

Abstract

Urban landscapes are a patchwork of native and regenerated forests, urban and suburban development, and a considerable portion of wetland, bottomland hardwood, and riparian habitat. As development continues, more areas of vegetated land cover are replaced with relatively impervious land uses. These changes significantly alter the local hydrological conditions and move the hydrologic cycle out of balance. As a result, flooding and water quality degradation are observed in locations where these problems were previously small or non-existent. East Baton Rouge Parish drains to the Bayou Manchac, which has been included on the state's 303(d) list of impaired waters for failure to meet its designated uses, either swimming or fishing. The causes of impairment included dissolved oxygen, fecal coliform and nutrients and one of the suspected sources was site clearance (land development or re-development).

The project utilized aerial photography to map the extent of riparian habitat within East Baton Rouge Parish. Each of the major urban streams was mapped and the extent of forested habitat delineated. A macro-invertebrate sampling project was also done along the various lengths of Ward's Creek in order to determine if there was any correlation between forested buffer zones and species diversity. The results of the work indicated that species number and diversity did decrease with declines in forested habitat along the stream corridor. This information illustrates the importance of urban forested habitats along urban streams.