

GIS-Based Water Quality and Quantitative Assessment of Historic Proctor Creek, Atlanta, Georgia

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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.

Abstract. We utilized specifically targeted geographic information systems (GIS) along with field data to establish baseline evidence regarding various forms of contaminant issues in the Proctor Creek Watershed, Atlanta, Georgia. Urban watersheds experience significant pollutant loads, which cause environmental stress, reduction in ecological stability and public exposure due to toxic load. Evaluating these problems requires understanding the past and present hydrology, as well as socio-economic activities within the watershed. The Proctor Creek Watershed is considerably impacted by non-point source runoff and combined sewer overflows (CSO). These are the most likely influences on this urban ecosystem. However, human health also been negatively influenced by socioeconomic conditions within this area especially in the western segment of Proctor Creek. The watershed is mainly populated by African American residents of modest means located in nearly 30 neighborhoods. With a history of degradation through development, transportation and disenfranchisement the Proctor Creek Watershed is a living laboratory of environmental justice issues.