

INCREASING WATER QUALITY AND INFILTRATION IN THE CITY OF NEWNAN, GA

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This project will be conducted in conjunction with American Rivers, a non-profit organization, Coweta county and the city of Newnan. The project is intended to be carried out under the guidance of Dr. Jon Calabria. This city has recently undergone a lot of development and is home to many new subdivisions, settlements, businesses and even a golf course. In order to plan effectively for the future of the city (which includes the placement of various light industrial and retail within its perimeter) it is essential to perform a coarse scale hydrologic assessment of the city in relation to the White Oak watershed and also to Coweta county. To do so, first, suitability analysis will be generated from the landcover, runoff analysis, digital elevation model and the existing storm water control measures in the city. After creating the suitability study, the Soil and Water Assessment Tool in ArcGIS will be used to model the runoff of from the city into the watershed and the model will then be recalibrated based on the suitability study in order to evaluate the necessary modifications to the model in order to maximize infiltration and increase water quality. Possibilities for retrofitting existing buildings and structures will also be outlined. This project is intended to provide the city of Newnan with a guide to better their storm water control measures based on existing conditions and the near future (to reduce their impact on the Upper White Oak watershed).

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