

ABSTRACT

This investigation and analysis of land use/tree cover was conducted to determine the impact of land-use policy developments in a major city. The City of Riverside was selected as a case study for this investigation because it had the necessary attributes: aerial photos of the study area over two decades, including two different yet comparable areas, one under a form of land use restriction with politically active citizenry interested in preserving their agricultural heritage. The research question is, can land use policy changes be analyzed for effectiveness by analyzing changes in land use and tree cover over time? Land use is defined herein as residential, farmland, or orchards. Aerial imagery covering a 50-year time span was collected and loaded into a GIS system for analysis. The GIS analysis included identification of land use types, imagery analysis of tree cover, and the correlation of the imagery analysis with land use policy using a feature analyst/computer-aided classification system. The research identified a significant reduction in tree cover due to the transition from orchards to residential land use. The results illustrate the land use and tree cover consequences of greenspace conservation policies adopted by the City of Riverside in 1979 and 1987. These results indicate that changes to land use and tree cover can be linked to policy developments in major southern California cities. The challenges in conducting this research included the acquisition of aerial imagery data sets, and analytical tool selection for measuring land use and tree cover which could be accurately associated with local, state and Federal policy development. Remaining questions include the correlation of census and property tax roles to the land use changes that have been identified.