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**Drinking Water from Private Household Wells in Georgia: Chemical and Biological Properties**

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Abstract:

The Agricultural and Environmental Services Laboratories (AESL) of the University of Georgia offer an extensive water testing program to determine the quality of drinking water as well as recommend corrective measures, if necessary, to provide a suitable and safe water supply. Water test data from more than 30,000 samples analyzed over the years indicated that the most common problems include low pH and high levels of manganese and iron. Among the primary contaminants, copper and lead were found to exceed EPA's maximum contaminant levels (MCL) in 6 and 7% of the wells tested, respectively. Summary data from 1993-2004 showed 4% of the samples tested had nitrate-N levels above the EPA's MCL of 10 ppm, likely due to poor wellhead protection. From 2005 to mid 2008, 2-3% of the waters from Atlantic Coast Flatwoods and Southern Coastal Plain regions showed nitrate levels above the MCL. Bacterial tests on 2767 well water samples submitted from 2005 to mid 2008 indicated about 38 and 6% of the wells had positive detections for total coliform bacteria and E. coli, respectively. Shallow wells (<100 ft deep) showed higher levels of bacteria compared to deep wells (>100 ft).

Impact Statement:

Increased awareness of well water quality in the State of Georgia and treatment technology options, if needed.

Category: Other Water Resource Topics
Type of Presentation: Oral Presentation