

# Data Management for OSM Mine Pool Project at Ohio University: Lessons Learned<sup>1</sup>

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**Abstract:** The OU Voinovich School GIS Team is working to develop a method to collect, extract, and organize data to be used in creating a GIS tool for predicting mine pool formation. The team has collected and organized large amounts of mine permit data from Ohio Department of Natural Resources (ODNR) Division of Mineral Resource Management. Other publicly available data necessary was collected in cooperation with ODNR Water Resources, ODNR Geological Survey, industry collaborators, US Office of Surface Mining, and others. A process for data extraction, organization, and management was developed to efficiently work with such a large range of data for use in ArcMap, ArcGIS Online, QGIS, Box, and Microsoft Excel. Data extracted from well and borehole records included coordinates, static water levels, coal elevation, and strata percentages. Challenges encountered collecting data involved receiving thousands of pages of raw data in PDF and not easily manipulated formats, inconsistencies in data reporting, ambitious data delivery deadlines, and locating relevant publicly available data. Obstacles to tracking data entry included a need to develop uniform collection mechanisms, multiple data entry personnel, and assuring accuracy. A status-tracking sheet recorded different stages of the data management process, allowed for prioritization of permits to facilitate efficient use of data entry time, eased communication between team members, and allowed the process to move more smoothly. Sharing lessons learned can help others avoid some of the pitfalls and dead ends encountered by the team. Recommendations and tools for processes developed for data extraction, quality control/quality assurance, standardized Excel sheets, shapefile creation, and status tracking will be detailed.<sup>3</sup>

Additional Keywords: Have any?

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