

OSM Western Region GIS

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The Western Region Geographic Information System (WGIS) is a geospatial database developed to aid OSM-Western Region SMCRA personnel in the regulatory process.

Inspectors collect geographic data in the field including information on drainage, depressions, topsoil measurements, vegetation observations, wildlife sightings, photographs, and many other features deemed necessary. This raw data is collected monthly using Global Positioning System (GPS) hardware. The data is downloaded from the GPS unit and placed into the WGIS.

Regulatory personnel use this geographic data to make critical decisions concerning reclamation. Scientists, engineers, and other reclamation specialists needing to see the big picture of a mine area, such things as are not always visible on a specific hardcopy map, benefit through the visual and analytical power of the WGIS.

Using analytical processes offered through the WGIS applications such as, but not limited to, those listed below are developed:

- Methods to compare the Approximate Original Contour to current topography at the mine site
- Methods to determine reclamation slope commitments defined by the permit
- Methods to evaluate topsoil replacement commitments defined by the permit

The WGIS is a powerful tool offering many possibilities. Currently, the WGIS holds information on 10 surface coal mines throughout the Western U.S. See Figure 1 for a simplified data flowchart. Figure 2 illustrates reclamation experts performing GPS field data collection for input into the WGIS.

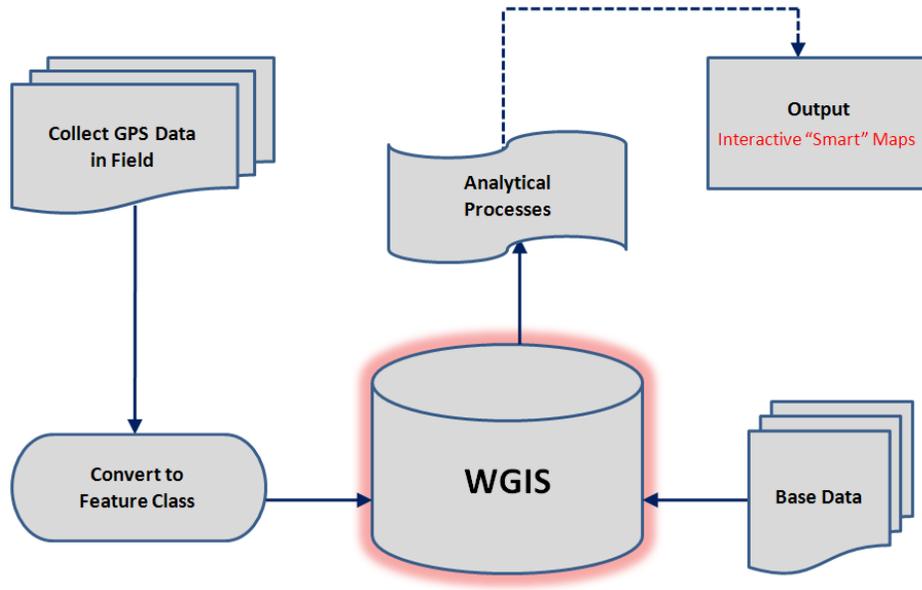


Figure 1. Western GIS Data Flowchart



Figure 2. Reclamation experts performing GPS field data collection