

Department of Environment, Great Lakes, and Energy
Geologic Resources Management Division
Upper Peninsula Geological Repository
FY27 Five Year Plan

Mission Statement

The mission of the Geologic Resources Management Division (GRMD) is to promote the best use of Michigan's non-renewable geological resources for their social and economic benefits while protecting associated resource values, property rights, the environment, and public health and safety. As part of this mission, the GRMD has been responsible for the proper handling, storage and retention of rock core and samples for over 50 years.

The Upper Peninsula Geological Repository (UPGR) holds a collection of drill core and cuttings with an emphasis on Upper Peninsula geology. The collection includes rock core and samples that were drilled or collected from State-owned mineral lease lands or have been donated by private mineral owners. Some of the oldest rock core in the collection dates back to copper mining operations during the late 1800s. Currently, UPGR houses more than 750,000 lineal feet of rock core that is available for viewing and geologic study by the public, industry, and academic researchers.

Some aspects of this study may include:

- Critical mineral resource exploration and development
- Addressing issues related to water quality and groundwater aquifers
- Contributing to research on climate change
- Enhancing the ability to identify geological hazards
- Supporting research of unconventional and emerging energy sources

The GRMD moved into the UPGR facility, located at 416 Avenue C, Gwinn, Michigan, in the fall of 2020. Located in Michigan's Upper Peninsula near Sawyer International Airport in Gwinn, the collection is enclosed within a 44,000 square-foot warehouse at the former K.I. Sawyer Air Force Base. The collection was previously stored in two separate buildings that were in a state of disrepair and at maximum capacity.

The UPGR facility has significantly more space that allowed for the expansion of the collection and offers greatly improved amenities in a more modern, safe environment. It currently provides office space for three full-time and one part-time GRMD staff, which was not an option at the previous core storage locations. The Michigan Geological Survey (MGS) leases a portion of the office space at the UPGR for four full-time MGS staff dedicated to research and work in the Upper Peninsula and has requested a renewal of the lease through October 2028.

The UPGR collection is publicly available for viewing and sampling and contributes to an increased overall geological knowledge of the Upper Peninsula. This allows

for informed decisions involving all aspects of our society from agriculture to energy, minerals, drinking water and environmental remediation.

The facility is open to the public by appointment and throughout the course of FY25, UPGR hosted visitors from private industry, local groups, universities, and state and federal agencies. Visitors booked 11 days in FY25 for viewing rock core, historic mine maps and documents, and 2 academic workshops were held at the facility.

Facility Assessment

The Northern Michigan Geological Repository Association donated the current property and building to the Department of Environment, Great Lakes, and Energy (EGLE) in December of 2018. For reference, the GRMD obtained construction costs from other geological repositories around the United States and generally, the cost to replace this facility could be as high as \$12,000,000.

When EGLE accepted the donation of the facility, an assessment was completed by the Department of Technology Management and Budget (DTMB) to identify immediate upgrades and renovations needed to meet safety and operational standards. Using a one-time Legislative appropriation of \$1 million in FY2018, EGLE and DTMB oversaw remediation and upgrades to the UPGR location that included activities associated with lead and asbestos abatement, remodeling, exterior repairs, and fire system upgrades to name a few. These activities were necessary prior to occupying the building.

Fiscal Year 2024

- EGLE conducted an air exchange study to assess radon levels as well as moisture and mold issues in the warehouse.
- Heating, Ventilation, and Air Conditioning (HVAC) Design-Build Contract awarded to address the radon levels, and heating and ventilation issues in the warehouse and office space.

Fiscal Year 2025

- HVAC Design-Build Contract construction completed.
- Site Security Upgrades completed: State of Michigan (SOM) ID-badge reader at front door, internet connection to the secure SOM Network.
- Pallet Racking System Installation Project contract award that will provide additional storage space for rock core and samples.
- Warehouse Painting Project contract awarded that will include removal of mold and mildew and encapsulate the existing paint containing lead and cadmium on the interior walls of the warehouse.
- Building Upgrades Project contract awarded for engineering and architectural design and construction administration. This includes several immediate-need projects such as safety upgrades and electrical projects throughout the facility and bringing the facility up to current occupancy code with the addition of a second restroom. Construction will occur in FY2026.

V. Implementation Plan

It is necessary to ensure a safe working environment for State employees and lessees working within the building, as well as the growing number of visitors requesting to view the valuable rock core and samples for private industry research and academic enrichment.

While maintenance and day-to-day operations are overseen by EGLE staff, the following items have been identified as necessary to enhance safety, keep the building in an acceptable operating condition and continue the mission of the facility entrusted to EGLE GRMD.

Year 1 (Immediate Need): \$1.5 Million

Outbuilding Design/Construction: Engineering, Design and Construction of an Outbuilding on the parcel. The UPGR facility currently houses property maintenance equipment (lawn mower, utility tractor with implements, snowblower, truck-mounted snowplow, etc.) that occupies a portion of the warehouse that is intended for rock core and sample storage.

An outbuilding would house all facility and property maintenance equipment and provide easier access to the equipment without needing to maneuver across the loading dock ramps, as well as allow use of the current space inside the warehouse for its intended purpose.

This building can serve the dual purpose of housing additional rock core and samples. The facility is nearly at a storage capacity where GRMD would need to decline the opportunity to accept rock core and samples of State-owned minerals. There are large collections of rock core sampled from State-owned minerals associated with Eagle Mine in Marquette County and the Back Forty Project in Menominee County that the facility would not be able to accommodate when they become available.

Recent engineering estimates for construction of a 9,600 square-foot, cold storage-style building came in at \$1.5 Million.

Year 2-5: \$600,000

Roof: With the initial upgrades made to the UPGR, some roof work was completed such as sealing and resealing of seams, areas around roof ventilation, and other problem areas. At the time of initial upgrades, the life of the roof was estimated to range from 5 to 10 years. Roof replacement should be considered as special maintenance for this building.

Recent engineering estimates for a complete tear-off and new roof installation for the 44,000 square-foot building came in at \$600,000.