# Linkage Between Climate Change and Stormwater Management in the Raritan River Watershed

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# Abstract

The focus area of research is the link between climate change and its effects on stormwater management. By examining land use for the years 1986, 1995, and 2010 for 5 subbasins (approximately 19,167.61 acres) within the Lower Raritan, South River, and Lawrence Brook subwatersheds, areas prone to flooding, a general hypothesis can be made regarding changes in pervious cover. To execute this, GIS land use data was compiled from the years aforementioned, and the focus was the change over time per subbasin. The areas of land use that the most notable changes were found include agriculture, forest, wetland, and urban land use cover. The results were staggering; there has been a steady decrease in agricultural and forest land use, while there has been an overall increase in wetland data. There has been approximately a 20.9% increase in urbanization as well. These findings conclude that there has been an overall decrease in pervious cover. With an increase in heavier rainfall events in the Northeast (NCA), major flooding becomes a concern. With this information, recommendations within these subwatersheds can be made to design stormwater management systems to help alleviate flooding and prepare for heavier rainfall events associated with climate change.