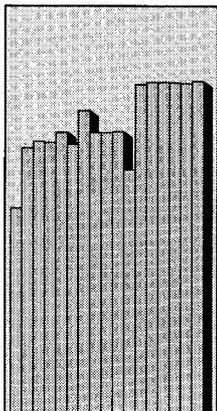


# ABANDONED MINE LAND RECLAMATION

## ELIMINATING HEALTH AND SAFETY PROBLEMS

**T**itle IV of SMCRA -- the Abandoned Mine Land Reclamation Program -- provides for the restoration of lands mined and abandoned or left inadequately restored before August 3, 1977. Situations of danger to public health, safety and general welfare are given priority.

### Fund Management



Abandoned Mine Land Fund Collections 1978-1994

Production fees of 35 cents per ton of surface mined coal, 15 cents per ton of coal mined underground, and 10 cents per ton of lignite are collected from coal producers at all active coal mining operations. The fees are deposited in

the Abandoned Mine Reclamation Fund, which is used to pay the reclamation costs of abandoned mine land projects. The fund consists of fees, contributions, late-payment interest, penalties, administrative charges, and interest earned on investment of the fund's principal. Since January 30, 1978, when the first fees were paid, through September 30, 1994, the fund has collected \$3,765,937,237.

Before reclamation this 8,000 acre mine site contained some of the nation's worst acid soil and water associated with surface coal mining. Today, after treatment and reclamation, it is a valuable wetland.

Expenditures from the fund are made through the regular budgetary and appropriation process. SMCRA specifies that 50 percent of the reclamation fees collected in each state with an approved reclamation program, or within Indian lands where the tribe has an approved reclamation program, are to be allocated to that state or tribe. That 50 percent is designated as the state or tribal share of the fund. The remaining 50 percent (the federal share) is used by the Office of Surface Mining to complete high-priority and emergency projects under its Federal Reclamation Program, to fund the Rural Abandoned Mine

Program (RAMP) administered by the U.S. Department of Agriculture, to fund the Small Operator Assistance Program (SOAP), to fund reclamation directly through state reclamation programs, and to pay for audit and administrative costs. In 1991, at the direction of Congress, a formula to distribute federal-share money to the state reclamation programs was established based on historic coal production. Table 9 shows collections and funding by states for 1994.

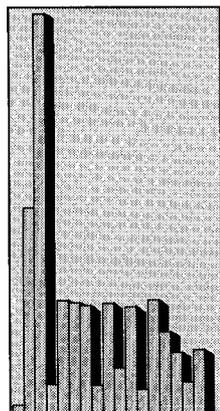
The Abandoned Mine Reclamation Act of 1990 (Public Law 101-508) extended fee collection authority through



September 30, 1995, and the Energy Policy Act of 1992 (Public Law 102-468) further extended the fee collection authority until September 30, 2004.

Under 1990 Congressional authority (Public Law 101-508), the Office of Surface Mining began investing abandoned mine land funds in 1992. By law, the Office of Surface Mining is restricted to investing in certain market-based securities issued by the U.S. Treasury, such as bills, notes, bonds, and one-day certificates. Total investment earnings for 1994 were \$40.08 million. The average interest earned during this year was 3.31 percent. At the end of the year, the Office of Surface Mining had more than \$1.17 billion invested in Treasury securities. The Energy Policy Act of 1992 (Public Law 102-486) stipulated that all 1993 investment earnings received and all future investment earnings are to be made available for transfer from the Abandoned Mine Reclamation Fund to the United Mine Workers Association Combined Benefits Fund, beginning in 1996.

**Federal Reclamation Program**



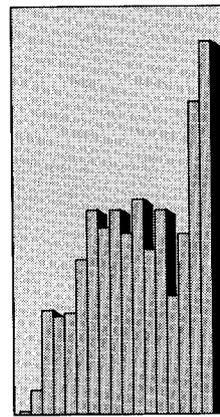
Interior Department Projects 1978-1994

Under Sections 402 and 407 of SMCRA, the Secretary of the Interior is authorized to expend Abandoned Mine Reclamation Fund monies for non-emergency reclamation of high-priority sites that present an extreme danger to the public. A non-emergency is defined in 30 CFR 870.5 as "a condition that could reasonably be expected to cause substantial harm to persons, property, or the environment and to which persons or improvements on real property are currently exposed."

Until 1980, when states and Indian tribes began to receive approval of their

abandoned mine land programs, all reclamation was administered by the Office of Surface Mining. However, as state and tribal programs were approved and the states and tribes assumed responsibility for correcting abandoned mine land problems, the Office of Surface Mining has greatly reduced its direct participation in this portion of the program. During 1994, work was accomplished on 24 projects: 2 in Georgia, 3 in Michigan, 8 in Tennessee, 9 in Washington, 1 in California, and 1 on Cheyenne River Tribe lands.

**Emergency Program**



Office of Surface Mining Emergency Projects 1978-1994

Emergency projects are those involving abandoned mine lands that present a danger to public health, safety, or general welfare and which require immediate action.

Under Section 401(a) of

**TABLE 9  
ABANDONED MINE LAND FEE COLLECTIONS AND FUNDING  
1994**

State/Tribe	Total Collected	State Share Distribution*	Federal Share Distribution*	Emergency Distribution*	Total Distribution*
Alabama	\$ 5,523,952	\$ 1,725,663	\$ 1,263,282	\$ 300,000	\$ 3,288,945
Alaska	555,013	155,411	1,844,589	25,000	2,025,000
Arkansas	25,988	0	2,000,000	25,000	2,025,000
Colorado	5,464,235	1,258,023	741,977	0	2,000,000
Illinois	8,062,169	3,518,919	4,680,010	561,000	8,759,929
Indiana	9,685,181	2,987,726	0	0	2,987,726
Iowa	11,447	17,556	1,982,444	0	2,000,000
Kansas	91,110	66,388	1,933,612	675,000	2,675,000
Kentucky	36,820,287	10,336,811	4,586,706	0	14,923,517
Louisiana	326,736	87,376	0	0	87,376
Maryland	720,203	224,672	1,775,328	0	2,000,000
Missouri	235,487	249,852	1,750,148	0	2,000,000
Montana	12,201,440	3,430,404	0	100,000	3,530,404
New Mexico	5,298,843	1,127,774	872,226	0	2,000,000
North Dakota	3,178,959	873,022	1,126,978	50,000	2,050,000
Ohio	7,708,159	2,363,748	2,868,907	1,525,658	6,758,313
Oklahoma	673,289	173,694	1,826,306	0	2,000,000
Pennsylvania	13,212,668	4,299,425	15,128,115	0	19,427,540
Tennessee	669,974	0	0	0	0
Texas	5,488,693	1,496,520	0	0	1,496,520
Utah	3,429,254	871,835	1,128,165	0	2,000,000
Virginia	7,959,473	2,414,455	1,407,804	300,000	4,122,259
Washington	1,688,856	0	0	0	0
West Virginia	29,382,660	9,087,148	8,694,442	4,800,000	22,581,590
Wyoming	74,905,052	18,132,548	0	0	18,132,548
Crow Tribe	1,342,682	478,364	1,499,136	0	1,977,500
Hopi Tribe	1,437,833	446,527	0	0	446,527
Navajo Tribe	8,189,540	3,977,464	0	0	3,977,464
Undist. Emerg.	0	0	0	544,692	544,692
<b>Total</b>	<b>\$244,289,183</b>	<b>\$69,801,325</b>	<b>\$57,110,175</b>	<b>\$8,906,350</b>	<b>\$135,817,850</b>

\*The term "Distribution" is now used instead of "Allocation". Allocation refers to the "pooling" of monies collected for the Abandoned Mine Land Fund. State and federal share distribution amounts are based on formulae set forth in Directive AML-18 dated November 26, 1992. Emergency distribution amounts are based on figures provided annually by the Assistant Director, Reclamation and Regulatory Policy, and as approved during the year by the Dep. Director, Operations and Technical Services. The Total Distribution does not include RAMP funding.

SMCRA, the Secretary of the Interior is authorized to spend money from the Abandoned Mine Reclamation Fund for the emergency restoration, reclamation, abatement, control, or prevention of the effects of coal mining practices if an emergency exists.

Since the beginning of the program, the Office of Surface Mining has encouraged states to assume responsibility for emergency projects. In 1983, Arkansas and Montana assumed emergency project responsibility, followed by

Illinois in 1984. During 1988 and 1989, Kansas, Virginia, and West Virginia took over responsibility for their emergency projects. Alabama assumed responsibility in 1990, followed by Ohio in 1992, and Alaska and North Dakota in 1993. In 1989, the Office of Surface Mining established an emergency policy that provided federal-share funds, in addition to the formula-based allocation, to states with emergency programs.

In December of 1993, continuing rains

and a mild winter with no sustained hard freezes combined to cause a substantial increase in the numbers of abandoned mine land problems across Appalachia, notably landslides in eastern Kentucky and subsidences in Pennsylvania. A record of 477 emergency complaints and eventual projects was recorded for eastern Kentucky. The \$5.0 million of emergency funds originally appropriated for Kentucky were exhausted early in 1994. An Emergency Supplemental appropriation of \$5.1 million was obtained. The

Commonwealth of Kentucky reclaimed 19 emergency projects costing \$3.2 million and also provided \$1.8 million to the Office of Surface Mining to reclaim six emergency-affected sites. Near the end of 1994, an Emergency Supplemental Appropriation of \$2.1 million was obtained to abate problems in eastern Kentucky which remained unreclaimed. Actual reclamation of these sites will occur in 1995.

In 1993, the average number of days required to respond to complaints (from notification of a possible emergency problem) averaged 2.65 in the East and 1.56 in the West. The total days from complaint referral to construction averaged 63.3 days in the East and 11.5 in the West. This represents a 7.3 percent improvement in response (a 2.9 percent reduction in days from complaint referral to construction) compared with 1993.

**TABLE 10  
FEDERAL RECLAMATION PROGRAM PROJECTS  
1994 OBLIGATIONS**

State/Tribe	Emergency	High Priority	Total 1978-93*	Total Emergency Prior Year Adj. in 1994*	Total High Priority Prior Year Adj. in 1994*	Total 1978-1994*
Arkansas	\$ 0	\$ 0	\$ 13,934,015	\$ 0	\$ 0	\$ 13,934,015
Alaska	0	0	194,638	0	0	194,638
Arkansas	0	0	84,904	0	0	84,904
California	0	18,538	1,048,643	0	0	1,067,181
Colorado	25,049	0	1,833,313	0	0	1,858,362
Georgia	0	186,437	1,903,371	0	(3,682)	2,086,126
Illinois	0	0	5,376,749	0	0	5,376,749
Indiana	238,004	0	3,862,909	(71,858)	0	4,029,055
Iowa	3,472	0	1,080,036	0	0	1,083,508
Kansas	0	0	5,094,172	0	0	5,094,172
Kentucky	4,943,945	0	71,678,308	(333,941)	0	76,288,312
Maryland	90,366	0	2,537,645	(1,073)	0	2,626,938
Michigan	0	134,387	1,834,815	0	0	1,969,202
Missouri	236,381	0	7,779,966	(2,783)	0	8,013,564
Montana	0	0	729,058	0	0	729,058
New Mexico	0	0	2,364,696	0	0	2,364,696
North Carolina	0	0	205,407	0	0	205,407
North Dakota	0	0	1,723,933	0	0	1,723,933
Ohio	11,680	0	18,444,593	(13,068)	0	18,443,205
Oklahoma	18,710	0	1,191,814	0	0	1,210,524
Oregon	0	0	42,275	0	0	42,275
Pennsylvania	5,090,993	0	82,667,404	(41,822)	(60,000)	87,656,575
Rhode Island	0	0	556,229	0	0	556,229
South Dakota	0	0	47,000	0	(19,745)	27,255
Tennessee	81,938	995,825	15,591,772	0	(55,793)	16,613,742
Texas	2,000	0	283,849	0	0	285,849
Utah	0	0	123,791	0	0	123,791
Virginia	0	0	10,139,719	(250)	0	10,139,469
Washington	0	552,365	4,344,568	(211)	(93,529)	4,803,193
West Virginia	0	0	29,023,226	0	0	29,023,226
Wyoming	363	0	1,066,738	0	0	1,067,101
Cheyenne River Sioux Tribe	0	200,000	2,412,372	0	100,000	2,712,372
Crow Tribe	0	0	1,097,895	0	0	1,097,895
Fort Berthold Tribe	0	0	69,972	0	0	69,972
Fort Peck Tribe	0	0	147,991	0	0	147,991
Hopi Tribe	0	0	1,263,409	0	0	1,263,409
Jacarillo Apache Tribe	0	0	50,998	0	0	50,998
Navajo Tribe	0	0	2,222,792	0	0	2,222,792
Northern Cheyenne Tribe	0	0	580,005	0	0	580,005
Southern Ute Tribe	0	0	94,206	0	0	94,206
Rocky Boy Tribe	0	0	60,188	0	0	60,188
Uintah/Ouray Tribe	0	0	138,738	0	0	138,738
Ute Mountain Tribe	0	0	14,300	0	0	14,300
White Mountain Apache Tribe	0	0	1,838	0	0	1,838
Wind River Tribe	0	0	73,267	0	0	73,267
Zuni Tribe	0	0	125,009	0	0	125,009
<b>Total</b>	<b>\$10,742,901</b>	<b>\$2,087,552</b>	<b>\$295,142,538</b>	<b>(\$465,006)</b>	<b>(\$132,749)</b>	<b>\$307,375,236</b>

\* Includes prior year contract deobligations and upward adjustments.

Of the 493 emergency complaint investigations referred by Office of Surface Mining field offices, 269 resulted in declaration of emergency, 28 were determined to be not of an emergency nature, 8 were considered not related to coal mining or were reclaimed by the landowner, and 188 were still under investigation at the close of the fiscal year on September 30, 1994. Non-emergency mining-related complaints were referred to the states for consideration as high-priority abandoned mine land grant projects.

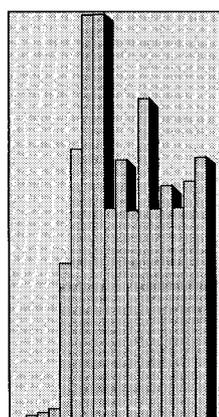
**Post-SMCRA Reclamation**

As authorized in the 1994 appropriations, federal civil penalties collected under Section 518 of SMCRA were used to reclaim lands mined and abandoned after August 3, 1977. In 1994, the Office of Surface Mining funded six reclamation projects costing a total of \$100,650. There were five projects in Kentucky and one in Tennessee. An additional \$699,535 in unobligated funds will be carried over for use in 1995 reclamation projects.



Abandoned mine land sites frequently contain a variety of environmental problems. At this 45-acre West Virginia site adjacent to a small town, 11 abandoned underground mine openings were discharging acid water, mountains of exposed coal refuse from an abandoned coal cleaning plant covered the valley floor, and 6,500 linear feet of dangerous highwalls from an abandoned pre-SMCRA surface mine were present. After reclamation, it is difficult to find any traces of past mining or the associated abandoned mine problems. Here, as the architects of the surface mining law envisioned, use of Abandoned Mine Land funds has resulted in permanently removing mining-related health and safety hazards, leaving the land essentially as it was before mining took place.

**Grants to States and Tribes**



Grant Obligations 1978-1994

Beginning with Texas in 1980, the Office of Surface Mining has gradually approved state reclamation programs. Currently, all primacy states except Mississippi have approved abandoned mine

land reclamation programs. During 1988, the Navajo and Hopi Tribe programs were approved, and in 1989 the Crow Tribe received approval for its program. In 1994, the states and the tribes received grants totaling \$205,819,158. Since 1979, when the states began receiving abandoned mine land administrative grants to operate their programs and construction grants to compete reclamation projects, states

have received \$2,069,264,620 from the fund. Of that amount, approximately \$526 million was applied to administration grants, set-aside and subsidence insurance programs, emergency programs, and initial program development and cooperative agreement costs. Total net grant awards for abandoned mine land construction projects from grants were \$1.5 billion, and construction obligations at the state/tribe level were \$1.4 billion. Grant amounts for 1994 are shown in Table 11. On-the-ground coal mine reclamation accomplishments resulting from grant funding through 1994 are summarized in Table 12.

Simplified grant funding of state abandoned mine land programs was begun in 1994. This new grant application process eliminates the requirement for advance approval of each project before the grant is awarded to the state for the reclamation. States received amounts based on appropriated spending levels and are held accountable for using those funds in accordance with their approved abandoned mine land plan. The Office of Surface Mining is no longer involved in cumbersome and detailed pre-award scrutiny of state grant applications.

**TABLE 11**  
**ABANDONED MINE LAND GRANTS TO PRIMACY STATES AND INDIAN TRIBES**  
**1994**

State/ Tribe	Subsidence Insurance	10% Program Set-Aside	Administration <sup>4</sup>	Project Costs <sup>5</sup>	Emergency <sup>6</sup>	1994 Total	1993 Total
Alabama	\$ 0	\$ 0	\$ 529,214	\$ 2,998,878	\$ 300,000	\$ 3,828,092	\$ 4,133,901
Alaska	0	0	227,370	1,857,630	25,000	2,110,000	2,532,876
Arkansas	0	0	185,624	2,174,522	25,000	2,385,146	1,942,272
Colorado	0	200,000	526,000	1,274,000	0	2,000,000	2,035,000
Illinois	0	0	857,502	8,915,156	561,000	10,333,658	9,019,395
Indiana	0	298,773	805,443	4,041,188	0	5,145,404	7,173,000
Iowa	0	0	136,895	1,944,740	0	2,081,635	2,045,225
Kansas	0	0	200,045	2,298,407	675,000	3,173,452	4,389,718
Kentucky	0	0	1,401,277	18,584,333	0	19,985,610	14,728,663
Louisiana	0	0	146,743	0	0	146,743	82,454
Maryland <sup>2</sup>	0	63,250	478,937	2,072,829	0	2,615,016	2,480,325
Missouri	0	74,669	450,770	2,103,468	0	2,628,907	2,902,892
Montana	0	343,040	490,433	3,834,113	100,000	4,767,586	5,593,759
New Mexico	0	133,315	1,118,551	934,685	0	2,186,551	1,870,788
North Dakota	0	113,593	327,380	3,366,739	25,000	3,832,712	1,991,038
Ohio	0	0	2,531,009	2,592,568	1,525,658	6,649,235	10,693,976
Oklahoma	0	0	282,309	1,988,691	0	2,271,000	2,080,378
Pennsylvania <sup>3</sup>	0	1,942,754	2,982,294	36,136,378	0	41,061,426	48,752,574
Texas	0	0	459,169	4,628,651	0	5,087,820	3,374,562
Utah	0	0	293,127	2,188,060	0	2,481,197	2,094,528
Virginia <sup>3</sup>	0	0	1,434,446	3,526,347	1,200,000	6,160,793	6,414,211
West Virginia <sup>3</sup>	0	5,231,741	4,970,940	31,606,448	4,800,000	46,609,129	29,658,322
Wyoming	150,000	0	364,053	20,058,221	0	20,572,274	18,174,995
Crow Tribe	0	0	233,433	1,802,362	0	2,035,795	2,006,000
Hopi Tribe	0	0	105,000	0	0	105,000	143,388
Navajo Tribe	0	397,746	971,579	4,195,662	0	5,564,987	6,256,699
<b>Total</b>	<b>\$150,000</b>	<b>\$8,798,881</b>	<b>\$22,509,543</b>	<b>\$165,124,076</b>	<b>9,236,658</b>	<b>\$205,819,158</b>	<b>\$192,570,939</b>

1 Funding for these grants is derived from the FY 1994 Distribution and funds recovered or carried over from previous years. Downward adjustments of prior-year awards are not included in the totals.

2 These 10% set-aside amounts are for Acid Mine Drainage set-aside funding rather than future set-aside funding.

3 Administrative amount includes \$75,567 for coalbed mapping grant.

4 Administrative amounts for most states/tribes contain non-emergency indirect costs which are applicable to their entire Abandoned Mine Land program. These costs cannot be broken down into separate cost categories.

5 The term "Project Costs" is now used instead of "Construction." Abandoned Mine Land simplified grants do not contain specific construction cost breakdowns, but rather list all costs associated with a construction project as a project cost. This category contains both non-water supply and water supply project costs.

6 This category contains emergency project, administrative, and indirect costs. Indirect costs are not directly attributable to either emergency project or administrative costs.

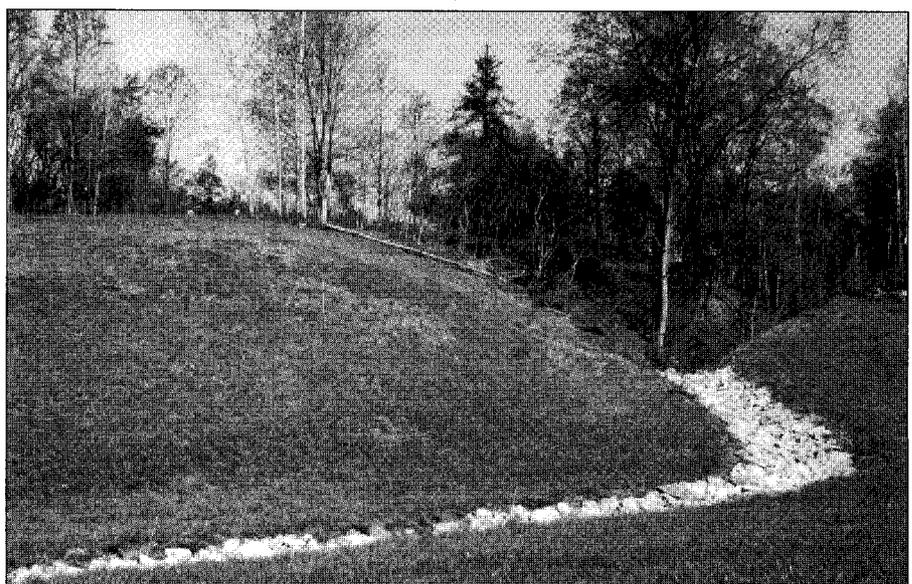
### Minimum Program

The minimum-level program was established by Congress in 1988 to ensure funding of existing high-priority projects in states where the annual allocation is too small for the state to administer a program and begin reclamation.

During 1994, Alaska, Arkansas, Iowa, Kansas, Maryland, Missouri, New Mexico, North Dakota, Oklahoma, Utah, and the Crow Tribe were eligible for minimum-level program funding and received such grants during the year. Minimum-level program funding remained at \$2,000,000 for 1994. Eligible states and tribes received contributions of \$14,479,620 in federal-

Before reclamation, this abandoned mine site contained dangerous highwalls, erosion, and acid mine drainage. Today, the problems have been eliminated and the area no longer poses a safety hazard for nearby residents.

share money from non-minimum program states and tribes. These contributions bring the 11 states and tribe to the minimum program level. Once minimum program states and tribes complete their high-priority projects listed in the National Inventory of Abandoned Mine Land Prob-



lems, annual funding is limited to state-share money.

### State Set-Aside

Beginning in 1987, Public Law 100-34 authorized states to set aside up to 10 percent of the state-share portion of their annual abandoned mine land reclamation grants. Set-aside money was deposited into special trust funds and became available, along with interest earned, for use by the state for reclaiming abandoned mine land problems after August 3, 1992, the original expiration date for the collection of abandoned mine land reclamation fees. (Subsequent legislation extended this date to September 30, 2004.) Statutory amendments contained in Public Law 101-508 created a new set-aside program that does not supersede the transfer funds deposited under the original 1987 program. The funds set aside under the new program may be used only after September 30, 1995, and only to reclaim eligible priority 1 and 2 abandoned coal mine land problems. In 1994, nine states and one tribe set aside \$8,798,881.

### Subsidence Insurance

Public Law 98-473 authorized states and tribes with approved reclamation programs to use abandoned mine land funds for establishing self-sustaining, individually administered programs to

insure private property against damage caused by land subsidence resulting from abandoned underground coal mines. Implementing rules were promulgated in February 1986. Under those rules, states can receive a subsidence insurance grant of up to \$3,000,000, awarded from the state's share of the abandoned mine land fund. In 1994, one subsidence insurance grant was issued. Through 1994, the Office of Surface Mining has granted a total of

\$11,719,662 to Colorado, Indiana, Kentucky, Ohio, West Virginia, and Wyoming to develop and administer subsidence insurance programs.

**Inventory of Abandoned Mine Land Problems**

SMCRA, as amended by the Abandoned Mine Reclamation Act of 1990 (Public Law 101-508), requires the Office of Surface Mining to maintain an inventory of eligible abandoned coal

mine lands and waters that meet the public health, safety, and general welfare criteria of Section 403(a)(1) and (2). During 1994, this inventory was maintained and updated to reflect reclamation accomplishments as required by Section 403(c).

The Office of Surface Mining maintains its inventory data on the Abandoned Mine Land Inventory System (AMLIS), which is used to provide

The first Office of Surface Mining/state cooperative agreement project started under the surface mining law was the abatement of the Peach Creek refuse fire in West Virginia. The project contained 38 acres of burning refuse that was excavated and quenched using water from a pond constructed on the project site. Twelve years after the project's completion, the area was covered by a wide variety of vegetation.



statistical reports of problems eligible for funding, estimated reclamation costs, and reclamation accomplishments.

As of September 30, 1994, the system contained information for 12,151 problem areas, mostly related to abandoned coal mines. A problem area is a geographic area, such as a watershed, that contains one or more abandoned mine problems that could logically be corrected together. Problem area boundaries are delineated by the extent of their effect on surrounding land and water, not just the abandoned mine sites. \$1.1 billion was spent for completed projects and \$258.9 million funded for ongoing coal projects. Of these problem areas, 10,268 were pre-SMCRA coal sites with health, safety, and general welfare problems, of which 5,403 (53 percent) have been reclaimed at a cost of \$1.2 billion. The estimated cost to reclaim

the remaining 4,865 high-priority problems is \$2.4 billion.

Table 12 summarizes state, emergency, and federal coal reclamation project accomplishments through 1994. In comparing figures reported between 1993 and 1994, most categories show increases. In a few cases, totals decreased. The current data shown in the table reflects continued efforts on the part of the Office of Surface Mining, the states, and the tribes to improve the quality of the data. In some cases it was found that the data for sites reclaimed under more than one reclamation funding program had been inadvertently duplicated, or other errors had occurred. These figures have been corrected.

**Reclamation Awards**

After more than 17 years of abandoned mine land reclamation funded under SMCRA, thousands of dangerous health

and safety problems throughout the country have been eliminated. To publicly recognize the people responsible for outstanding achievements in abandoned mine land reclamation, the Office of Surface Mining presents awards to those individuals responsible for their completion. This year, 86 individuals responsible for nine award-winning projects received recognition for their work. Awards for the following projects were presented at the annual meeting of the National Association of Abandoned Mine Land Programs:

- Harrison County Road 51 project near Germano, Ohio
- Shirley Basin Uranium District project in Shirley Basin, Wyoming
- Adrian Southeast project near Punxsutawney, Pennsylvania

**TABLE 12  
ABANDONED MINE LAND COAL RECLAMATION ACCOMPLISHMENTS  
1978-1994**

	Ala.	Alas.	Ark.	Calif.	CERT <sup>6</sup>	Colo.	Crow	Ga.	Hopi	Ill.	Ind.	Iowa	Kan.	Ky.	Md.	Mich.	Mo.	Mont.	
<b>Priority 1 &amp; 2 (Protection of Public health, Safety, and General Welfare)</b>																			
Clogged Streams <sup>1</sup>	2	0	0	0	0	0	0	0	0	13	14	2	1	33	3	0	10	3	
Clogged stream lands <sup>2</sup>	0	0	0	0	0	0	0	0	0	552	106	234	0	7,849	41	0	1,155	2	
Dangerous highwalls <sup>3</sup>	101,890	960	29,906	0	5,070	51,493	650	1,000	14,302	15,385	78,660	45,335	30,431	13,424	26,680	950	43,662	150	
Dangerous impoundments <sup>4</sup>	2	3	0	0	0	0	0	2	0	6	5	1	1	76	0	0	5	3	
Dangerous piles & embank <sup>2</sup>	37	8	217	0	355	7	33	3	0	104	477	657	80	214	99	0	345	62	
Dangerous slides <sup>2</sup>	8	0	0	0	0	0	22	0	0	2	0	0	1	1,404	17	0	0	1	
Gases: hazardous/explosive <sup>4</sup>	0	0	0	0	0	0	0	0	0	7	2	0	0	0	0	0	0	0	
Underground mine fires <sup>2</sup>	0	0	0	0	0	108	0	0	2	0	0	0	0	83	0	0	2	63	
Hazardous equip. & facilities <sup>4</sup>	441	57	1	0	6	1	1	0	8	184	85	4	2	131	12	5	24	175	
Hazardous water bodies <sup>4</sup>	36	0	9	0	30	0	0	0	0	1	3	20	2	16	9	2	10	0	
Industrial/residential waste <sup>2</sup>	22	3	12	0	5	2	0	0	0	13	21	2	2	48	15	0	69	74	
Portals <sup>4</sup>	747	6	6	25	72	486	4	67	9	100	41	1	0	1,060	17	0	14	714	
Polluted water: agricultural <sup>4</sup>	0	0	0	0	0	3	1	0	0	0	6	12	3	5	3	0	29	17	
Polluted water: human con. <sup>4</sup>	9	0	0	0	0	0	0	1	0	0	6	1	0	2,890	1	0	13	12	
Subsidence <sup>2</sup>	10	0	2	0	35	43	16	1	0	16	16	1	27	54	9	1	0	392	
Surface burning <sup>2</sup>	50	0	2	0	0	21	0	0	0	11	2	0	3	205	0	8	19	302	
Vertical opening <sup>4</sup>	261	5	67	38	18	256	4	6	2	328	249	17	7	61	2	12	31	430	
<b>Priority 3 (Environmental Restoration)</b>																			
Bench <sup>2</sup>	1	0	0	0	0	3	2	0	0	1	0	0	0	619	0	0	0	1	
Industrial/residential waste <sup>2</sup>	9	0	0	0	0	5	0	0	0	13	46	0	0	0	0	0	3	76	
Equipment/facilities <sup>4</sup>	6	0	0	0	2	7	0	0	0	83	98	0	1	51	1	1	4	58	
Go-b pits <sup>2</sup>	87	7	0	0	4	102	9	3	25	1,909	795	1	89	195	21	21	68	144	
Highwalls <sup>3</sup>	18,000	0	0	0	1,500	2,028	450	0	551	4,510	3,080	0	3,000	2,000	3,650	0	8,624	1,170	
Haul roads <sup>2</sup>	0	0	0	0	0	0	4	0	15	42	32	5	0	1	1	1	1	1	
Mine openings <sup>4</sup>	26	0	0	0	1	18	0	2	0	73	13	1	0	68	0	0	0	42	
Pits <sup>4</sup>	1	0	0	0	7	83	5	0	10	268	6	19	17	3	0	1	65	18	
Spoil area <sup>2</sup>	5,934	0	0	0	80	829	4	0	10	2,097	1,052	440	248	976	212	10	1,042	856	
Slurry <sup>2</sup>	33	9	0	0	0	0	0	0	0	906	312	0	10	58	0	0	57	0	
Slump <sup>2</sup>	1	25	0	0	0	0	0	0	0	1	2	0	22	10	1	11	1	19	
Water problems <sup>5</sup>	80	0	0	0	0	1	0	0	0	201	68	0	0	0	70	0	1	19	
Other <sup>4</sup>	23	0	0	0	0	5	0	0	2	780	256	0	1	408	0	0	4	13	

Units: 1 Miles; 2 Acres; 3 Linear feet; 4 Count; 5 Gallons/minute  
6 CERT is the Council of Energy Resources Tribes

- Eckhart Coal Waste Stabilization project in Eckhart Mines, Maryland
- Colorado Bats/Inactive Mines project in central Colorado
- Tintic project in Eureka, Utah
- Richmond Shafts project in Midlothian, Virginia
- Rush Run Portals Project in Fayetteville, West Virginia, and
- Crook County Bentonite project in Colony, Wyoming.



A mining operation that began in 1926 left this site covered with 3,000 acres of acid-forming refuse. After treating the refuse and reclaiming land, this abandoned Illinois mine site has been returned to productive wildlife habitat.

**TABLE 12 (Continued)**  
**ABANDONED MINE LAND COAL RECLAMATION ACCOMPLISHMENTS**  
**1978-1994**

	Navajo	N.Car.	N.Dak	N.Mex.	Ohio	Okla.	Ore.	Penna.	R.Is.	S.Dak.	Tenn.	Texas	Utah	Vir.	Wash.	W.Vir.	Wyo.	Total
<b>Priority 1 &amp; 2 (Protection of Public health, Safety, and General Welfare)</b>																		
Clogged Streams <sup>1</sup>	0	0	0	0	10	1	0	13	0	0	0	0	11	60	0	26	0	202
Clogged stream lands <sup>2</sup>	0	0	0	0	4,134	0	0	61	0	0	147	0	0	706	0	142	0	15,129
Dangerous highwalls <sup>3</sup>	0	0	25,596	0	20,258	127,183	0	297,479	0	135	16,755	3,285	2,925	5,983	0	115,929	9,011	1,084,487
Dangerous impoundments <sup>4</sup>	1	0	4	0	5	0	0	39	0	0	0	0	1	13	0	125	1	293
Dangerous piles & embank <sup>2</sup>	1	0	303	2	85	0	0	314	0	0	200	917	100	217	3	2,173	503	7,516
Dangerous slides <sup>2</sup>	7	0	35	0	298	0	0	0	0	0	30	0	0	166	0	256	0	2,247
Gases: hazardous/explosive <sup>4</sup>	0	0	0	0	0	0	0	0	0	0	0	0	19	0	0	1	0	29
Underground mine fires <sup>2</sup>	0	0	0	2	0	0	0	749	0	0	0	0	19	0	0	18	92	1,138
Hazardous equip. & facilities <sup>1</sup>	4	0	14	10	36	13	3	228	0	4	24	0	135	172	4	203	14	2,001
Hazardous water bodies <sup>4</sup>	0	0	13	0	4	108	0	64	0	0	9	0	0	1	0	1	0	338
Industrial/residential waste <sup>2</sup>	0	0	2	0	34	4	0	15	0	0	11	0	2	2	0	16	1	375
Portals <sup>4</sup>	140	0	13	115	129	101	12	203	0	5	184	1	487	547	25	1,147	192	6,670
Polluted water: agricultural <sup>4</sup>	0	0	6	1	0	3	0	1	0	0	0	0	2	0	0	7	0	99
Polluted water: human con. <sup>4</sup>	0	0	0	0	2	0	0	7	0	0	4	0	0	19	0	6	0	2,971
Subsidence <sup>2</sup>	5	0	1,055	28	40	4	1	2,065	6	1	5	0	4	4	4	162	277	4,284
Surface burning <sup>2</sup>	3	0	1	32	73	0	0	115	0	0	1	0	38	26	15	262	9	1,198
Vertical opening <sup>1</sup>	7	5	78	50	126	72	3	264	0	1	10	19	23	64	48	53	221	2,838
<b>Priority 3 (Environmental Restoration)</b>																		
Bench <sup>2</sup>	0	0	0	1	0	0	0	0	0	0	76	0	4	0	0	0	0	708
Industrial/residential waste <sup>2</sup>	1	0	0	0	0	0	0	0	0	0	0	0	7	1	0	0	11	172
Equipment/facilities <sup>4</sup>	2	0	0	6	3	0	0	14	0	0	2	0	58	21	0	0	3	421
GoB piles <sup>2</sup>	100	0	0	27	68	0	0	31	0	0	48	8	229	11	0	20	30	4,052
Highwalls <sup>3</sup>	0	0	0	0	9,220	0	0	3,050	0	0	130	0	550	0	0	7,850	1,300	70,663
Haul roads <sup>2</sup>	0	0	0	0	0	0	0	0	0	0	8	0	3	1	0	0	1	116
Mine openings <sup>4</sup>	12	0	0	0	19	0	1	4	0	0	0	0	0	20	0	1	4	305
Pits <sup>4</sup>	15	0	0	2	17	0	0	32	0	0	47	0	6	0	0	0	10	832
Spoil area <sup>2</sup>	141	0	0	1	382	0	0	613	0	0	325	152	49	3	0	2	385	15,843
Slurry <sup>2</sup>	0	0	0	2	0	0	0	1	0	0	0	0	1	0	0	0	0	1,389
Slump <sup>2</sup>	0	0	0	0	0	0	0	26	0	0	3	0	16	0	0	0	0	138
Water problems <sup>5</sup>	0	0	0	0	0	0	0	90,462	0	0	110	0	20	20	0	2	400,002	491,363
Other <sup>4</sup>	67	0	0	0	0	0	0	3	0	0	1	0	0	0	0	0	0	1,563

Units: 1 Miles; 2 Acres; 3 Linear feet; 4 Count; 5 Gallons/minute  
6 CERT is the Council of Energy Resources Tribes