December 31, 2025

GeMS Transmittal Letter for the Geologic Map of the Sykesville Quadrangle, Howard, Carroll and Baltimore Counties, Maryland.

1. Full bibliographic citation for the published map.

Kavage Adams, R., 2025. Geologic Map of the Sykesville Quadrangle, Howard, Carroll and Baltimore Counties, Maryland. Maryland Geological Survey, Quadrangle Geologic Map, SYKES2025.1, scale 1:24,000.

1. URL to its NGMDB Product Description Page.

New mapping/publication, not yet listed in the NGMDB Map Catalog.

1. Is the GeMS database considered to be:

New mapping/publication, not yet listed in the NGMDB Map Catalog.

1. URL where users may access the GIS files from the State Survey site.

MGS publications page: <http://www.mgs.md.gov/publications/maps.html>

1. Indicate whether GeMS level One, Two, or Three

Level 3

1. High-resolution PDFs of published map and other oversize sheets.

PDF included in map folder.

1. High-resolution PDFs of published report or pamphlet accompanying the map.

N/A

1. Describe, in a sentence or two, any significant deviations from the full GeMS compliance as revealed by the GeMS Validate Database tool and the Geologic Names Check tool. If the deviation was necessary to address agency or science needs for this publication, please so indicate; this insight could help guide future GeMS development.

Deviations from the GeMS Level 3 database compliance are in the Validation check and from the Geolex Geologic namescheck. The field ObservedMapUnit\_Lith is used in the Stations feature class to document field-based observations of lithology. This geodatabase splits out OrientationPoints into two feature classes, one that is displayed on the PDF and contains a subset of points (OrientationPoints\_Display), and one that contains all points (OrientationPoints\_All). OrientationPointsAllID is an additional field in the OrientationPoints\_Display feature class, and acts as a foreign key to the OrientationPoints\_All feature class.

The Geolex Geologic namescheck identified two units as different ages than in the map area. The Guilford Granite is determined to be Devonian in the map area based on data from Aleinikoff, J.N., Horton, J.W., Drake, A.A., and Fanning, C.M., 2002, SHRIMP and conventional U-Pb ages of Ordovician granites and tonalites in the central Appalachian Piedmont: Implications for Paleozoic tectonic events: American Journal of Science, v. 302, no. 1, p. 50–75. The Woodstock Granite is determined to be Devonian in age in the map area based on data from Sinha, A.K., Thomas, W.A., Hatcher, R.D., and Harrison, T.M., 2012, Geodynamic evolution of the central Appalachian orogen: Geochronology and compositional diversity of magmatism from Ordovician through Devonian: American Journal of Science, v. 312, no. 8, p. 907–966. Additionally, in this map the Loch Raven Formation (https://ngmdb.usgs.gov/Geolex/Units/LochRaven\_2514.html) and the Oella Formation https://ngmdb.usgs.gov/Geolex/Units/Oella\_3083.html) have been interpreted jointly.