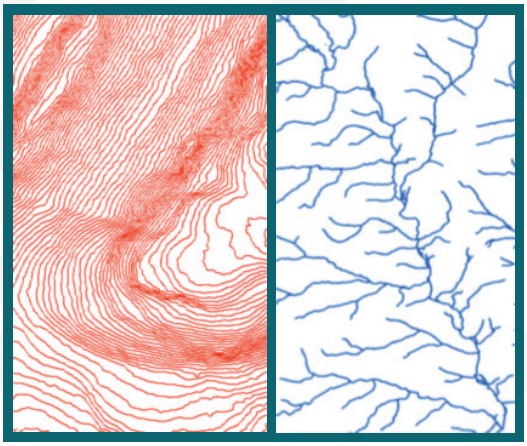
GROUNDPOINT
TECHNOLOGIES, LLC

Project Summary

Project Name: NYCDEP Hydrography and Topographic Mapping
Period of Performance: 2010-2012
Budget: ~$1.2M
Customer: NYC Department of Environmental Protection (NYCDEP)

GroundPoint Technologies provided primary production, project management, and quality control support to the completion of 2500 square miles of LiDAR based hydrography, contour, and digital elevation data for the New York City Department of Environmental Protection. The project area covers the two primary watersheds that provide daily drinking water to over 10 million people. The watersheds, located in the Catskill Mountains to the west and in the more heavily populated Westchester and Putnam Counties to the east, support the single largest unfiltered drinking water supply in the nation. The City of New York relies heavily on accurate hydrography data for implementing and maintaining water quality protection programs designed to ensure the long term economic viability of the water supply and conform with strict EPA mandated filtration avoidance criteria. This project was a multi-year effort lead by GroundPoint in partnership with the State University of New York.

Staff conducted exhaustive end user requirements analysis to develop a robust ArcGIS data model for including terrain data derived from airborne LiDAR, 4-band imagery, using a complex set of domains for cataloging both linear and polygon geospatial data. Built to support an ArcHydro data model as part of a linear network, data were captured at 1:500 scale and included in a comprehensive hydrography update that was reviewed and approved by both USGS and EPA. In addition, a robust QC protocol was implemented that resulted in redundant data checks to ensure the highest degree of accuracy and quality. Included as part of the data model were detailed capture standards and specifications that were tested and then approved by the customer. The result was a vertically integrated data package that not only aligned the elevation, GIS and imagery data but extended the City's hydrography mapping across the entire 2500 square mile watershed to a level of detail that is normally associated with engineering level project applications.



Terrain data for the entire watershed was hydro-enforced to ensure downstream flow through culverts and road crossings. The final data is now available for download as part of the National Hydrography Dataset.