Module 1: Crash Prevention
Lesson 4: Traffic Congestion
Crash Case Study: Atlanta Interstates

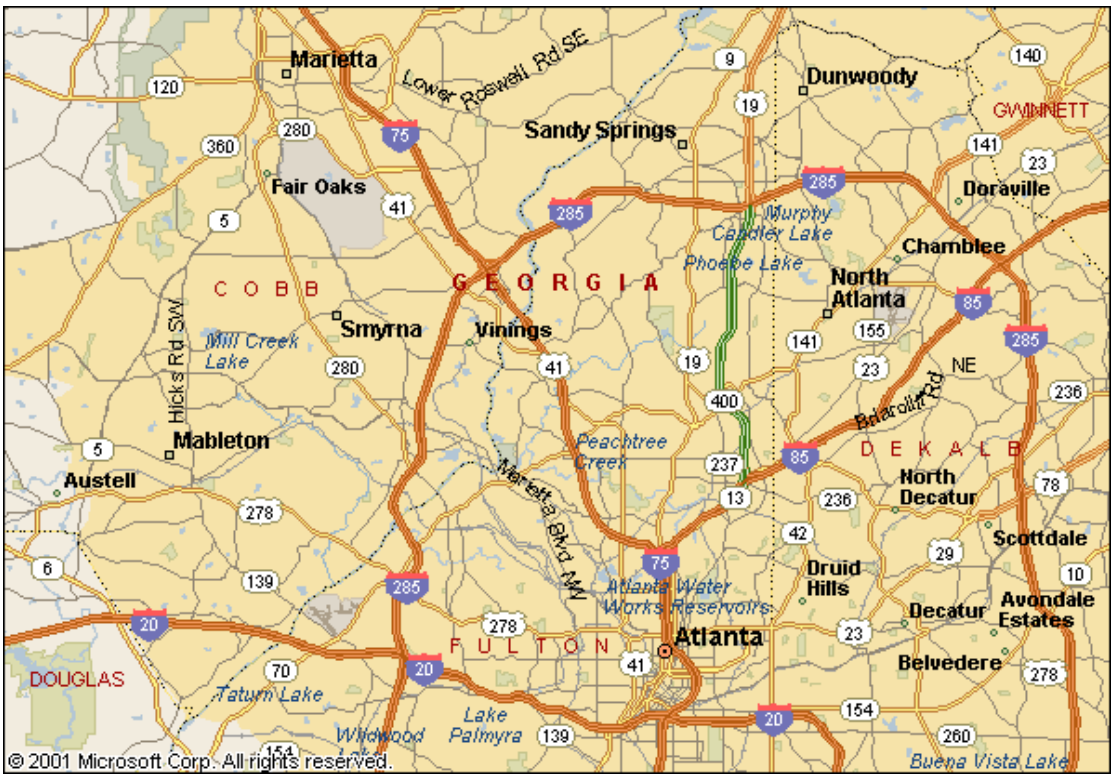
Summary of Crash Event

Atlanta is the capital and the most populous city in Georgia with a population of nearly a half million. Six interstate highways, I-20, I-75, I-85, I-285, I-575, and I-675 help metropolitan Atlanta residents get where they need to go. This case study occurred on January 28, 2014, when a rare snow and ice storm swept over a wide swath of the South and deposited 2.6 inches of snow in Atlanta. Schools, businesses, and government offices sent their workers home early and nearly at the same time. Traffic soon came to a standstill. As a result, thousands were stranded for 18-20 hours on frozen highways. Tractor trailers jackknifed on the slippery pavement thus blocking equipment that could have treated the roadways. There were over 1,000 fender benders in Georgia and Alabama.

Links to News Story

- http://abcnews.go.com/us/wrong-atlanta-storm-chaos/story?id=22294035
- http://www.cbsnews.com/news/atlanta-other-parts-of-south-paralyzed-by-ice-snowstorm/

Map of the Surrounding Area



Analysis questions

1. What was the main cause of the congestion? Were there any other contributing circumstances?
2. Use Google Maps to determine the closest emergency response unit(s). Estimate how long it would have taken for EMS to arrive at one of the major crash scenes. How does this affect congestion and injury outcome? Are there alternative routes that the EMS could take to improve travel time if the roads are congested?
3. Did the transportation authority use any special traffic management strategies or technologies to help manage traffic during this incident?
4. What changes would you make in order to reduce the amount of congestion during this incident? Be specific. What strategies and technologies would you use?
    a. How would you alert drivers of the growing congestion?
    b. What technologies could you use to warn or divert traffic?
    c. If re-routing traffic, how could traffic be re-routed in order to reduce the congestion caused by the crash? And what implications would this have on the surrounding roads? Can these roads handle the volume of traffic that you have diverted? Will there be additional delays caused by re-routing? Will this new method provide a shorter travel time compared to simply staying on the main road?

Task

Prepare a PowerPoint presentation to explain your findings and solution to the class. Be sure to include a quick explanation of the crash scenario, the strategies that were employed on the scene, and the strategies that you would recommend implementing to reduce congestion and improve traffic flow.