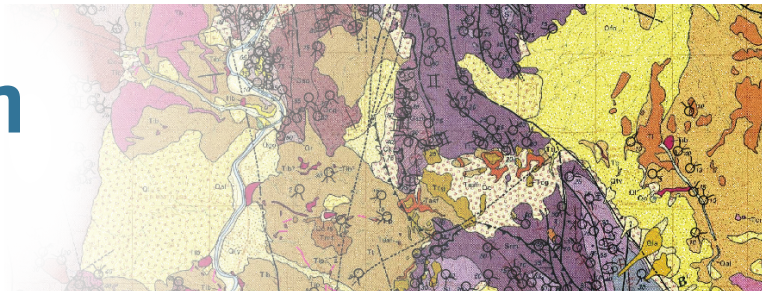
GeMS Conversion Services



Across the U.S., geological surveys and research institutions are sitting on thousands of geologic maps and spatial datasets — valuable records of Earth's structure that remain locked in outdated or inconsistent formats.

East View Geospatial (EVG) can support converting legacy geologic mapping data into the USGS Geological Map Schema (GeMS), enabling seamless integration with the National Geologic Map Database (NGMDB), NGGDPP, and federal data infrastructure.

Our Bulk GeMS Conversion Services Include:

Legacy Data Assessment

» Audit and triage of your spatial data holdings (GIS or CAD vector data; scanned map images)

Georeferencing & Digitization Services

» Preservation quality map scanning using wide-format, high-resolution scanner equipment

» Coordinate Reference System (CRS) identification; datum transformation research (as needed)

» Map georeferencing services (using NLT 25 control points); GeoTIFF/GeoPDF creation

» Map mosaicking & tiling services

» Data digitization from georeferenced map images (head-up feature data extraction)

Schema Conversion

» Attribute mapping, domain reconciliation, and data normalization

Topology & Feature Class Generation

» Structured creation of key GeMS feature classes:

» Feature-level QC/QA to ensure schema validity, topological correctness, and logical consistency

- ContactsAndFaults
- GeologicLines
- MapUnitPoints
- OrientationPoints

Symbology & Cartography Preservation

» GIS data symbolization according to original map legend or re-styling to USGS cartographic standards

Metadata & DMU Generation

» Standardized FGDC metadata for each converted dataset

» Workflow can include OCR of the legend and output to spreadsheet:

	A	B
1	**MapUnit**	**Description**
2	Gud	Grenvillian rocks, undivided
3	Gftz	Grenville front tectonic zone
4	Cgn	Central gneiss belt
5	Cmbz	Boundary zone
6	Bt	Bancroft block
7	EMM	Eastern midcontinent magnetic block
8	Ez	Elzevir block
9	Fr	Frontenac block (including Adirondack Lowlands)
10	Cgr	Central granulite belt (including Adirondack Highlands)

Who It's For

» State geological surveys with large archive backlogs

» USGS cooperative agreement recipients

» Universities digitizing historical mapping projects

» Environmental and resource firms needing data migration to GeMS

» Agencies preparing for NGGDPP submission or NGMDB upload

Why Choose EVG?

High-Throughput

» **Deliverables Built for Archiving and Publication:** Ready-to-ingest GDBs, PDF map exports, and metadata files

» **Collaborative Workflow:** We will work closely with your team to validate units, symbology, and classifications

Conversion Capacity

» **Small-Scale Pilots:** Convert a handful of maps to prove workflow & quality

» **Full Backlog Projects:** 100+ maps over phased timelines

» **Continuous Ingestion:** Ongoing conversion pipeline for newly digitized maps

Sample Deliverables

» File Geodatabases (.gdb) structured to GeMS spec v2.8+

» Full FGDC-compliant metadata (.xml)