

COLORADO GEOLOGICAL SURVEY
Online Dataset ON-006-19D
Alluvial Fan Mapping of Boulder County, Colorado (Data) –
v20251120

CITATION

Lindsey, K.O., Perman, E.A., Zhou, Wendy, and Lovekin, J.R., 2025, Alluvial fan mapping of Boulder County, Colorado (data) – v20251120: Colorado Geological Survey Online Series 006-19D.

<https://doi.org/10.58783/cgs.on00619d.erid4823> [Also available at <https://coloradogeologicalsurvey.org/publications/alluvial-fan-map-data-boulder-colorado/>].

ABOUT THIS REPORT

The CGS is providing LiDAR-based mapping to refine the currently mapped alluvial fans and debris flow prone areas in Boulder County. This new mapping is based on the County's existing geologic hazard maps but also includes new areas delineated by LiDAR and other imagery. Debris flows or mudflows are significant hazards associated with alluvial fans. According to the American Geosciences Institute, alluvial fans are

“A low, outspread, relatively flat to gently sloping mass of loose rock material, shaped like an open fan or a segment of a cone, deposited by a stream (esp. in a semiarid region) at the place where it issues from a narrow mountain valley upon a plain or broad valley, or where a tributary stream is near or at its junction with the main stream, or wherever a constriction in a valley abruptly ceases or the gradient of the stream suddenly decreases; it is steepest near the mouth of the valley where its apex points upstream, and it slopes gently and convexly outward with gradually decreasing gradient.”

HOW TO USE THIS ZIP FILE

To open the compressed (.zip) file that you downloaded, double-click on the file. Inside the folder labeled **ON-006-19D-v20251120**, there are several files and folders. Some files are stored in Adobe Portable Document (.pdf) format. Geographic Information Systems (GIS) data are also included.

HOW TO IDENTIFY AND READ FILES

REPORT DOCUMENTS

- **ON-006-19D-Read_Me-v20251120.pdf**

This file

- **ON-006-19D-GIS_Data-v20251120 folder**

*Contains map package file **Boulder_Fans_v11202025.ppkx** which represents current data as of **November 20, 2025**. Consult enclosed metadata for further information on methodology, data processing, and use limitations.*

To view GIS files

Included is an ArcGIS Pro project package file (.ppkx) that may be viewed using ESRI's ArcGIS platform. If any other GIS data types are required (e.g., shapefiles), please contact the CGS directly.



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