



Civil and Environmental Students Awarded Second Place at WEFTEC Student Design Competition

Two University of South Florida teams competed and took second place at the World Environment Federation Technical Exhibition and Conference (WEFTEC) Student Design Competition held in New Orleans. Both teams took first place in the wastewater and environmental capstone design contests at the 2016 Florida Water Resources Conference.

Prior to WEFTEC, WEF placed both teams in the wastewater category. This past year the students partnered with the following staff from the City of Plant City's Water Reclamation Facility (Lyudmila Haralampieva, Patrick Murphy, Frank Coughenour, Al Miller). The teams were advised by Professor James Mihelcic (University of South Florida) and Tom Cross (Tetra Tech). Many members of FWEA provided the students with financial support and valuable input as they prepared for WEFTEC.

One team placed second at the national competition. That team developed an energy efficient and cost-effective, supplementary sludge management process to achieve Class AA biosolids for the City of Plant City Water Reclamation Facility. Their detailed design for a solar drying system considered current and future flow rates, included a detailed economic analysis, identified potential users of the produced biosolids, and performed a carbon footprint analysis to compare the environmental sustainability of the proposed solar drying system with a baseline scenario of hauling biosolids off site.

The second team developed detailed off- and on-site strategies and designs for the handling and treatment of the septage that will no longer be land applied because of FL Senate Bill 550. The team developed a detailed on-site design, created a detailed analysis to identify current and future volumes of septage, performed a detailed economic analysis, and used a life cycle assessment to assess the environmental sustainability of their on-site alternative.

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The University of South Florida is a high-impact, global research university dedicated to student success. USF is a Top 25 research university among public institutions nationwide in total research expenditures, according to the National Science Foundation. Serving over 48,000 students, the USF System has an annual budget of \$1.6 billion and an annual economic impact of \$4.4 billion.



Left: USF Solar Drying Student Design Team Christin Gentz, Maria Reed, Krystin Kadonsky, and Rebecca Braz. Not pictured, Poe Min Hlaing.

Below: USF Septage Management Student Design Team Monica Resto, Madeline Kender, Jonathan Knudsen, Vittoria Zucchelli, Dillon Forsyth, and Wainella Isaacs.

