

# UPDATE<sup>©</sup>

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## COAL MINE LOCATIONS IN THE UNITED STATES

A map of the U.S. was created of all the known abandoned and active surface and underground coal mines. This map is shown in Figure 1. The reason this map was created was because no such similar mine map could be found. Please keep in mind, that there are also mined-out areas of which there is no record.

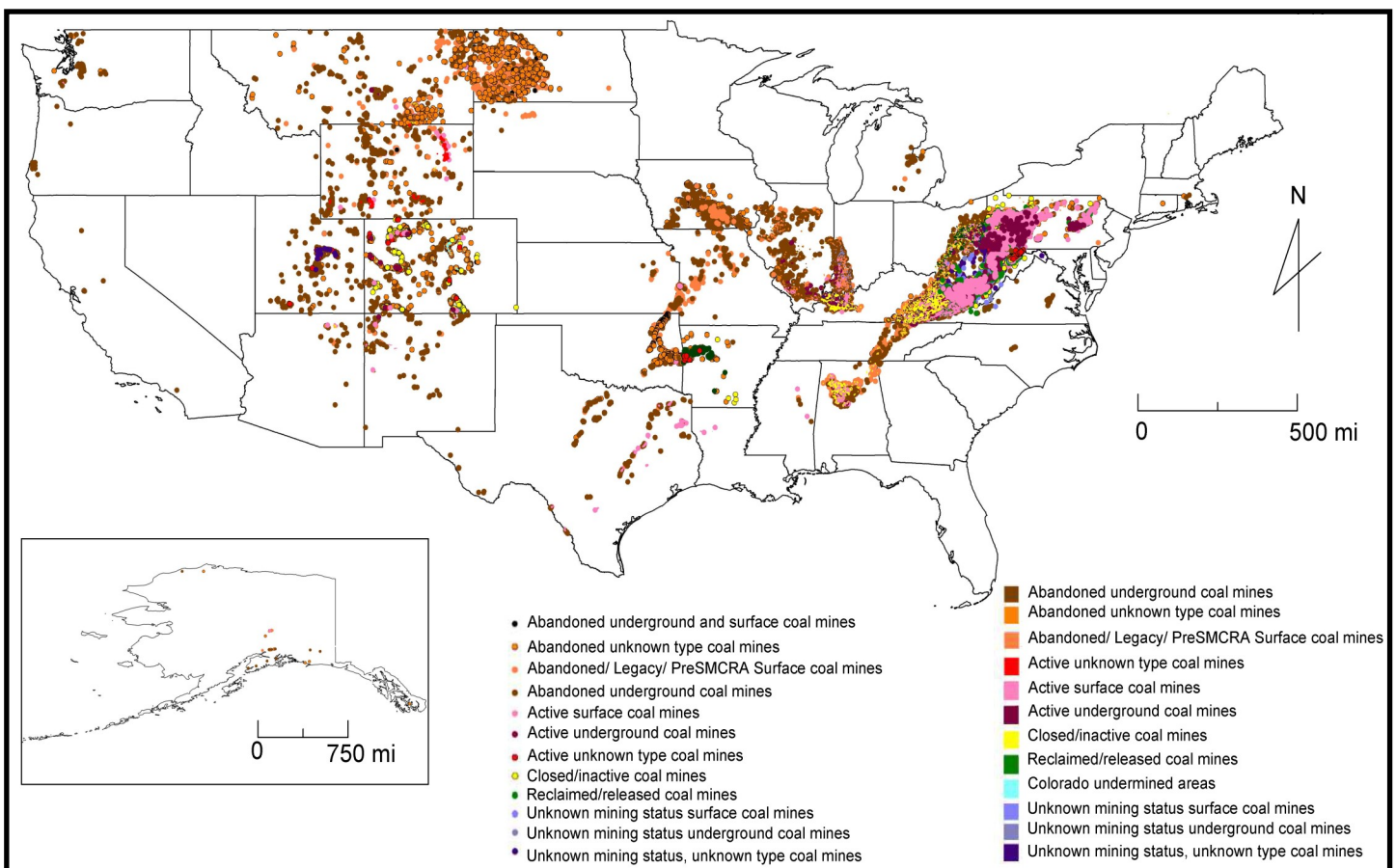


FIGURE 1 COAL MINE LOCATIONS IN THE UNITED STATES

To create this national map of coal mine locations, shapefiles containing the most recent coal mine data available from each state were downloaded. The different types of shapefiles downloaded included area location and point location. Area location shapefiles used polygons to outline the area of the map where the coal mine was present while point location shapefiles had only a single point on the map where a mine was located. Area location shapefiles were preferred over point location as they are more accurate and representative of the mine conditions than a single point representing an entire mine.

After collecting all the shapefiles for each state, they were loaded into Global Mapper, which was used to color-code and rename the data, and make the individual state's coal mine map with a legend, title, north arrow, and scale. After completion of the individual maps for all the coal mining states, the maps were compiled in one massive Global Mapper project.

At this point the state data had to be similarly classified to create a more uniform map, since some states listed the coal mines as surface or underground and other states listed the coal mines by status e.g. abandoned, active, closed, etc. To address this issue the data needed to include both mine type and mine status. Based on the attribute table of the data, new shapefiles were created from existing data to first list the mine status, then by splitting that data a separate shapefile was created based on the mine type of that mine status. This provided separate shapefiles for each type: abandoned underground, abandoned surface, abandoned unknown, active surface, active underground, active unknown, etc.

A legend was created that organized and color-coded each shapefile, so the data was uniform across states. Once all the states were uploaded to Global Mapper, TIFF images of the data and the legend were saved. These images were imported into AutoCAD so that the TIFF files could be attached together, while also adding in the North Arrow and scales.

References for the U.S. Coal Map can be provided upon request.

## REFERENCES

Original shapefiles and primary data taken from the state geological surveys of Alabama, Alaska, Arizona, Arkansas, Colorado, Illinois, Indiana, Iowa, Kentucky, Maryland, Missouri, Montana, New Mexico, North Dakota, Ohio, Oklahoma, Pennsylvania, Texas, Utah, Virginia, West Virginia, and Wyoming. More information on sources used available upon request.

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### **Other MEA Publications that may be of Interest:**

[UPDATE #14: Establishing Mine Subsidence Risk](#)

[UPDATE #19: Cross-Hole Radar Used to Locate Mined-Out Areas](#)

[UPDATE #38: Satellite Surveillance of Ground Movement](#)

[UPDATE #46: Mining and Associated Subsidence in St. Louis and St. Louis County, MO](#)

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