Aerial Data Collection

Surdex Completes Challenging Aerial Data Collection of Mississippi River



n March of 2018, Surdex received a task order encompassing 168 square miles of the Mississippi River from the Missouri confluence northward to Hannibal, Missouri. Specifications called for orthoimagery at 6" Ground Sample Distance (GSD) and lidar at 4 points per square meter.

Acquisition was very challenging for this project because the scope required specific water levels at three different lock and dam sites. Upon notice to proceed from the Corps, Surdex mobilized quickly and acquired both datasets during a one-week window when conditions met the requirements. Our proximity to the project site and equipment resources—including ten aircraft, three lidar sensors, and five pushbroom image sensors—enabled us to acquire the data in a timely manner. Surdex has an Indefinite Delivery / Indefinite Quantity (IDIQ) contract with the U.S. Army Corps of Engineers – St. Louis District. Over the past five years, we have completed numerous task orders through this contract, with services including orthoimagery acquisition and processing, lidar acquisition and processing, and planimetric and topographic mapping. These datasets are particularly useful for the Corps for waterway monitoring, planning and management.

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Datasets to the Corps

Once data processing was complete, Surdex provided the following datasets to the Corps, derived from the imagery and lidar data:

- Digital Elevation Models (DEMs)
- Classified lidar point clouds
- Auto-generated 1' contours
- Hydro breaklines

- Digital Terrain Model (DTM)
- Uncompressed image tiles
- Compressed imagery mosaics



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