

Enhancing Well Water Safety through University and Health Department Partnership

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Two-thirds of residents in Marion County, Florida, U.S. receive their drinking water from private wells. Management and protection of private well water is under the control of well owners, and depends primarily on education rather than regulation. Therefore, University of Florida Institute of Food and Agricultural Sciences (UF/IFAS) Extension Marion County partners with the local health department and offers a two-hour seminar monthly to educate well owners about potential pollutant sources and what steps can be taken to lessen potential impacts from these sources and improve their understanding of the relationships between practices in or near wells, especially septic systems. A free well water test for total coliform and E.coli is offered after the class, followed by an explanation of the results and well water protection practices. As of June 2018, 180 well owners attended this class and 124 surveys were collected. All have indicated that the class was very helpful and they improved their understanding of private well management, septic system maintenance, and importance of protecting Florida's water. Ninety-six class attendees collected water samples and returned them back to the Extension office to test for bacteria. According to the Texas and Virginia Well Owner Network, the average water sample return rate is around 25%. This program has a return rate at 53%. Bacteria was detected in 28 samples. All of them took the recommendation to shock chlorinate through their wells and plumbing to kill bacteria. Twenty-six successfully disinfected the well and the other 2 installed continuous disinfection systems. Annual well testing is recommended, but about 65% participants reported never testing their water, mainly because they did not know where to test it and what to test. The free water testing provides an opportunity for well owners to test their well water. Ninety class attendees committed to pumping their septic systems. Twenty-two of them already pumped the tanks as a result of attending the class, eliminating approximately 1,500 pounds of nitrogen leaching into groundwater in five years. This program is an initial attempt of the Florida Well Owner Network and will support on-going Florida groundwater quality improvement and protection.

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