

Description

The Denver Regional Council of Governments (DRCOG) facilitates the acquisition of light detection and ranging (lidar) data in the Denver region on an as-needed basis. Lidar projects are completed on behalf of local and regional organizations. Due to the expense of lidar data, state and federal partnerships are typically required to collect data.

At a glance

DRCOG lidar products adhere to the U.S. Geological Survey Lidar Base Specification, which outlines requirements for quality, accuracy and minimum deliverables that produce data that integrates with the existing national data set. Project requirements can be expanded to include such things as additional deliverables (for example contours, DSMs, RGB fusion), increased quality levels or enhanced classifications if funding is available.

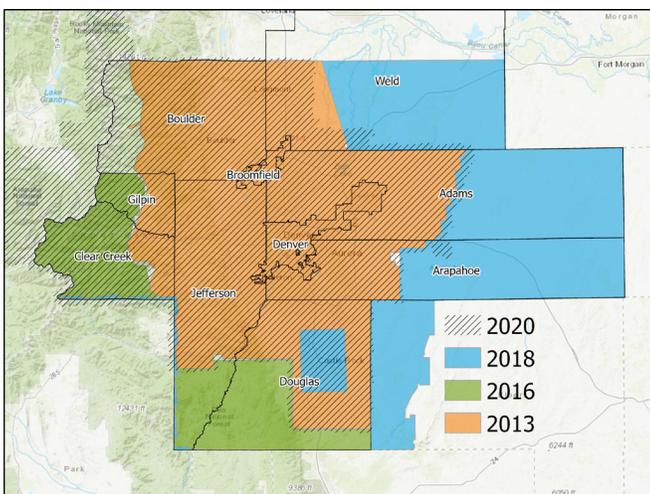
Quality level: QL2
 Aggregate nominal pulse spacing (m): ≤ 0.71
 Aggregate nominal pulse density (pls/m²): ≥ 2.0

Classification:

- 1: Processed but unclassified
- 2: Bare earth
- 7: Low noise
- 9: Water
- 17: Bridge deck
- 18: High noise
- 20: Ignored ground
- 21: Snow
- 22: Temporal exclusion

Deliverables:

- Classified lidar point cloud
- Bare-earth digital elevation model
- First return intensity raster
- Breaklines
- Federal Geographic Data Committee metadata



Project history

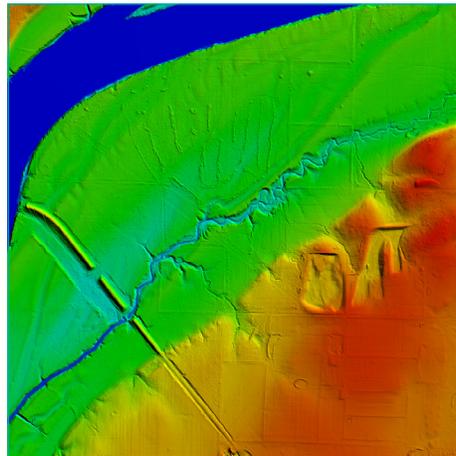
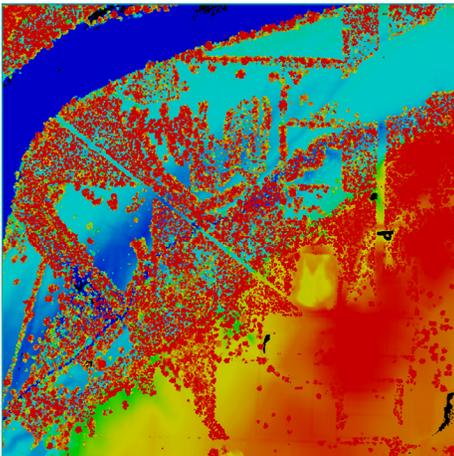
The most recent projects in the Denver region have been in 2013, 2016, 2018 and 2020. The 2013 project was an opportunistic collection that was made possible when the United States Geological Survey and Federal Emergency Management Agency were on-site to gather information related to catastrophic flooding. The federal agencies agreed to expand their data collection area to cover the Denver metro area for a relatively small fee from DRCOG and its partner organizations. In 2016 and 2018, the Colorado Water Conservation Board collected data in the Eastern Plains and Mountain West. In 2020, DRCOG, in cooperation with 32 project partners, received a U.S. Geological Survey Broad Area Announcement grant to refresh data in the metro area and collect new mountain areas.

Data uses

Lidar data has many applications across the public, private, and academic sectors such as:

- identifying wildfire defensible space
- geological hazard identification and visualization
- project planning (trailheads, parking lots)
- viewshed/line of sight analysis
- visualizing 3D structures with realistic rooflines
- identification of historic features like trails, roads, building sites and plowed fields
- vegetation density mapping for forestry studies
- stream bed bathymetry

Data samples



Credit: Sanborn Map Company

More information

Data can be downloaded from the [Regional Data Catalog](#), the U.S. Geological Survey's The National Map, or the [Colorado Governor's Office of Information Technology](#).

Questions?

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