The Maryland Coal Mine Mapping Project: Providing Access to Historic Maps for Today's Uses

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ABSTRACT

Frostburg State University, the Maryland Bureau of Mines (BOM), and the Maryland Power Plant Research Program have undertaken a cooperative venture to provide access to the historical record of coal mining in Western Maryland using GIS and geospatial databases. Consolidating, cataloging, and indexing these materials will be accomplished for the purpose of 1) providing for the public safety, 2) facilitating plans for use of coal combustion products in mine restoration, 3) identifying subsidence prone areas, 4) facilitating environmental restoration efforts by BOM, and 5) aiding in the location and proximity of mine portals to proposed and/or existing wind turbine sites for the purposes of determining bat habitats.

A geodatabase containing spatial and bibliographic data is being constructed to provide access to the historical records. Georeferenced, vector point shapefiles are created using ArcGIS 8.3, and usually represent entries, shafts (if known), or the general location of a mine. Each point location is linked to the scanned image of the hardcopy source map and attribute tables for each point contain pertinent information specific to the individual mine. Using ArcCatalog, shapefiles are grouped together into layers, according to 1:24,000 USGS Quadrangle, as well as by watershed and mine type. FGDC compliant metadata is created for the point coverages by quadrangle and posted on the Maryland Mapping Resource Guide Clearinghouse node. ArcIMS, a web based GIS and mapping service, will be used to serve up and deliver the data to many users and allow them to do location based analyses.

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