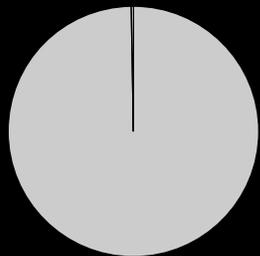
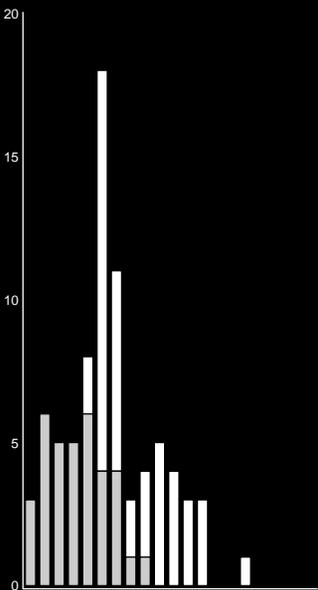


Iowa



Production tonnage 1978-1997

■ U.S. Total
■ Iowa Coal Production



Number of new permits 1978-1997

■ Interim Program
■ Permanent Program

Largest number of abandoned problems in non-producing states

Coal-bearing regions cover about 18,464 square miles or one third of Iowa, primarily in the south-central part of the state. Coal beds are typically thin seams with a maximum thickness of five feet, and are covered by glacial deposits, except where streams cut through the deposits and expose the coal. Iowa's coal reserves are estimated to be 2.2 billions tons, less than one-half of one percent of total U.S. reserves.

Coal deposits in Iowa were first mined in the 1840s, although some earlier mining probably occurred at exposed outcrops along the Mississippi River. Coal was first used for blacksmithing, domestic purposes, and to power steamboats and railroads. Later the demand changed to fuel for electric generating plants. Production peaked in 1917, when Iowa produced 9 million tons of coal. Since then production has declined and in 1995 coal production ended.

The Iowa regulatory program was conditionally approved January 21, 1981. Full approval was received March 28, 1982, and the Abandoned Mine Land Program was approved March 28, 1983.

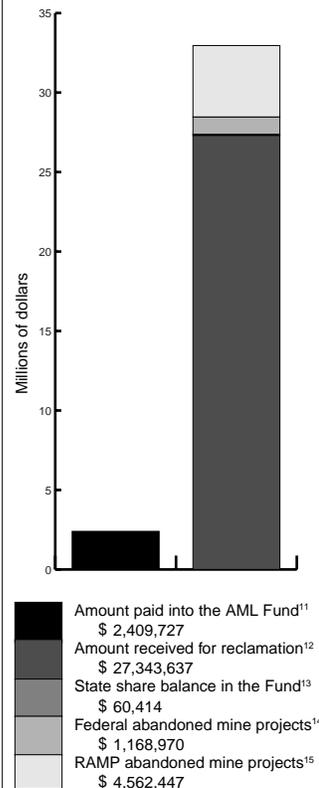
The Office of Surface Mining has completed all emergency Abandoned Mine Land reclamation in Iowa, and has completed 15 projects costing \$248,000. Iowa emergency hazards have been subsidence or open mine shafts.

Since the Abandoned Mine Land Program was approved, the state has spent almost \$25 million reclaiming non-emergency projects. The largest expenditure has been \$10 million for dangerous highwall reclamation.

Iowa presently has a \$23 million inventory of remaining high-priority Abandoned Mine Land problems and almost \$15 million of remaining environmental problems. Included in this inventory are: \$9 million of lands causing clogged streams, \$4 million of dangerous piles and embankments, \$3 million of dangerous highwalls, and over \$1 million of subsidence problems near communities including Des Moines, Oskaloosa, Knoxville, and What Cheer. Iowa receives the minimum program annual Abandoned Mine Land reclamation grant to eliminate these problems.

coal production¹⁰

	1978		1997		1978-1997 Rank
	Amount	Percent U.S. Total	Amount	Percent U.S. Total	
Tons Produced					
Surface	193,082	0.07%	0	0%	24
Underground	141,422	0.5%	0	0%	15
Lignite	0	0%	0	0%	0
Total	334,505	0.08%	0	0%	27
Number of Producing Mines					
Surface (bituminous coal)	10	0.3%	0	0%	20
Underground	2	0.07%	0	0%	17
Lignite (surface)	0	0%	0	0%	0
Total	12	0.2%	0	0%	22
Mine Production					
Average	27,875	39.2%	0	0%	
>1,000,000 tons	0	0%	0	0%	
300,000-1,000,000 tons	0	0%	0	0%	
<300,000 tons	12	0.2%	0	0%	



Active mining and reclamation¹⁶

	1978	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	Total
Number of New Permits																					
Surface Mining	3	6	2	2	0	12	5	1	1	3	2	1	1	0	0	1	0	0	0	0	40
Underground Mining	0	0	1	1	4	4	5	2	3	2	2	2	2	0	0	0	0	0	0	0	28
Other	0	0	2	2	4	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	11
Acreage Permitted																					
Surface Mining	1,231	1,345	150	111	379	2,232	1,326	1,944	80	303	461	401	33	0	0	250	0	445	0	0	10,691
Underground Mining	0	0	11	0	0	342	810	2,500	1,770	0	0	0	0	0	0	0	0	484	0	0	5,917
Other	0	0	150	0	0	150	40	0	0	0	0	0	0	0	0	0	0	111	0	0	451
Acreage of Bond Release																					
Interim Prog. (final)	0	0	0	100	60	0	250	20	34	375	0	0	0	0	0	0	0	0	0	0	839
Phase 1	0	0	0	0	0	0	0	0	0	233	460	1,212	50	0	0	0	0	0	0	0	1,955
Phase 2	0	0	0	0	0	0	0	0	0	192	0	57	78	0	0	0	0	0	0	0	327
Phase 3	0	0	0	0	0	0	0	0	404	85	0	0	0	0	0	0	0	0	0	0	489
Inspections																					
Complete	NA	NA	NA	NA	NA	109	130	129	125	125	114	120	126	112	112	112	112	112	89	112	1,739
Partial	NA	NA	NA	NA	NA	135	168	211	235	214	249	225	235	200	200	224	224	224	178	224	3,146
Oversight	0	0	0	0	NA	35	53	39	NA	31	27	14	17	17	12	26	18	17	5	16	327
Citations Issued																					
NOV's	2	5	9	0	NA	11	39	66	24	53	37	33	36	52	28	38	31	64	45	77	650
CO's	0	0	3	0	1	0	0	0	0	1	0	0	4	35	0	1	0	73	28	69	215

Abandoned coal mine reclamation 1977-1997¹⁷

	Reclaimed Problems			Remaining Problems	
	OSM Emergency	State Emergency	Non-Emergency	Number	Estimated Cost
Priority 1 & 2 (Protection of Public Health, Safety, and General Welfare) and Emergency Projects					
Clogged Streams (miles)	0	0	6.6	10.4	\$ 602,400
Clogged Stream Lands (acres)	0	0	1,030.0	1,368.5	8,967,800
Highwalls (feet)	0	0	69,442.0	46,389.0	3,218,561
Impoundments (count)	0	0	2.0	4.0	334,001
Piles & Embankments (acres)	0	0	844.9	565.5	4,031,500
Slides (acres)	0	0	0	42.0	1,014,000
Gases (count)	0	0	0	0	0
Equipment & Facilities (count)	0	0	4.0	5.0	60,000
Water Bodies (count)	0	0	26.0	23.0	2,028,225
Industrial Waste (acres)	0	0	7.0	50.5	454,100
Portals (count)	0	0	1.0	0	0
Polluted Water: Agriculture & Industrial (count)	0	0	30.0	12.0	777,000
Polluted Water: Human Consumption (count)	0	0	2.0	5.0	460,900
Subsidence (acres)	0.5	0	2.0	23.0	1,150,000
Surface Burning (acres)	0.1	0	10.0	0	0
Underground Mine Fires (acres)	0	0	0	0	0
Vertical Openings (count)	5.0	0	21.0	5.0	26,000
Total					\$ 23,124,487
Priority 3 (Environmental Restoration)					
Bench (acres)	0	0	0	5.0	\$ 35,000
Industrial Waste (acres)	0	0	2.0	11.5	14,403
Equipment & Facilities (count)	0	0	0	1.0	200
Gob (acres)	0	0	1.0	3.0	15,500
Highwall (feet)	0	0	800.0	57,022.0	4,777,163
Haul Road (acres)	0	0	5.0	23.5	76,178
Mine Opening (count)	0	0	1.0	0	0
Pit (acres)	0	0	18.5	140.0	1,851,425
Spoil Area (acres)	0	0	442.5	1,449.3	7,797,249
Slurry (acres)	0	0	0	1.0	200
Slump (acres)	0	0	0	0	0
Water (gallons/minute)	0	0	0	337.5	185,512
Total					\$14,752,830