

Title: An analysis of metro Atlanta precipitation-related traffic accidents and risks

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This study analyzes Georgia traffic and weather data within a ten-year span in order to consider the impacts that precipitation has on traffic accidents. With the importance of public safety in mind, the objective of this research is to ultimately create a safer community for those who drive, specifically in inclement weather. Using mapping tools and data from public databases, the focus for this study will be on the metro Atlanta area (Fulton, Cobb, Clayton, and Gwinnett county). By investigating significant thresholds in relation to inches of precipitation, mechanisms such as a safety rating system can be determined in order to warn the public of possible roadway hazards. Discovering such thresholds and relationships not only statistically but also spatially can promote a safer commute for all drivers and passengers. Because several thousand Georgia State University Students, Faculty, and staff commute to campus every day, the results of such correlations can directly improve commuter safety. Not only beneficial to the Georgia State University community, such analysis can ultimately improve commuter safety for all businesses in Atlanta. In light of this research I would like to propose new public safety announcements, such as a rating system, on when it is safest to drive proceeding with established ratings to when it is most dangerous to drive. Although the results of such investigation are yet to be reached, my hypothesis is that there must be a threshold of precipitation when most traffic accidents, fatal and non-fatal, occur.