supply can be contaminated by faulty septic systems, urban runoff, small disposal pits, house and garden chemicals, stream infiltration, deicing salts, landfills, storage lagoons, underground storage tanks, fertilizers, pesticides, animal lots, etc. Toxic doses of chemicals in the drinking water can cause detrimental health effects.
- In Georgia, many of the existing sanitary landfills are nearing capacity.
- Energy costs have risen and there is a greater demand as urban sprawl continues in Georgia.
- Lack of knowledge about household hazardous waste, like batteries, fluorescent lights, and thermostats, which contain mercury, precipitate water contamination and impairs fish consumption.

Research-Based Solutions

- Water conservation technology can be used to delay/avoid capital expenditures for new water supplies. The typical consumer uses 60-75 gallons daily inside the home. In some areas of Georgia, the increased water demand threatens to surpass the capacity of the existing water treatment and distribution systems.
- Energy costs in Georgia have risen as more plants are built to increase generating capacity. Sound energy saving techniques and the retrofit of homes built before 1970, at 31.6% of all homes in Georgia (Census 2000), with weatherization, insulation, heating and cooling will help reduce energy costs and protect the environment.
- To maximize landfill capacity, recycling, reusing and reducing are methods which can aid in waste stream reduction and future landfill management.

Extension's Role

- Create awareness on energy and water conservation and waste management.
- Provide classes/educational information in water and energy conservation and waste reduction and recycling, particularly hazardous waste disposal.

Extension's Contribution to Solving the Problem

- Extension programs reached 817 Georgians to help them better manage their household water, energy, and waste in 2006.
- Utilized media to reach thousands of Georgians with information related to water, energy, and waste management. For example, two newspaper columns went to a circulation of 11,650 readers and two radio spots reached almost 3,200 listeners.
- Worked with the Alliance for Quality Growth to increase awareness and understanding among policy makers, planners, developers, and the general public to promote efficient land use and natural resource development.
- It is predicted that approximately 50% of the people reached by Extension adopt a water conservation and protection attitude and save close to 1.2 million gallons of water daily.

- Continued and expanded an educational program for water testing of home wells to help Georgians reduce the risk of ingesting contaminated drinking water.
- Continued the *Energy Star*® program to prevent energy waste. Provided leadership for 17 states and helped raised the awareness of the role of extension in energy conservation. The US Department of Energy is now funding a national extension initiative.

Impact on Georgians

- Previous research with the participants revealed the impact of the program. For example, 47% of the respondents fixed water leaks in their homes; 61% of the respondents started to conserve or save water; 60% of the respondents inspected and changed filters for their heating/cooling systems at least twice a year; 40% of the respondents added insulation and sealed air leaks to save energy; 21% of the respondents tested their well water once a year; 21% of the respondents protected the wellhead to prevent potential contamination; 33% of the respondents installed digital programmable thermostats in the home to control energy usage; 40% of the respondents installed fluorescent light bulbs to conserve energy; and 31% of the respondents purchased *Energy Star*® products and/or appliances. As a result of the application of energy and water conservation practices, respondents were able to save an average of \$62.00 in 2003.
- Participants in the *Tips for Saving Energy in Georgia Homes* educational programs conducted in Polk and Floyd counties during August 2006, indicated that they would implement potential practice changes to save energy. For example, 91% of the Polk County participants indicated that they are more likely to inspect their homes for areas where energy can escape and 100% indicated that they would be more likely to make sure their homes are energy efficient by checking the level of insulation and weatherizing their homes.

Contact

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