

RAIN BARRELL WATER QUALITY IN SOUTH FLORIDA

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Rain barrels are a great way to conserve water, save money, and contribute to a sustainable landscape. Collecting rainwater reduces the amount of water flowing off our properties into the surrounding environment. However, it can be challenging to get people to adopt rain barrels because of concerns about water quality, especially from different roof types (Shuster et al., 2013; Hamilton et al., 2018). This study evaluated concerns about rain barrels water quality used in South Florida Landscapes so that homeowners can better utilize this water in urban landscapes. We sampled the water from 50 rain barrels in South Florida. We had 25 samples from tile roofs, 20 from shingle roofs, and 15 from metal roofs. To get a better handle on rain barrel water quality, we analyzed the pH, soluble salt levels (electrical conductivity, EC), and nutrient levels in rainwater collected from tile, shingle, and metal roofs in South Florida. We also tested for *E. coli* in the water using test kits available on Amazon. We purchased the Aqua Vial Well Water testing kit (for drinking water, pool, pond, lake, and well water) that tests *E. coli* and coliform. Based on our water analysis, we found it safe and suitable for non-potable uses. The water had no *E. coli* or harmful nutrients, and the roof type did not affect the water quality. We suspect that the high solar radiation and temperatures in South Florida killed potential pathogens. This is an essential factor in South Florida when testing pathogens' presence in rain barrels connected to roof gutters. Temperatures greater than 149 °F will kill bacteria in water. Our findings agree with the Southwest Florida Water Management district's guide: rain barrel water is safe for non-potable uses and occasional contact.

PRESENTER BIO: Lorna is the Urban Horticulture Agent and County Extension Director for UF/IFAS Extension Broward County, she leads the Master Gardener Volunteer (MGV) program and the Florida-Friendly Landscaping program. She applies her architectural and horticultural skills to create resource-efficient and environmentally sensitive communities through trained MGVs.