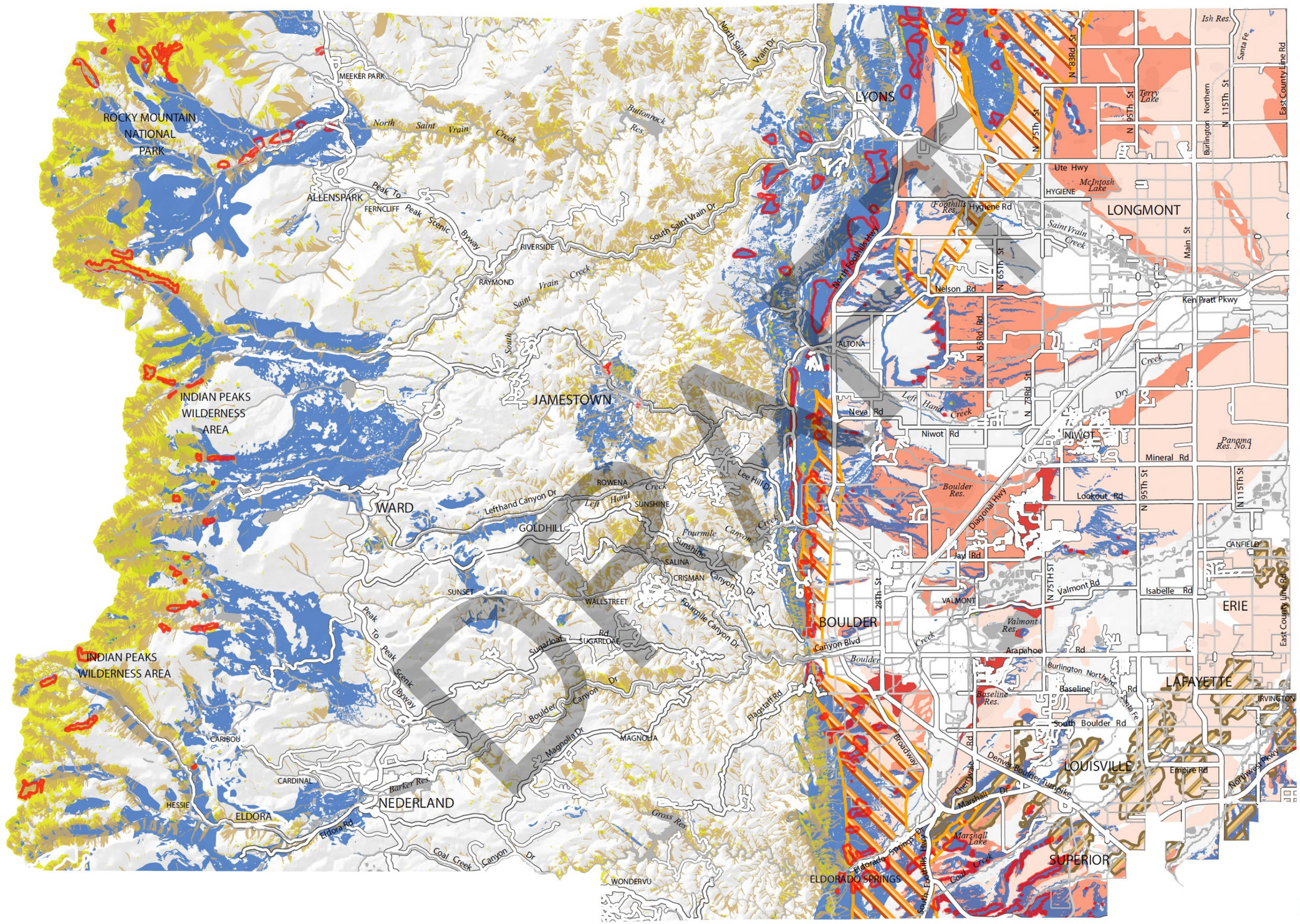
Geologic Hazard & Constraint Areas

Geology Element



Slope Stability

- Debris flow susceptibility area
- Rockfall susceptibility area
- Landside susceptibility area
- Landslide Inventory

Heaving Bedrock

- Steeply Dipping, Heaving Bedrock

Boulder Coal Field

- Extent of Abandonded Coal Mines

Soil and Bedrock Swell Potential

- Very High
- High
- Moderate

Note: Refer to the reverse side for additional information on the studies used to compile this map.

Map scale and reproduction method limit precision in physical features and boundary locations.

Planning Commission Adopted

_____, __ 2020

Printed 12/23/2019

0 2.5

1" = 2.5 miles

1:158,400

Boulder County

North

Comprehensive Plan Map

Boulder County Comprehensive Plan

Geologic Hazard Map Data Sources

This map is a composite of maps from different studies. Those studies need to be consulted when additional information is needed. The table below shows the study and maps that are used in each of the Geologic Hazard Map layers.

Layer: Debris Flow Susceptibility

Source~~tudy~~	Dataset ~~Map~~
Skyline Geoscience, ~~July M~~Julia M. Frazier, P.G.; Cesare, Inc., K. Craig Vaughn, P.E.; Geologic Hazard Datasets, 2019 Revisions, Project No. 16.3097; May 9, 2019.	Debris Flow Initiation Zones and Process Areas. ~~Figure 4.~~ ~~Debris Flow Process Areas. Figure 4.~~
Colorado Geological Survey, Kevin M. McCoy; Transmittal Information for Draft Maps Debris Flow Susceptibility Mapping in the Gold Run and Ingram Gulch Areas, Boulder County, Colorado; November 30, 2016.	Gold Run ~~On~~ Susceptible Areas ~~Gold Run Off Susceptible Areas~~ Ingram Gulch ~~On~~ Susceptible Areas ~~Ingram Gulch Off Susceptible Areas~~
Colorado Geological Survey, Matthew L. Morgan, Jonathan L. White, F. Scot Fitzgerald, Karen A. Berry and Karen A. Morgan; Foothill and Mountainous Regions in Boulder County That May Be Susceptible to Landslides, Earth and Debris/Mud Flows; May 2, 2014.	Debris Flow Susceptibility

Commented [WN1]: Make them the same color on the maps and combine into one layer (or 2 layers same color)

Layer: Rockfall Susceptibility

Study	Dataset~~Map~~
Skyline Geoscience, ~~July M~~Julia M. Frazier, P.G.; Cesare, Inc., K. Craig Vaughn, P.E.; Geologic Hazard Datasets, 2019 Revisions, Project No. 16.3097; May 9, 2019.	Rockfall Sources Zones~~.~~ ~~Figure 5.~~ Rockfall Process Zones~~.~~ ~~Figure 5.~~

Layer: Landslide Susceptibility

Study	Dataset~~Map~~
Skyline Geoscience, ~~July M~~Julia M. Frazier, P.G.; Cesare, Inc., K. Craig Vaughn, P.E.; Geologic	Landslide Susceptibility~~.~~ ~~Figure 3.~~ ~~.~~

Hazard Datasets, 2019 Revisions, Project No. 16.3097; May 9, 2019.	
Colorado Geological Survey, Kassandra Lindsey; OF-19-06 Landslide Inventory and Susceptibility Map for Boulder County, Colorado. June 2019.	Landslide Susceptibility

Layer: Landslide Inventory

Study	**Dataset~~Map~~**
Skyline Geoscience, ~~July M~~Julia M. Frazier, P.G.; Cesare, Inc., K. Craig Vaughn, P.E.; Geologic Hazard Datasets, 2019 Revisions, Project No. 16.3097; May 9, 2019.	Landslide Inventory~~. Figure 1.~~ ~~.~~
Colorado Geological Survey, Kassandra Lindsey; OF-19-06 Landslide Inventory and Susceptibility Map for Boulder County, Colorado. June 2019.	Landslide Inventory

Layer: Steeply Dipping, Heaving Bedrock

Study	**Dataset~~Map~~**
Cesare, Inc., ~~July M~~Julia M. Frazier, P.G.; Geologic Hazard Study, Project No. 16.3097; March 31, 2017.	Steeply Dipping, Heaving Bedrock~~. Plate 8.~~

Layer: Extent of Underground Coal Mining

Study	**Dataset~~Map~~**
~~Cesare, Inc., July M Frazier, P.G.; Geologic Hazard Study, Project No. 16.3097; March 31, 2017.~~ United States Geological Survey, Roberts, S.S., Hynes, J.L., and Woodward, C.L.; Maps Showing the Extent or Mining, Locations or Mine Shafts, Adits, Air Shafts, and Bedrock Faults, and Thickness or ~~Overburned~~ Overburden Above Abandoned Coal Mines in the Boulder-Weld Coal Field, Boulder, Weld, and Adams Counties, Colorado: Geologic Investigations Series 1-27 35. 2001.	Extents of Abandoned Coal Mines~~. Plate 4.~~

Layer: Soil and Bedrock Swell Potential

Study	Dataset~~Map~~
~~Cesare, Inc., July M Frazier, P.G.; Geologic Hazard Study, Project No. 16.3097; March 31, 2017.~~ Colorado Geologic Survey, Hart, S.S. Potentially Swelling Soil and Rock in the Front Range Urban Corridor; 1974	Swelling Soils and Bedrock~~. Plate 3.~~