Treasures of the Earth

DEC Minerals Division Supervises Land Reclamation

By Christine Reed

McEwan Trucking, East Concord, NY

Alfalfa is growing on the reclaimed area while mining continues.

To some people, they're just rocks. But New York State is a treasure trove of sand and gravel, stones and minerals that — when extracted and processed — are valued at more than $1 billion annually.

Many of the materials are familiar: Sand and gravel, crushed stone, salt (both the table and road variety). But did you know that New York State has the only major mine in the United States of high-grade wollastonite? A mineral with a needle-like structure, its qualities of durability, moisture-resistance and color-fast brilliant whiteness make it suitable for a wide variety of uses from dental cleaning, to car bumpers, to vinyl floor tiles. Wollastonite is also the stuff in the match heads that makes them burn evenly.

New York ranks among the top five states nationally in the production of salt, zinc, talc and garnet. Garnet is the official gem of New York. Ground down, it provides abrasive for sand paper. Polished up, it's a gem stone. One of the largest garnet mining operations in the world is near North Creek in Warren County.

A mineral quiz: What does Albany's Empire State Plaza have in common with the moon? Both feature anorthosite, a metamorphic rock composed mainly of feldspar and some pyroxene and garnet that forms a hard durable stone commonly used in high traffic areas, such as the Plaza. It's one of the primary rocks of the highlands of the moon. It's only found in a few places on Earth, including the High Peaks region of the Adirondacks. Mt. Marcy (New York's highest peak) and Whiteface (the Olympic) Mountain are both made mostly of anorthosite.

Under state law, DEC oversees mineral extraction from mines and wells. Currently, there are more than 2,500 DEC-regulated mines. DEC also oversees the operation of more than 12,000 of oil, gas and salt wells.

Since 1860, about 65,000 wells have been drilled in New York. One of the major objectives of the DEC Division of Mineral Resources is to see that mining and drilling operations cause minimal impact on the environment. DEC requires that operators design and carry out reclamation plans to restore, and often improve, the landscape. In recent years, reclamation projects have included "community benefit" projects that resulted in nature preserves, recreational trails, wetlands and restored wildlife habitats.

The reclamation project at the Galster Sand and Gravel Pit near Manlius, Onondaga County, earned a national award for its owner, T.H. Kinsella Inc. Working with DEC, the mining company excavated 36 acres to a depth of about 20 feet and into the water table. By going beyond the regulatory requirements, the operator developed a 20-acre lake, tennis courts, golf greens, playing fields and picnic areas. The area now abounds with waterfowl and wildlife, including geese, blue herons, fox, deer, turkey and pheasant.

Christine Reed is a geologist with the DEC Division of Mineral Resources in Albany.

Gotta good rock?

The New York State Museum in Albany seeks to add to the world's oldest and largest collection of New York State geologic material. More than 20,000 specimens include every mineral species and variety known to exist in the state, many from old locations depleted more than a century ago. If you would like to make a donation or learn more about New York mining history, DO NOT send a box of rocks. But DO write to: Curator of Geology, New York State Museum, 3140 Cultural Education Center, Albany, NY 12230. The State Museum has a permanent exhibit on "The Minerals of New York."

New York State Museum, Albany

Garnet is the official New York State gem.

From the digital collections of the New York State Library.