

Montreal Up in Smoke: A Spatial Analysis of Mid-Nineteenth Century Urban Fires

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The patterning of Montreal's historic urban fires demonstrates that fire spread is more likely to occur in densely built urban areas. This study aims to demonstrate the relationship between the spread of urban fires and density of buildings. This study uses geographic information systems (GIS) and statistical analysis to shows that a threshold exists at which fires are more likely to spread to nearby buildings. Fire data was collected through archival research in both French and English for the years 1845 to 1855 and layered with physical and political historic maps in order to identify patterns of fire spread. A clear correlation exists between the spread of fires and the proximity of the affected buildings. The case study of Montreal between 1845 and 1855 is particularly interesting because the time period surrounds the 1852 fires that burned a significant portion of the city and led to the adoption of new building and safety codes.

