Sand and Gravel



In Illinois, aggregates primarily consist of limestone bedrock or Sand and Gravel deposits which result from the weathering of bedrock and subsequent transportation and deposition of the material by streams or glaciers.

Sand and gravel are commonly mined in open pits or, if mined from rivers, streams, or lakes by dredging. Mining and processing consist of four major stages: site preparation, mining, processing, and reclamation.

Natural aggregates are widely distributed throughout Illinois and the United States in a variety of geologic environments and are used in the construction industry for structural fill material, and in concrete and asphalt.



Dry Mining (including site preparation)

Dry mining consists of the removal of soil material above the mineral deposit. Sand and gravel is then mined using equipment such as front end loaders.

It is then loaded into trucks or onto conveyors that transport it to the processing facility.

Dredging

Deposits from rivers, streams, or from below the water table, are commonly removed using a dredge. Some dredging operations process materials on board a floating hull; others ship it to a processing facility on shore.



Processing

Processing includes screening and sizing and sometimes crushing and washing.

The resulting material is stockpiled according to size and quality. (Top left image)

It is later blended according to the specifications for use in concrete or asphalt.



Reclamation

Reclamation returns the mined area to a beneficial use. Reclaimed pits have been used for residential developments, lakes and recreation areas, storm-water management, farmland, and wildlife preserves.





