

# Kentucky

## The state with the most active coal mines

Through 1987, Kentucky was the nation's largest coal producer. Currently it ranks second in production, behind Wyoming. Kentucky's coal reserve base is mostly bituminous and found in two separate areas; the mountainous, steep-sloped Eastern Coal Field, where underground, contour, and mountaintop mining occurs, and the flat to rolling Western Kentucky Coal Field where area and underground mining predominates. Lignite coal occurs in the westernmost counties; however, no lignite mining is occurring. Since 1979, coal produced from underground mines has steadily increased and currently accounts for more than 60 percent of the production.

Conditional primacy was granted to Kentucky on May 18, 1982, and final regulatory approval was granted on May 30, 1985. The Abandoned Mine Land Program was approved May 18, 1992. Kentucky chose not to have the emergency abandoned mine lands program so all emergency abatement work in the state is completed by the Office of Surface Mining.

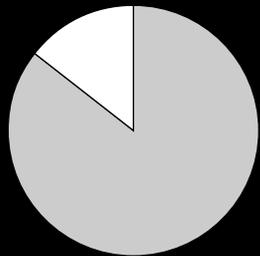
Since 1977, the Office of Surface Mining has completed 621 emergency projects in Kentucky, ranking it second (Pennsylvania was first) among states in the number of emergency projects. Reclamation costs of emergency projects in Kentucky are higher than any other state, largely because of the predominance of landslides that are expensive to reclaim.

Over the 20-year period, Kentucky has received more than \$300 million for the reclamation of non-emergency abandoned mine hazards. In steep Eastern Kentucky, landslides are the principal problem, and in Western Kentucky the principal problems are unreclaimed spoil and refuse piles, pot-hole subsidence, and acid mine drainage. In both areas, the impact of abandoned coal mining on potable and industrial water supplies has been significant. Between 1984 and 1996 the state completed 25 water supply projects costing \$29 million. These projects have provided residents with dependable water supplies to replace those that were destroyed or damaged by abandoned mine problems.

The current inventory of remaining high-priority abandoned mine hazards in Kentucky is over \$300 million. In addition, approximately 200 high-priority landslides are added to the inventory annually as they are discovered or emergencies arise.

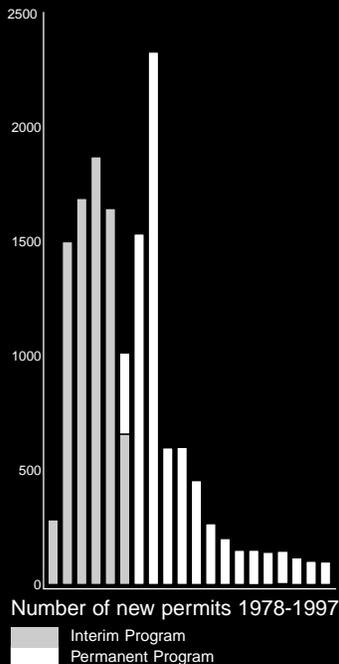
## coal production<sup>10</sup>

	1978		1997		1978-1997 Rank
	Amount	Percent U.S. Total	Amount	Percent U.S. Total	
<b>Tons Produced</b>					
Surface	46,562,453	19.0%	58,974,943	10.1%	2
Underground	36,959,158	24.5%	96,300,023	22.9%	2
Lignite	0	0%	0	0%	0
<b>Total</b>	<b>83,521,612</b>	<b>20.0%</b>	<b>155,274,966</b>	<b>14.2%</b>	<b>2</b>
<b>Number of Producing Mines</b>					
Surface (bituminous coal)	764	22.9%	488	20.3%	1
Underground	783	30.9%	644	37.7%	1
Lignite (surface)	0	0%	0	0%	0
<b>Total</b>	<b>1,547</b>	<b>26.3%</b>	<b>1,132</b>	<b>27.4%</b>	<b>1</b>
<b>Mine Production</b>					
Average	53,989	75.9%	137,168	52.1%	
>1,000,000 tons	7	14.2%	36	17.4%	
300,000-1,000,000 tons	50	24.3%	121	36.0%	
<300,000 tons	1,450	26.4%	975	27.1%	



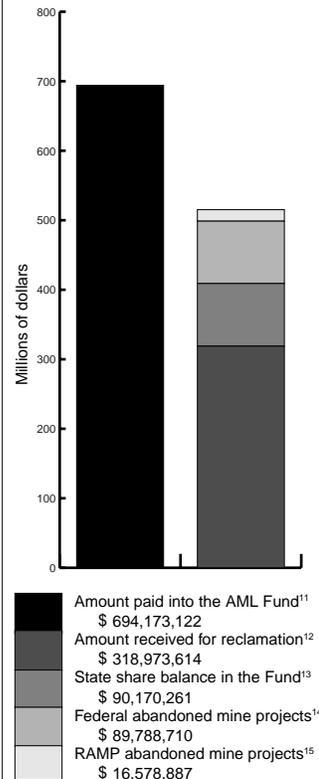
Production tonnage 1978-1997

■ U.S. Total  
■ Kentucky coal production



Number of new permits 1978-1997

■ Interim Program  
■ Permanent Program



# Active mining and reclamation<sup>16</sup>

	1978	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	Total
<b>Number of New Permits</b>																					
Surface Mining	355	767	1,076	1,144	932	755	1,069	1,327	419	232	186	140	120	78	97	63	72	55	56	57	9,000
Underground Mining	120	647	515	505	423	225	411	780	155	131	147	103	68	61	46	64	62	50	42	35	4,592
Other	16	83	95	219	287	31	51	218	23	236	121	23	13	11	8	14	8	12	4	7	1,481
<b>Acres Permitted</b>																					
Surface Mining	23,250	65,536	103,450	83,312	6,072	19,933	80,714	43,211	28,416	34,294	31,008	21,659	22,534	18,040	28,660	14,698	18,321	18,530	15,214	12,692	698,544
Underground Mining	2,248	8,891	8,306	6,703	292	83,920	225,868	61,254	24,515	49,809	50,982	42,931	29,104	28,903	36,981	39,597	52,546	46,762	33,978	28,541	862,131
Other	786	4,231	4,961	7,757	130	423	10,719	3,043	953	2,404	1,874	1,267	795	506	258	1,049	433	479	357	544	42,969
<b>Acres of Bond Release</b>																					
Interim Prog. (final)	0	0	0	0	31,929	35,205	116,903	68,932	20,253	35,550	60,592	35,705	18,895	9,330	0	0	0	0	0	0	433,294
Phase 1	0	0	0	0	0	0	0	0	0	11,100	0	16,080	16,030	13,440	16,991	14,378	14,755	15,598	17,047	8,480	143,899
Phase 2	0	0	0	0	0	0	0	0	0	240	0	1,500	4,850	9,660	13,077	13,636	11,370	13,362	8,625	7,251	83,571
Phase 3	0	0	0	0	0	0	0	0	0	38,760	41,310	38,895	30,565	15,299	3,840	9,667	17,347	15,839	16,991	19,925	248,438
<b>Inspections</b>																					
Complete	NA	NA	3,444	9,161	11,177	24,882	36,396	34,570	21,595	20,764	18,817	22,008	16,896	21,048	16,052	16,308	15,197	14,106	13,530	12,692	328,643
Partial	NA	NA	8,911	18,419	23,726	19,930	29,098	35,382	26,880	26,100	25,917	27,610	25,003	26,651	23,225	18,443	18,499	18,448	17,084	17,758	407,084
Oversight	0	0	0	0	0	745	673	1,090	NA	1,053	1,016	914	2,304	2,256	1,627	1,610	1,068	1,146	647	931	17,080
<b>Citations Issued</b>																					
NOV's	NA	NA	1,344	1,425	1,664	1,076	1,688	2,574	2,794	2,888	2,809	3,667	3,007	2,676	1,775	1,509	3,147	2,633	1,448	1,926	40,050
CO's	NA	NA	NA	NA	NA	300	604	547	653	703	714	664	629	478	356	275	223	235	114	137	6,632

# Abandoned coal mine reclamation 1977-1997<sup>17</sup>

	Reclaimed Problems			Remaining Problems	
	OSM Emergency	State Emergency	Non-Emergency	Number	Estimated Cost
<b>Priority 1 &amp; 2 (Protection of Public Health, Safety, and General Welfare) and Emergency Projects</b>					
Clogged Streams (miles)		0		42.5	\$ 3,713,174
Clogged Stream Lands (acres)		0		10,610.2	80,287,682
Highwalls (feet)		15,144.0	0	53,954.0	5,784,038
Impoundments (count)		17.0	0	141.0	2,828,887
Piles & Embankments (acres)		0	0	2,126.7	10,486,567
Slides (acres)		582.7	0	2,136.1	46,192,784
Gases (count)		0	0	0	0
Equipment & Facilities (count)		5.0	0	209.0	1,258,890
Water Bodies (count)		0	0	52.0	4,025,627
Industrial Waste (acres)		0	0	69.5	74,316
Portals (count)		245.0	0	1,584.0	1,936,910
Polluted Water: Agriculture & Industrial (count)		4.0	0	6.0	149,750
Polluted Water: Human Consumption (count)		0	0	5,785.0	3,269,593
Subsidence (acres)		92.7	0	81.0	130,259,000
Surface Burning (acres)		14.0	0	229.6	4,179,884
Underground Mine Fires (acres)		7.7	0	92.0	7,474,951
Vertical Openings (count)		6.0	0	101.0	377,486
<b>Total</b>					<b>\$ 302,299,539</b>
<b>Priority 3 (Environmental Restoration)</b>					
Bench (acres)		0	0	656.7	\$ 5,505,368
Industrial Waste (acres)		0	0	2.0	104,500
Equipment & Facilities (count)		0	0	52.0	527,606
Gob (acres)		0	0	235.8	2,625,614
Highwall (feet)		0	0	2,000.0	1,027,500
Haul Road (acres)		0	0	0.4	361,166
Mine Opening (count)		0	0	76.0	320,416
Pit (acres)		0	0	21.0	2,930,749
Spoil Area (acres)		0	0	1,275.7	16,978,133
Slurry (acres)		0	0	58.0	343,000
Slump (acres)		0	0	10.0	64,650,000
Water (gallons/minute)		0	0	25.0	451,717
<b>Total</b>					<b>\$ 95,825,769</b>