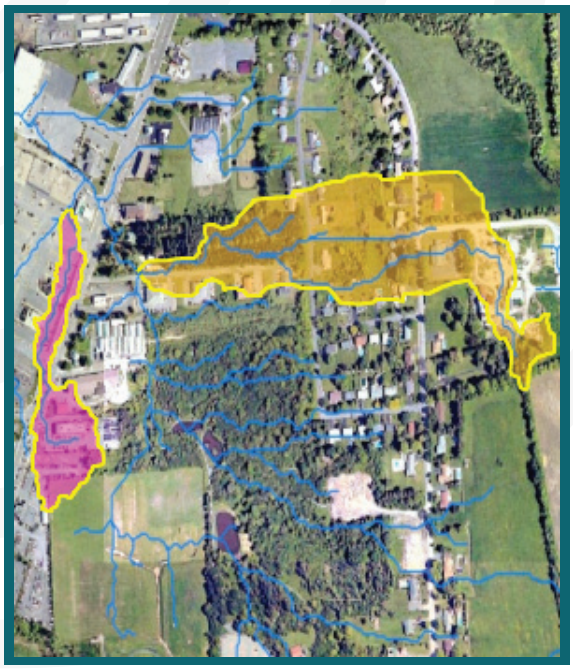
GROUNDPOINT
TECHNOLOGIES, LLC

Project Summary

Project Name: Albany County Storm Water Mapping **Project**
Period of Performance: 2010
Budget: ~$50K
Customer: Storm Water Coalition of Albany County

This project was conducted by GroundPoint Technologies as part of a larger project to create high resolution elevation and hydrography data and host it in a web based application supporting storm water infrastructure mapping for a coalition of MS4 regulated municipalities led by Albany County. The Project Area was approximately 523 square miles and involved processing classified LiDAR point cloud data into various derived GIS data such as elevation models, 2-ft Contours, Void Areas and Steep Slopes.



In order for most regulated MS4s to use a LiDAR based DEM for drainage analysis and catchment level mapping, the elevation surface models must be "hydro-conditioned". This includes "hydro-flattening" as described in the current USGS standards for large water bodies, and "hydro-enforcement" which integrates the drainage network into the elevation model. Hydro-conditioning goes further to support additional post-processing of the entire terrain surface that results in an "artificial DEM" that becomes the basis for accurate flow direction and flow accumulation modeling used in hydrologic analysis. This is an essential pre-requisite for assessing mapped storm water outfalls and their contributing catchments.

This effort involved compiling hydrographic updates (streams) and, and hydro-conditioning the digital elevation data for surface flow modeling to account for artifacts and errors inherent in the laser scan data. Final deliverables included both topographic (i.e., for contour mapping) and hydrologically enforced (i.e., for hydrologic analysis) Digital Elevation Models (DEMs), as well as derived flow direction and flow accumulation raster data to support drainage catchment mapping.