Land Reclamation Division is responsible for the implementation and enforcement of the Surface-Mined Land Conservation and Reclamation Act of 1971 and the Surface Coal Mining Land Conservation and Reclamation Act of 1980, which enables the division to function as the state's regulatory authority for the federal Surface Mining Control and reclamation Act.

In Illinois, previously surface coal mined land surfaces sustain pastures, cropland, fish and wildlife sanctuaries, forest land and industrial, commercial and residential sites. In many areas, the post-mining land uses so closely approximate pre-mining land uses that it is often impossible to visually recognize that an area was once the site of a surface mining operation. This land must be restored to the capability of growing row crops according to topsoil and rooting medium depth requirements.
The Illinois Surface Mined Land Conservation and Reclamation Act (SMLCRA) of 1971 carried some of the toughest restrictions in the country for the coal mining industry. SMLCRA, as amended in 1975, carried important requirements for potential soil productivity. For example, the state required that land be restored to row cropland capability based on the characteristics of the soil rather than the historic use of the land.

The total soil profile on reclaimed land must be a minimum of 48 inches, including topsoil and subsoil. In addition, a topsoil substitute may be used where it is determined selected overburden materials are equal or more suitable chemically and physically for sustaining revegetation than the existing topsoil. Occasionally root medium may need to be stockpiled to meet total soil depth and quality requirements for a selected postmining land use.

Gob and Slurry -The operation plan must detail where coal will be stockpiled, as well as how and if it will be cleaned and processed. Coal processing waste (gob and slurry), which are coarse and fine waste, respectively, from the coal cleaning process, can be potentially acid-forming and/or toxic.
The plan must outline how gob and slurry will be disposed. The material must be treated or covered with a minimum of four feet of nontoxic, noncombustible earthen material to prevent production of acid water.

Grading and Soil Replacement -
Operators must plan to provide rough grading of rocky, mined overburden within 180 days of coal removal and must have no more than four ungraded spoil ridges behind the active pit. This grading is done before subsoil or topsoil is replaced. Water that accumulates between spoil ridges should be diverted and drained prior to grading to aid drying and limit compaction with machinery.
The replaced overburden must be shaped to result in adequately drained land with its approximate original contour. Preexisting streams must be replaced. Material from the initial pit or box cut must be graded to blend with unmined land and have a maximum outslope of 25 percent.
Along the sides of the pit where overburden has been replaced, material must be blended with unmined land, providing a maximum outslope of 15 percent, if compatible with the reclamation plan. Final grading must be completed by the fall of the year following each year’s mining. Final grading includes any root medium replacement, topsoil replacement and installation of erosion control measures such as terraces, diversions, grass waterways ad drains.

Roughening the ground surface, particularly on steep slopes, before applying soil enures cohesion, prevents slippage and limits erosion. Operators also grade replaced soil during dry periods to limit compaction.

The total soil profile, including subsoil and topsoil, must be a minimum of 48 inches for prime farmland and highcapability land, including fragipan soils. Operators must guarantee the replacement of topsoil to a depth that will ensure the development of the selected post-mining land use. All previously existing topsoil must be replace on prime farmland. In the case of high-capability land, all previously existing topsoil must be replaced with a minimum of eight inches of topsoil. For other land capabilities, a minimum of six inches of topsoil is required. Unless they existed before mining, no rocks may be present in prime farmland topsoil. Subsoil, or root medium, must be equivalent to or better than that which existed before mining.
No coarse fragments greater than 10 inches maybe present in root medium of high-capability lands. The volume of coarse fragments in the root medium must be less than 20 percent, and clay content cannot exceed 40 percent.

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The key to a successful restoration is often dependent upon the proper placement of soils that will best support vegetation. One means to do this is to develop a detailed soil survey for the project and proposed borrow areas. Use the soil survey to identify the types and extent of soil materials and those that will best support vegetation.

Soil permeability is often a problem on reclaimed soils. Improve soil permeability after placing backfill material by using tillage or deep ripping to decrease compaction, and promote infiltration and root development. Do not plan practices to promote infiltration if seepage through cover materials can increase acid mine drainage.

Maintenance activities should be completed on a regular basis after the initial reclamation, to ensure success. The construction of stabilized access roads will allow access to the site for maintenance, without causing erosion problems.