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**GREENING THE CWA CONSENT DECREE - SOME EXAMPLES OF COLLABORATIVE RESEARCH  
AMONGST USEPA AND MUNICIPALITIES (OHIO, USA)**

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**ABSTRACT:** Consent decree settlements for violations of the Clean Water Act (CWA; 1972) increasingly include provisions for redress of combined sewer overflow activity through hybrid approaches that incorporate both gray (high-rate treatment plants, storage tunnels, etc.) and green techniques (plant-soil systems such as rain gardens, green roofs, pervious pavement systems, etc.). Although there is a great deal of data on how green practices operate on the site scale, there is almost no experience with how to implement green infrastructure at neighborhood and larger scales, how it interfaces with existing gray infrastructures, and how to fully leverage social and cultural capitals so as to maximize economic benefits, address environmental justice issues, and improve the provision of ecosystem services. We have leveraged large public works projects in two US cities towards the development of a portfolio of basic and applied research around the theme of integrating green infrastructure to link between the present urban landscape and its decidedly gray wastewater system. For Cleveland, soil and landscape data will be used to drive an active adaptive management approach to a green-infrastructure retrofit of a neighborhood block located in the Slavic Village area of Cleveland, and to test this method for its effectiveness in sustainably restoring vacant land mass, the surrounding neighborhood, and potentially maximize social equity, economic stabilization, and environmental quality in an urban core area. The Lick Run project in Cincinnati OH, is an example of a comprehensive approach to changing stormwater routing and reducing CSO activation frequency and volume through sewer separation, downspout disconnection, reforestation and re-vegetation, and daylighting long-buried streams. We will present and detail the research objectives, and how project results may serve to impart confidence in our national, large-scale deployment of green infrastructures towards improved environmental quality.