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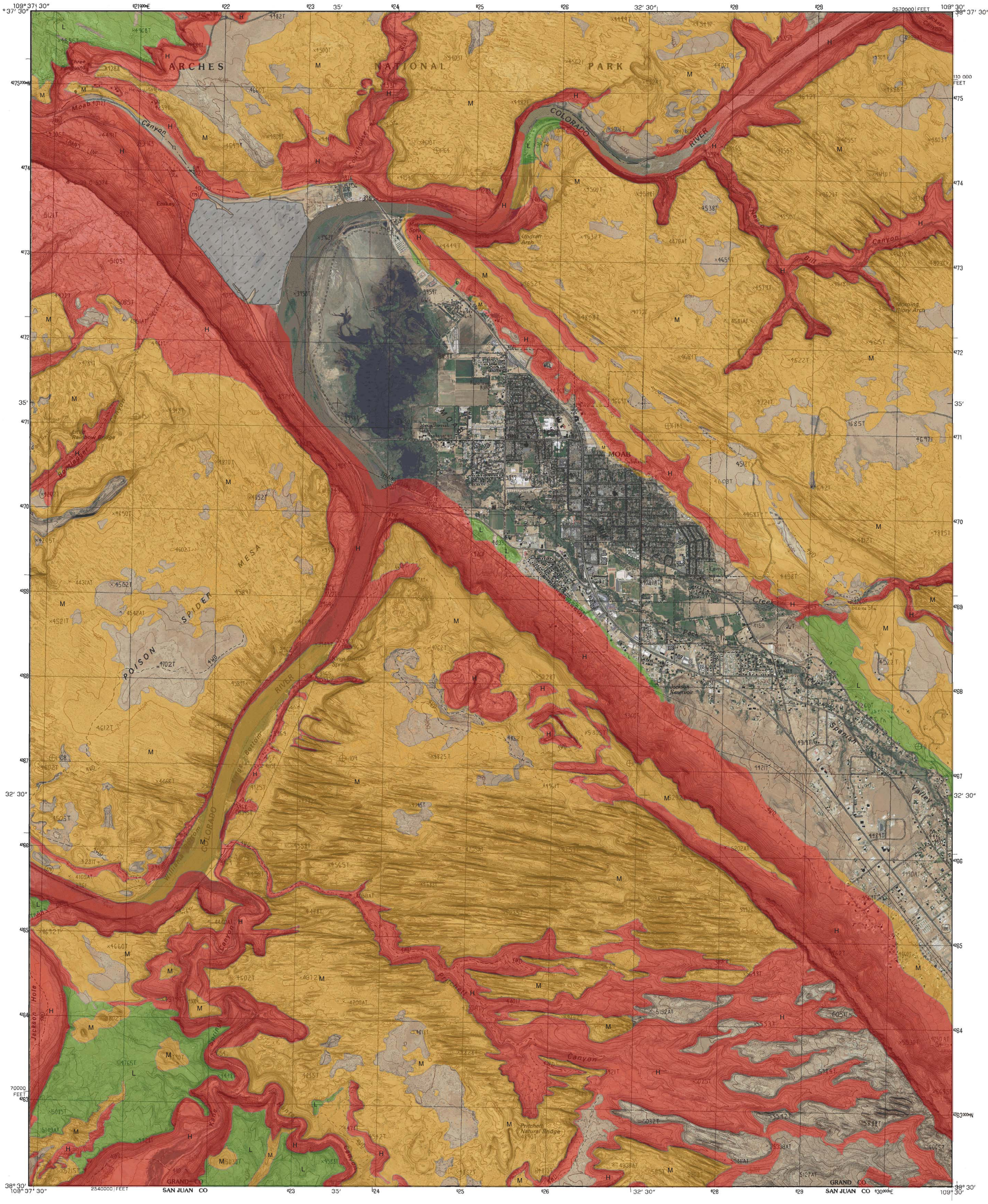

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SCALE 1:24,000

1 0.5 0 1 MILE

5000 2500 0 5000 FEET

1 0.5 0 1 KILOMETER

CONTOUR INTERVAL 40 FEET

Base from USGS Moab 7.5' quadrangle (1985), slopeshade derived from the USGS 10-meter National Elevation Dataset (NED) (2009), and aerial photography from the National Agriculture Imagery Program (NAIP, 2011).
Projection: UTM Zone 12
Datum: NAD 1983

GIS and Cartography: Jessica J. Castleton and Emily J. Kleber

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APPROXIMATE MEAN DECLINATION, 2018

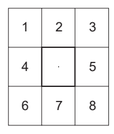
ROCKFALL HAZARD MAP OF THE MOAB QUADRANGLE, GRAND COUNTY, UTAH

by

Jessica J. Castleton, Ben A. Erickson, and Emily J. Kleber

2018

QUADRANGLE LOCATION



1. Merrimac Butte
2. The Windows Section
3. Big Bend
4. Gold Bar Canyon
5. Rill Creek
6. Shafer Basin
7. Trough Springs Canyon
8. Kane Springs

ADJOINING 7.5' QUADRANGLE NAMES

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EXPLANATION

Not Mapped – Area not mapped due to significant and ongoing human disturbance.

Rockfall-Hazard Categories

H — **High** – Slopes that are greater than or equal to 20 degrees within a geologic unit highly susceptible to rockfall, and slopes greater than 35 degrees within a rockfall source area of a geologic unit moderately susceptible to rockfall. High-hazard areas include rockfall sources and their associated shadow-angle zones.

M — **Moderate** – Slopes between 20 and 35 degrees within a geologic unit moderately susceptible to rockfall, and slopes greater than 35 degrees within a rockfall source area of a geologic unit having low susceptibility to rockfall. Moderate-hazard areas include rockfall sources and their associated shadow-angle zones, which extend into rockfall source areas that would otherwise be mapped in the low-hazard category.

L — **Low** – Slopes between 20 and 35 degrees within a geologic unit having low susceptibility to rockfall. Low-hazard areas include rockfall sources and their associated shadow-angle zones, which extend into areas that would otherwise be mapped as having a negligible hazard.

Rockfall hazard is considered negligible in areas not included in one of the above hazard categories.

USING THIS MAP

This map shows areas of relative rockfall hazard in the Moab quadrangle. The UGS recommends performing site-specific rockfall-hazard investigations within the mapped rockfall hazard areas. These investigations can resolve uncertainties inherent in generalized hazard mapping and help ensure safety by identifying the need for rockfall-resistant design or mitigation. For most areas, site-specific assessment may only require a geologic field evaluation to determine if a rockfall source is present. However, if a source is identified, additional work to adequately assess the hazard is needed. This map is based on limited geologic, topographic, and aerial photography analysis. The quality of the map depends on the quality of these data, which varies throughout the quadrangle. The mapped boundaries between rockfall-hazard categories are approximate and gradational. Small, localized areas of higher or lower rockfall potential are likely to exist within any given map area, but their identification is precluded due to the generalized map scale and the relatively sparse data. This map is intended for use at a scale of 1:24,000, and is designed for use in general planning to indicate the need for site-specific geotechnical/geologic hazard investigations. The rockfall-hazard categories do not account for hazards caused by cuts, fills, or other alterations to the natural terrain. This map is intended primarily for planning purposes and should not be used as a substitute for site-specific rockfall investigations. Site-specific geotechnical/geologic-hazard investigations are required to produce more detailed rockfall-hazard information.

For additional information about the rockfall hazard in the Moab quadrangle, refer to the accompanying report.