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Abandoned Underground Mines GIS for Ohio

Abandoned underground mines present a hazard to the public and to the mining industry. Subsidence of abandoned underground mines can affect highways and buildings, potentially endangering lives and property. Identifying the accurate location of abandoned underground mines aids in preventing mishaps to miners and mine owners, as evidenced by the accident at the Quecreek No.1 mine in Pennsylvania, July 2002. The Ohio Division of Geological Survey, with funding from the Ohio Department of Transportation (ODOT), is creating a GIS of abandoned underground mines that will help mitigate the hazard these mines present to lives and property. The Survey has been mapping the locations of the abandoned underground mines since the late 1970's. The mine outlines and openings had been converted to GIS data layers in the mid 1990's. Since then, new information has become available in the form of over 25,000 annual-mine maps, which show new mines and extensions to older mines. Several upgrades to the abandoned-underground-mine GIS data layer are being performed to make the data layer more accurate, and more useful to ODOT and the public. Mine attribute information is being added to the GIS, along with newly discovered mines and extensions to existing mines. The images of the final mine maps are being hyperlinked to the GIS, allowing the user to see the detailed information about a mine. Finally, GIS applications are being created, which will automate many of the advanced questions a user might ask of the data.