

# Assessing the Water Quality and Sources of Fecal Pollution in Southwestern Puerto Rico

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**Reference:** McDowell RJ, CA Pruitt, RA Bahn (eds.), *Proceedings of the 2015 Georgia Water Resources Conference*, April 28-29, 2015, University of Georgia, Athens.

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**Abstract.** For a USEPA sponsored project, 24 monitoring stations were characterized for sources of contamination in the Lajas Valley and the lowlands of Rio Loco in southwestern Puerto Rico. Lying in regions categorized as urban, suburban, and agricultural, these stations had a defined basin delineation, different covers, varying land uses, and alternate methods of management. Two rounds of samples were collected from each station, and they were analyzed for nutrients, heavy metals, optical brighteners, pH, conductivity, temperature, DO, and fecal contamination (using enterococci). In the urban areas, the enterococci were highest, and the nutrient levels were highest in agricultural regions. Eleven of the 24 sites were above EPA limits for enterococci. QPCR was used for microbial source tracking (MST) of human and cattle specific *Bacteroides* markers. Two of the sites were positive for human fecal bacteria, and eight were positive for cow fecal bacteria.