2004 New York Mining Industry At a Glance

Active Mines
2,272

Approx. Value
$1 Billion

Affected & Reclaimed Land

Net Affected Acreage	47,099
Life-of-Mine Acreage	110,482
Reclaimed, 2004	1,243
Reclaimed Since 1975	23,300

Owner Type

Industry	1,761
Government	511
- Local Govt.	495
- State Govt.	16

U.S. Quantity Rank

Wollastonite	1st
Garnet	1st
Salt	3rd
Talc	4th

Common Mine Types

Sand & Gravel	1,948
Limestone (dolostone)	98
Bluestone	54
Sandstone	24

Financial Security
For Reclamation
$99,060,756

Annual Regulatory Fees
$2,774,583

Regulated Vs. Unregulated Mines

DEC's statistics in this Annual Report cover only mines regulated under the Mined Land Reclamation Law as described at the right. New York also has many unregulated mines (active & abandoned) that fall outside the law's jurisdiction. Most of these are small mines and/or mines that predate the 1975 law.

Mines need a permit under the Mined Land Reclamation Law if they remove:

- More than 1,000 tons or 750 cubic yards of minerals in 12 consecutive months.
- More than 100 cubic yards of minerals in or adjacent to any waterbody not classified as "protected" by ECL Article 15.

Lands affected by mining before 1975 and not re-affected by later mining are exempt from the Mined Land Reclamation Law.

For Details on Mines in Your Area

Your County's Mined Land Reclamation Summary Report

NYS DEC Division of Mineral Resources 12/31/04

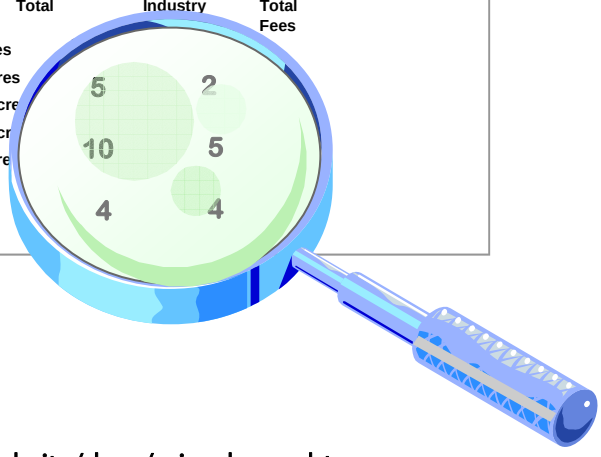
	Active Mines Total	Active Mines Average	Industry Mines Total	Industry Mines Average
No. Mines of Record	25		16	
Acreage Affected	1,324	53	1,028	73
Acreage Reclaimed	531	21	235	16
Net Affected Acreage	793	32	794	56
Life-of-mine Acreage	1,731	69	1,329	94

Number of Active Mines by Owner Type

County	2
Town	7
Industry	16

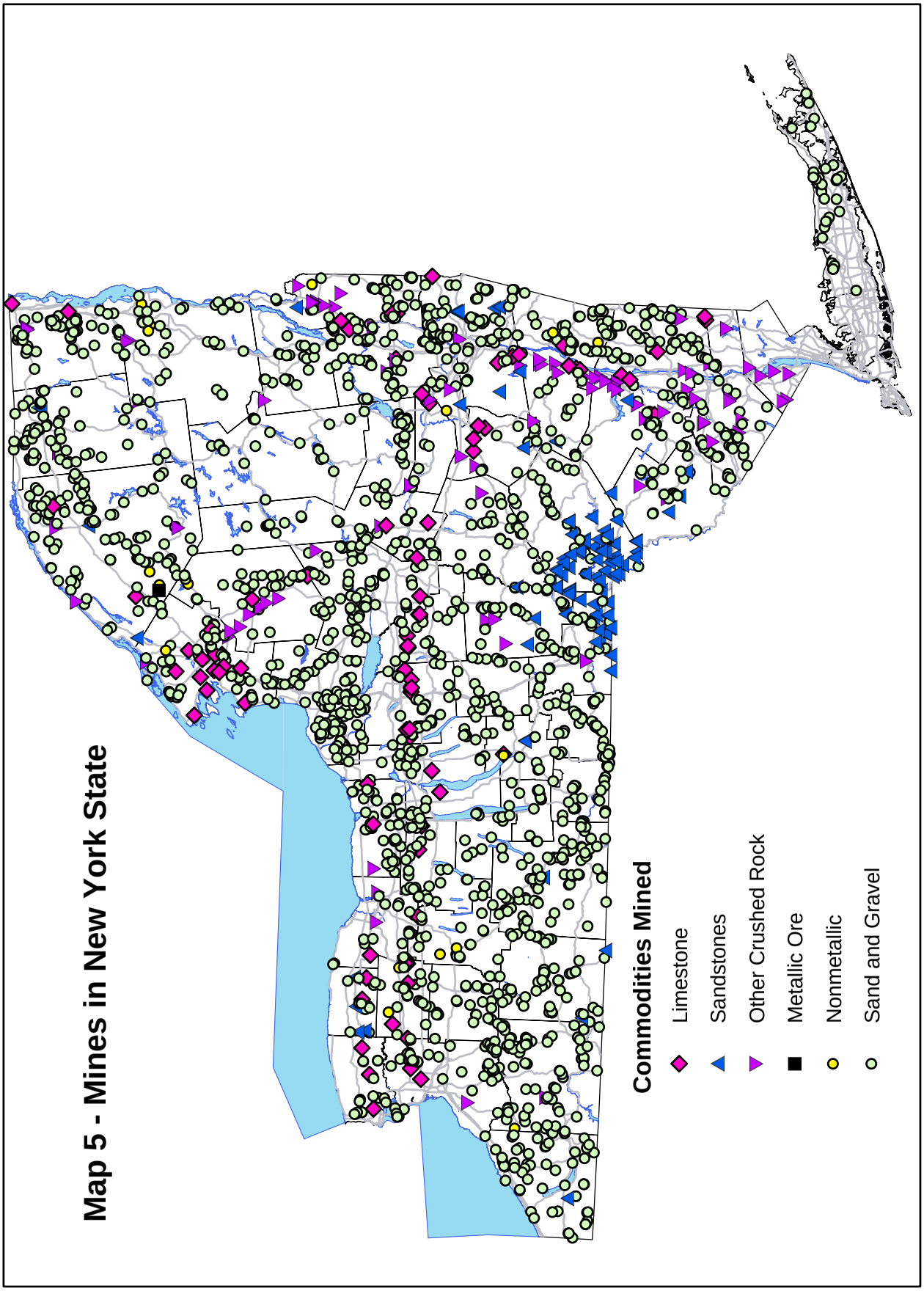
Number of Active Mines by Size

	Total	Industry	Total Fees
0-5 acres	5	2	
6-10 acres	10	5	
11-20 acre			
21-30 acr			
> 31 acre	4	4	



VISIT

http://www.dec.state.ny.us/website/dmn/minedsums.htm


Map 5 - Mines in New York State
Commodities Mined
Limestone
Sandstones
Other Crushed Rock
Metallic Ore
Nonmetallic
Sand and Gravel

MINED LAND PROGRAM OVERVIEW

Types of Mines in New York

In 2004 New York had 2,272 active mines. The vast majority of these mines produce sand and gravel or other surficial deposits such as glacial till, clay or topsoil. However, New York has roughly 250 hardrock mines that produce materials ranging from limestone, shale and salt, to less common products such as wollastonite and talc. Most of the State's hardrock mines are surface quarries, but there are also a few active underground mines. For more details on New York's mining commodities see pages 57-69 and the Appendix on page 81.

Permits Issued 2004

In 2004 staff issued 55 permits for new mines and 420 renewals or modifications, for a total of 475 permits (see Table 19). The relatively low number of new mine permits in 2004 is part of a continuing trend associated with strong public opposition to mining activities. Table 20 shows the top types of new mines permitted.

Mining permits are issued for a term of five years or less and must be renewed. A renewal permit simply authorizes continued operation of the mine. A modification permit allows changes such as expansion of the mine's surface area, mining deeper, or addition of processing equipment. Permit modifications always involve extra review and frequently require an environmental impact statement and public hearing.

Geographic Distribution of Mines

Map 5 on page 45 shows that mines can be found statewide; in 2004 there were active mines in 55 of New York's 62 counties. However, the map does not convey the relatively small percentage of the State's land surface devoted to mining.

The wide variation in county size means comparisons of the acreage under permit in each county can be misleading. For example, St. Lawrence, the State's largest county at 1,700,000 square acres, is 15 times larger than Rockland County. While St. Lawrence County had a relatively high total of 1,653 net affected acres under mining permit in 2004, that represented just 0.01% of the County's land area.

Therefore, Table 21 ranks counties by the percent of their land surface under permit. This table shows that mining activity is concentrated near heavily populated areas which require larger quantities of mineral resources for roads and buildings. In 2004 just 8 counties had more than 0.30% of their land surface under a mining permit (Albany, Dutchess, Genesee, Livingston, Onondaga, Ontario, Rensselaer, Rockland) with a range of 0.35 to 0.44%. For most of the counties with active mines, less than 0.25% of their land is covered by mining permits.

Table 19 - Permits 2000 to 2004

	2000	2001	2002	2003	2004
New Permits	71	71	56	51	55
Renewals & Modifications	290	307	367	538	420
Total Permits	361	378	423	589	475

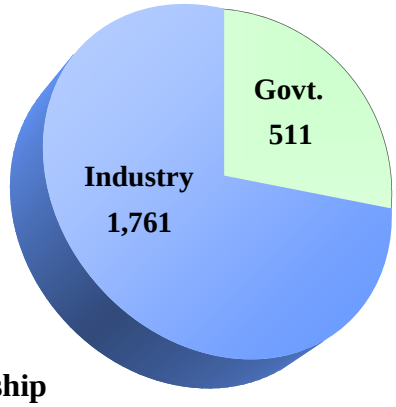
Table 20 - Commodity Type New Mines Permitted, 2004

Sand & Gravel	39
Bluestone	5
Clay	4
Topsoil	3
Dolostone	1
Peat	1

Table 22 shows the top 5 counties for mining permits in 2004. However, note that very few permits were for new mines, just renewals. Table 23 summarizes mining permits issued in 2004 by County.

Owner Type

In 2004 industry operators owned 1,761 mines or roughly three-fourths of the mines in the State. Most of the government mines belong to highway departments that use the material for road maintenance. In 2004 there were 57 county-owned mines and 438 belonging to towns, villages and other small local government entities. In addition to owning roughly one quarter of the mines in New York, government agencies at all levels purchase significant quantities of sand, gravel and other aggregates from commercial mines.



Mine Ownership

Annual Regulatory Fees

In 2004 the Division collected $2,774,583 in annual regulatory fees, up roughly 8% from 2003. Acreage-based fees are collected for individual, industry and state-owned mines. County, town, village and other local government mines are exempt. The fees are used to support the mining program.

Operators who do not pay their fees shortchange the mining program and have an unfair competitive advantage. In 2004 DEC Region 6 ran a successful pilot test of a new permit suspension strategy to collect overdue fees. Upon completion of the successful pilot, the new enforcement program was slated for statewide adoption. Database enhancements now allow staff to more closely monitor payment histories.

Table 21 - Counties with Highest Percentage of Land Under Mining Permit, 2004

County	Population Ctr. Nearby	Active Mines	Net Affected Acreage	Land Percent
Livingston	Rochester	26	1,802	0.45%
Rockland	NY City	4	493	0.44%
Genesee	Buffalo	28	1,297	0.41%
Onondaga	Syracuse	45	1,969	0.39%
Dutchess	NY City	62	1,940	0.38%
Ontario	Rochester	45	1,553	0.38%
Rensselaer	Capital/ Tri-City	55	1,543	0.37%
Albany	Capital/ Tri-City	19	1,218	0.36%

Table 22 - All Mining Permits Top 5 Counties, 2004

	New Permits	Total Permits
Saratoga	1	20
Cattaraugus	1	19
Dutchess	1	19
Jefferson	2	19
St. Lawrence	4	19

Table 23 - Summary of Mined Land Permits Issued, 2004

County	New Permits		Total Permits*	
	Number	Acres	Number	Acres
Albany	2	10	4	109
Allegany	3	8	16	93
Broome	2	20	3	63
Cattaraugus	1	4	19	600
Cayuga	0	0	4	44
Chautauqua	4	22	17	162
Chemung	0	0	7	151
Chenango	0	0	4	147
Clinton	1	4	9	111
Columbia	2	19	10	195
Cortland	0	0	5	201
Delaware	6	33	16	140
Dutchess	1	5	19	516
Erie	1	2	15	489

County	New Permits		Total Permits*	
	Number	Acres	Number	Acres
Essex	0	0	8	55
Franklin	1	5	18	155
Fulton	0	0	2	24
Genesee	0	0	4	171
Greene	1	5	6	139
Hamilton	0	0	5	46
Herkimer	2	9	13	564
Jefferson	2	9	19	266
Lewis	3	13	7	85
Livingston	0	0	8	364
Madison	0	0	5	98
Monroe	0	0	4	101
Montgomery	1	4	3	59
Niagara	1	5	2	10

* Includes new, renewal and modification permits.

Table 23 - Summary of Mined Land Permits Issued, 2004 (continued)

County	New Permits		Total Permits*	
	Number	Acres	Number	Acres
Oneida	2	20	15	253
Onondaga	0	0	13	355
Ontario	1	5	12	803
Orange	0	0	13	224
Orleans	0	0	5	218
Oswego	2	15	11	206
Otsego	0	0	3	45
Putnam	0	0	1	23
Rensselaer	0	0	5	653
Rockland	0	0	2	183
Saratoga	1	20	20	402
Schenectady	0	0	1	11
Schoharie	0	0	1	77
Schuyler	1	7	3	71

County	New Permits		Total Permits*	
	Number	Acres	Number	Acres
Seneca	0	0	1	64
St. Lawrence	4	20	19	1,357
Steuben	0	0	17	505
Suffolk	4	15	11	121
Sullivan	1	5	7	540
Tioga	0	0	4	30
Tompkins	0	0	2	85
Ulster	0	0	9	139
Warren	0	0	13	151
Washington	3	76	13	231
Wayne	1	3	13	539
Wyoming	1	2	7	50
Yates	0	0	2	55

* Includes new, renewal and modification permits.

Trends in Mine Size and Number

Mine renewal permits issued in 2004 ranged in size from 1 to 432 acres. In contrast, roughly 70 percent of new mines permitted in 2004 were under 5 acres. The largest new mine was the 64-acre Smiths Basin dolostone mine in Washington County belonging to Jointa Galusha.

Table 24 gives 2000-2004 size range information for all active mines based on net affected acreage. The table shows that the number of large mines has been increasing over time while the number of small mines has been decreasing.

The minor projects in the first row of the table are always less than five acres in size. They are subject to a simpler review process, but must comply with very strict criteria: minimum setbacks from homes and surface waters; a maximum 20-foot mine depth; no mining below water table; no hardrock (consolidated material) mining; and no on-site processing equipment, such as washing or crushing machines.

Mine Acreage Types and Statistics

Net Affected Acreage - Net affected acreage is the total affected acreage ever covered under a mined land permit minus the reclaimed acreage. In 2004 the total affected land that mine operators were authorized to extract minerals from under their current permits was 47,099 acres.

Life-of-Mine Acreage - Operators must indicate the total area that they expect to mine under past, current and future permits for a site. In 2004 this total life-of-mine area, which also includes past reclaimed acreage, was 110,482 acres.

Reclaimed Acres - In 2004 Mined Land staff approved final reclamation of 764 acres at 102 closed mines and concurrent reclamation of 479 acres at 72 operating mines. Table 25 on page 57 summarizes 2004 reclamation by County.

Since 1975 a total of 23,300 acres of mined land have been reclaimed.

Table 24 - Net Affected Acreage of Existing Mines, 2000-2004

	2000	2001	2002	2003	2004
Minor Projects	85	87	82	80	78
0-5 Acres	901	852	814	751	712
6-10 Acres	603	605	584	549	532
11-20 Acres	436	441	449	446	442
21-30 Acres	155	166	178	172	179
>30 Acres	295	308	310	319	329
Total Mines	2,475	2,459	2,417	2,317	2,272

MINE RECLAMATION

Reclaimed Land Uses

Final uses of mined land can vary considerably depending on location, size and depth of the site, surrounding land uses and local zoning. Farmland and pasture are two of the most common reclamation objectives in New York State, but mined land is also reclaimed to residential, forestry, wildlife, recreational, commercial and industrial uses.

Reclamation takes two forms based on timing of the work - concurrent or final (for 2004 acreage statistics see pages 50 and 53). Concurrent reclamation is reclamation of an affected or mined-out area while resources are still being extracted from other parts of the mine site.

The Division of Mineral Resources strongly promotes concurrent reclamation, particularly for mines over 10 acres. Concurrent reclamation is almost always economically feasible and has a number of advantages. Chief among these is the reduced potential for negative environmental impacts (dust, erosion, sedimentation) and the improved standing of the mine in the eyes of the surrounding community.

Financial Security

At the end of 2004 the Division held $99,060,756 in financial security that mine operators posted to guarantee the reclamation of mined land. This was an increase of $5.8 million from 2003. If an operator fails to reclaim a mine, DEC claims the financial security and uses it to reclaim the land. However, recent reclamation experiences show that posted bond amounts have not kept pace with rising reclamation costs over the years. The Division started a detailed analysis of financial security on file in 2004; the law authorizes DEC to increase financial security requirements if necessary. The statewide average of $2,334/ acre is insufficient to cover complete reclamation in most cases.

DEC Mine Reclamation

In 2004 the Division of Mineral Resources claimed the financial security for two mines and arranged reclamation with DEC's Operations Division. The mines were in Chautauqua and Onondaga Counties. The Santaro mine shown in the photo below was a steep site with safety problems, trash, erosion and offsite sedimentation.

DEC Mine Reclamation

Final seeding of the Santaro mine site in Onondaga County. The sprayer machine contains seed, water and fertilizer.

2004 Reclamation Highlights

Dutchess Quarry and Supply Company was the winner of the 2004 New York State Mined Land Reclamation Award for their voluntary reclamation of an abandoned mine in Pleasant Valley, Dutchess County. The company acquired the 15-acre Elizabeth Lansing Sand and Gravel Mine, graded the site to match the contours of the surrounding land and seeded it with a cool-season grass and legume mixture. The reclamation replaced an eyesore with a beautiful open meadow. Other notable reclamation during 2004 included:

- Lafarge continued its concurrent reclamation project at their Freedom Pit in Cattaraugus County. In the spring of 2004 DEC Region 9 staff inspected 7,200 trees and shrubs planted on 18 acres the previous year. The reclamation project will ultimately include Karner Blue butterfly habitat, a blight-resistant chestnut-oak forest, wetlands and shrub transition zones for songbirds and other wildlife. Staff also inspected about 10 acres planted to grass savannas and blue lupine.

- Country Side Sand and Gravel in Cattaraugus County opened over 7,000 feet of shoreline to public fishing on a lake excavated in the course of mining. The company also built a one-acre parking lot for public use. A fence separates the 20- to 40-foot deep lake from the active mine. In September 2004 a fisherman caught a 14 lb., 33-inch pike.

- T. H. Kinsella, a company with several mines in DEC Region 7, sought approval to create wetland credits by voluntarily altering the approved reclamation plan for one of their mines from a cornfield to a wetland. As a result, Region 7 Mined Land staff worked with the U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service, USEPA, and DEC's Divisions of Environmental Permits and Fish and Wildlife to start development of the first Wetland Mitigation Banking program in Region 7.

Volunteers from DEC's Camp Rushford and mine employees helped DEC Fish and Wildlife staff band Canada geese at Country Side Sand and Gravel's Dayton mine in Cattaraugus County (see above). The geese reside on one of the facility's lakes created by mining into the groundwater table. Fish and Wildlife staff herded roughly 300 birds into collection pens and the volunteers carried the birds to the DEC biologists for banding.

Table 25 - Reclaimed Acreage Summary, 2004*

County	Concurrent Reclamation	Final Reclamation	Total Reclamation
Albany	-	42	42
Allegany	-	25	25
Broome	70	4	74
Cattaraugus	-	5	5
Chautauqua	3	6	9
Chemung	-	9	9
Chenango	3	7	10
Clinton	13	20	33
Columbia	-	27	27
Cortland	-	7	7
Delaware	9	47	56
Dutchess	44	86	130
Erie	-	13	13
Essex	5	22	27
Franklin	18	8	26
Fulton	5	-	5
Genesee	15	2	17
Greene	4	4	8
Hamilton	-	2	2
Herkimer	5	1	6
Jefferson	29	17	45
Lewis	-	15	15
Madison	5	12	17

* Figures rounded so totals may not be exact.

Table 25 - Reclaimed Acreage Summary, 2004* (continued)

County	Concurrent Reclamation	Final Reclamation	Total Reclamation
Monroe	2	5	8
Oneida	2	23	25
Onondaga	2	1	3
Ontario	30	40	70
Orange	2	133	135
Oswego	29	1	30
Otsego	5	7	12
Rensselaer	5	35	40
Saratoga	5	16	21
Schenectady	1	-	1
Schuyler	6	10	16
St. Lawrence	81	36	117
Steuben	13	-	13
Sullivan	2	-	2
Suffolk	-	2	2
Tioga	10	-	10
Tompkins	4	11	15
Ulster	6	20	26
Warren	-	13	13
Washington	6	18	24
Wayne	43	9	52
Westchester	-	5	5
Total	**479**	**764**	**1,243**

* Figures rounded so totals may not be exact.

INSPECTIONS AND REMEDIATION

Inspections

In 2004 Mined Land staff performed 2,226 mine inspections and traveled 190,306 miles. Staff inspect mine sites:

- during permit application review,
- during the operating phase for general compliance,
- to ensure that violations are remediated as required,
- to ensure that reclamation complies with requirements, and
- to investigate complaints.

Violations and Fines

Violations are handled with a mixture of enforcement tools, remediation requirements and penalties. In 2004 the Mined Land Program collected $40,800 in fines and penalties.

At right is an example of severe erosion and slumping caused by a mine operator's failure to install adequate erosion control measures. As required by the Department, the operator restored and revegetated the area.

Remediation After Violation

Before

After

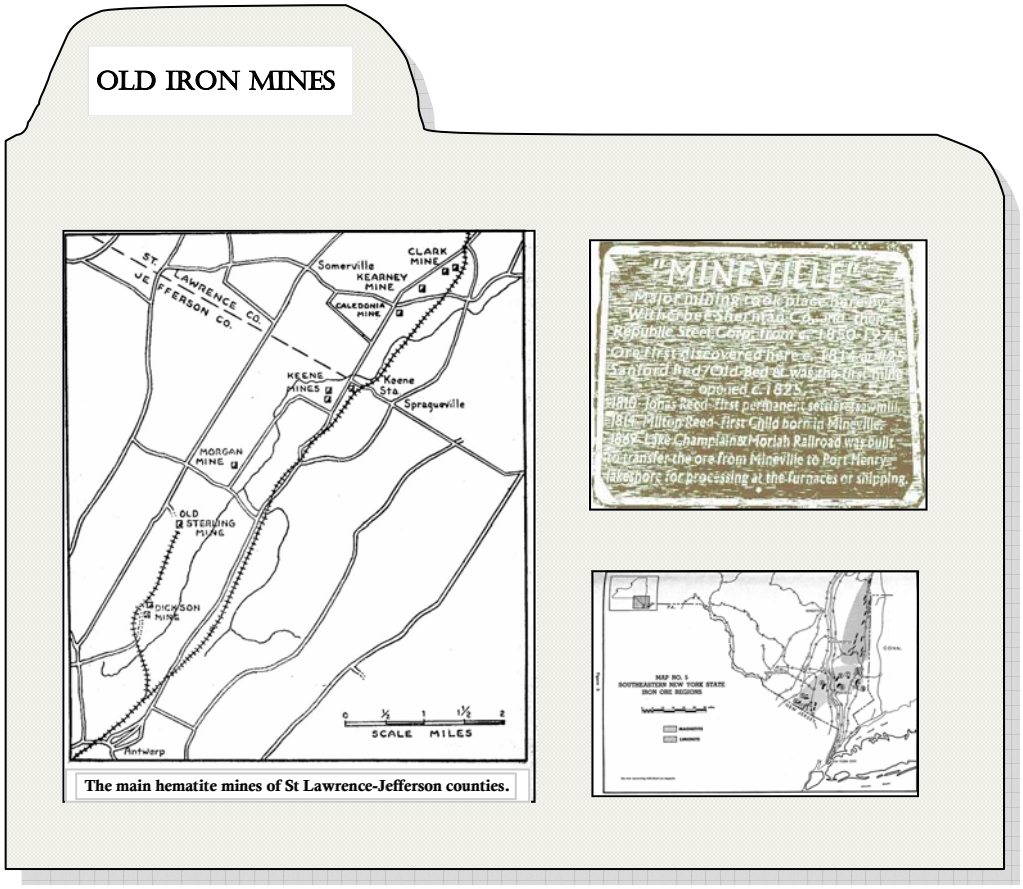
For More Information on the Mined Land Reclamation Program See the new FLASH presentation at

http://www.dec.state.ny.us/website/dmn

OLD ABANDONED MINES

The mining industry in New York achieved its greatest extent during the 19th and early 20th centuries. However, many underground mines from that period have long been abandoned with few remaining records available.

In 2004 DEC and the New York State Geological Survey (NYSGS) continued their joint work under a small grant from the U.S. Mine Safety and Health Administration (MSHA). DEC and the NYSGS have been researching information on roughly 255 major underground mines throughout the State. Staff working on the project established an underground mine database to index mine maps. They also scanned a total of 900 images of mine maps and other maps showing mine locations. If additional funding is found, the two agencies will georeference all available mine maps and provide the information in a web-based format.



The main hematite mines of St Lawrence-Jefferson counties.

Many of the mine maps collected by DEC and the NY State Geological Survey are from old iron mines. Iron ore was once a very important product for NY State.