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**Remotely Sensed Impervious Surfaces: Analysis of Urban Watersheds for Riparian
Restoration Efforts**

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In Massachusetts, the State's Executive Office of Environmental Affairs has conducted a pilot remote sensing impervious surface analysis of the Mill River watershed (~154 Km² primarily located in the Cities of Springfield and Wilbraham) to help implement the action items outlined in the Connecticut River Watershed Action Plan. Using high-resolution multispectral imagery and remote sensing software, impervious surfaces were extracted for further analysis and planning. Restoration of riparian corridors and surface water/groundwater protection was a primary goal of the project. Impervious areas within 200 feet, 50 feet in urban areas, for the Mill River and its tributary streams, within 303(d) listed waterbody drainage basins, and within wellhead protection zones were assessed for impacts both cumulatively and at a parcel level. These potential parcel owners will be approached later by various stakeholders to develop future streambank restoration projects that will include the removal of impervious surfaces in stream riparian areas. The results of this analysis will not only assist the state in coordinating restoration efforts, but will also help fulfill the requirements of several TMDLs and assist the individual communities with their Phase II programs by guiding the development, location and types of water quality BMPs. Parcel layers of imperviousness produced as part of this project may one day help these communities establish stormwater utilities. It is the goal that this type of analysis will be extended to other sensitive regions of the State and perhaps Statewide in the coming years. This paper will discuss the results and findings of this study as well as the uses and utility of this new method of assessing impervious areas using other project examples from around the U.S.