A Study of the flooding from Hurricane Ida on Staten Island, NY

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In order to study the effects of flooding on Staten Island this author has plotted the following on a LiDAR DEM in a GIS: Pre-1900 Staten Island streams; present day streams; Staten Island Bluebelts; NYC contour lines with a 2 foot contour interval; data from NYC recently published stormwater maps; and Staten Island streets and buildings with blocks and lots. Since many of the Staten Island streets slope, the intersection of the streets with the contour lines provided flow directions for the storm water.

In addition, during this rainfall event, this author monitored the FDNY scanner frequency and recorded many locations where rescuing of motorists occurred on flooded roadways. In many instances the FDNY indicated water depths. These locations were then plotted on the GIS.

Figure 1: Suggested Signage for potentially flooded areas.(photo taken by Alan Benimoff on a road in the state of Virginia)

Furthermore, since we now know the locations of potentially flooded roadways, Staten Island residents could be alerted to the depth of future flooding by the installation of “road may flood” signage with at staff gauge (Figure 1).