



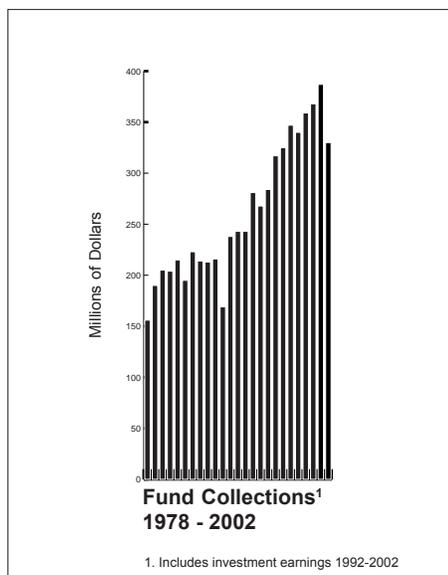
# ABANDONED MINE LAND RECLAMATION

## AN UPDATE ON THE RECLAMATION OF ABANDONED MINE LAND AFFECTED BY MINING THAT TOOK PLACE BEFORE THE SURFACE MINING LAW WAS PASSED IN 1977

Title IV of the Surface Mining Law – the Abandoned Mine Land Reclamation Program provides for the restoration of lands mined and abandoned or left inadequately restored before August 3, 1977.

Implementation is accomplished through an Emergency Program (for problems having a sudden danger that present a high probability of substantial harm to the health, safety, or general welfare of people before the danger can be abated under normal program operating procedures), and a non-emergency program. States and tribes with approved programs carry out these responsibilities.

### Abandoned Mine Land Fund



**F**ees 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 active mining operations. The fees are deposited in the Abandoned Mine Land Reclamation Fund, which is used to pay the costs of abandoned mine land reclamation projects. The fund consists of fees, contributions, late payment interest, penalties, administrative charges, and interest earned on investment of the fund's principal. From January 30, 1978, when the first fees were paid, through September 30, 2002, the Fund collections totaled \$6,542,832,940. For the same period, Fund appropriations totaled \$5,007,894,164.

Expenditures from the Fund may only be made as a consequence of appropriations or other laws. The Surface Mining Law 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. This 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, to fund the Small Operator Assistance Program, to fund additional projects directly through state

Reclamation at this West Virginia abandoned mine land site (left), eliminated 6,000 linear feet of highwall and sealed four mine openings. To prevent future damage, an under-drain was placed along the length of the highwall to collect drainage from auger holes. Since no topsoil was available, the spoil was direct-seeded with a special seed mix. Today this landscape bears little resemblance to its appearance before the abandoned highwalls and spoil were reclaimed.

# ABANDONED MINE LAND RECLAMATION

**TABLE 1: ABANDONED MINE LANDS FEE COLLECTIONS AND FUNDING (CASH BASIS)**

State/Tribe	AML Collections	State Share Distribution <sup>1</sup>	Federal Share Distribution <sup>1</sup>	Emergency Distribution <sup>1</sup>	Special Funding <sup>2</sup>	Clean Streams Distribution <sup>1</sup>	Total Distribution <sup>1</sup>
Alabama	\$3,486,834	\$1,404,248	\$1,657,068	\$400,000	\$0	\$289,784	\$3,751,100
Alaska	495,900	160,477	1,339,523	25,000	0	0	1,525,000
Arkansas	5,927	248	1,499,752	15,000	0	0	1,515,000
Colorado	6,932,931	1,730,003	807,571	0	0	0	2,537,574
Illinois	6,072,789	2,419,092	6,138,853	800,000	0	735,468	10,093,413
Indiana	11,120,364	3,112,492	1,998,618	309,479	0	323,749	5,744,338
Iowa	0	3,762	1,496,238	0	0	173,253	1,673,253
Kansas	59,172	37,449	1,462,551	465,000	0	0	1,965,000
Kentucky	30,061,909	10,019,837	6,016,465	0	0	723,297	16,759,599
Louisiana	359,074	99,758	0	0	0	0	99,758
Maryland	1,107,321	235,870	1,264,130	0	0	163,769	1,663,769
Mississippi	148,845	0	0	0	0	0	0
Missouri	58,848	87,359	1,412,641	49,800	0	172,231	1,722,031
Montana	11,513,193	3,611,665	0	125,000	0	0	3,736,665
New Mexico	5,683,439	1,638,418	196,331	0	0	0	1,834,749
North Dakota	3,061,317	921,797	578,203	100,000	0	0	1,600,000
Ohio	5,716,442	1,957,896	3,763,196	2,300,000	0	499,225	8,520,317
Oklahoma	459,256	173,193	1,326,807	60,000	0	153,135	1,713,135
Pennsylvania 2/	13,172,159	4,734,675	19,843,819	0	500,000	2,098,336	27,176,830
Tennessee	965,683	0	0	0	0	0	0
Texas	4,507,284	1,584,087	0	0	0	0	1,584,087
Utah	3,776,766	1,114,382	515,188	0	0	0	1,629,570
Virginia	6,008,214	2,123,427	1,846,641	1,050,000	0	308,636	5,328,704
Washington	1,529,929	0	0	0	0	0	0
West Virginia	34,453,470	9,693,083	11,404,655	3,000,000	0	1,259,117	25,356,855
Wyoming	126,076,878	28,659,989	0	0	0	0	28,659,989
Crow Tribe	2,009,726	550,551	0	0	0	0	550,551
Hopi Tribe	1,308,399	428,219	0	0	0	0	428,219
Navajo Tribe	6,914,277	2,414,773	0	0	0	0	2,414,773
<b>Total</b>	<b>\$287,066,346</b>	<b>\$78,916,750</b>	<b>\$64,568,250</b>	<b>\$8,699,279</b>	<b>\$500,000</b>	<b>\$6,900,000</b>	<b>\$159,584,279</b>

1. The term "Distribution" is now used instead of "Allocation". Allocation refers to the "pooling" of monies collected for the AML Fund. State and Federal share distribution amounts are based on formulas and parameters provided annually by the Assistant Director, Program Support. The emergency program distribution amounts are based on estimates provided by the states and approved by the Deputy Director.  
 2. The Commonwealth of Pennsylvania received \$500,000 to continue the demonstration project begun in 2000.

reclamation programs, and to pay collection, audit, and administration 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 1 shows 2001 collections and funding by states.

The Abandoned Mine Reclamation Act of 1990 (Public Law 101-508) extended fee collection authority through September 30, 1995; the Energy Policy Act of 1992

(Public law 102-486) further extended fee collection authority until September 30, 2004, after which the fee will be established at a rate to provide funds for the United Mine Workers of America Combined Benefit Fund.

In 1992, under authority of Public Law 101-508, the Office of Surface Mining began investing abandoned mine land funds. These funds are only invested in U.S. Treasury Securities.

### ***United Mine Workers of America Combined Benefit Fund***

Beginning in 1996, under a requirement of the Energy Policy Act of 1992 (Public Law 102-486), the Office of Surface Mining began an annual transfer from the investment interest earned to the United Mine Workers of America Combined Benefit Fund. This cash transfer is used to defray anticipated health care costs for eligible union coal mine workers who retired on or before July 20, 1992, and their dependents. The Energy Policy Act



1940's and 50's uranium mining on the Navajo Reservation had left abandoned underground mine openings, dangerous highwalls, radioactive waste piles, and undetonated explosives. Today, with reclamation complete, these hazards are eliminated and the site is being returned to native grazing land (above).

In the anthracite coal region of Eastern Pennsylvania, coal seam fires are common. This fire, located under the Pennsylvania town of Centralia, periodically burned to the surface, emitting smoke and noxious fumes. Here, smoke and fumes have killed all vegetation and started a forest fire (below). Emergency action to remove the burning coal was required to prevent additional surface fires starting at this location.



**TABLE 2: ABANDONED MINE LAND RECLAMATION FUND STATUS**

	Cash Basis	
	2002	2001
Balance, Start of Year	\$1,856,933,503	\$1,812,132,897
Fees, debts, and interest collected	287,066,346	284,044,124
Interest earned on investments	43,277,875	103,495,981
Total Earnings	\$330,344,221	\$387,540,105
Disbursements	196,607,171	160,894,551
Transfers to the United Mine Workers	90,352,804	181,844,948
Total Disbursements and Transfers	\$286,959,975	\$342,739,499
<b>Balance, End of Year</b>	<b>\$1,900,317,749</b>	<b>\$1,856,933,503</b>

authorizes a transfer of up to \$70 million per year of the interest earned on the principal balance of the Abandoned Mine Land Reclamation Fund to the Combined Benefit Fund to defray the costs related to health care for unassigned beneficiaries. Unassigned beneficiaries are those miners for whom no operating coal company is responsible. If, after a typical two-year cycle, the amount of the transfer was

greater or less than the actual health benefits, an adjustment is made to the next transfer. The 2002 annual payment was \$70 million for 16,770 beneficiaries. Prior year adjustments increased this payment by \$43.6 million. The Department of the Interior Appropriations Act, 2001 (Public Law 106-291) required an additional transfer of \$75 thousand to provide refunds for certain qualified operators. This payment was made in January 2002. Pursuant to agreements, the United Mine Workers Combined Benefit Fund returned \$23.3 million in 2002 which was the unused portion of the amount transferred to them in 2001 under the same Law. The total payment in 2002 was \$90.4 million. Since 1992, when the Office of Surface Mining began investing Abandoned Mine Land funds, the cumulative investment earnings have been \$706.2 million. Cumulative transfers to the United Mine Workers of America Combined Benefit Fund, including 2002, have been \$574 million, leaving an interest balance of \$132.2 million. Table 2 summarizes the Fund account for the past two years.

The Office of Surface Mining collects fees from coal operators through voluntary reporting, audit, and debt collection. In 2002, the initial rate of those reporting and paying on time was 94.2 percent. Through follow-up and other work with the operators, the compliance rate was raised to 99.88 percent, resulting in total collections of \$287,066,346 for the Fund.

# ABANDONED MINE LAND RECLAMATION

**TABLE 3: ABANDONED MINE LAND GRANTS<sup>1</sup>**

State/Tribe	Subsidence Insurance	10% Program Set-Aside	Administration <sup>3</sup>	Project Costs <sup>4</sup>	Emergency <sup>5</sup>	2002 Total	2001 Total
Alabama	\$0	\$0	\$425,634	\$3,360,257	\$400,000	\$4,185,891	\$4,291,410
Alaska	0	0	305,385	1,194,615	25,000	1,525,000	2,936,923
Arkansas	0	0	414,441	1,085,559	15,000	1,515,000	1,615,000
Colorado	0	265,000	756,258	1,628,742	0	2,650,000	2,870,811
Illinois	0	855,795	1,338,945	8,730,949	800,000	11,725,689	12,489,106
Indiana	0	511,111	1,034,548	4,392,031	309,479	6,247,169	7,567,543
Iowa	0	0	235,572	1,439,789	0	1,675,361	1,788,253
Kansas	0	0	231,403	1,566,492	465,000	2,262,895	2,080,482
Kentucky	0	0	1,802,006	14,957,594	0	16,759,600	18,894,469
Louisiana	0	0	99,758	0	0	99,758	141,277
Maryland <sup>2</sup>	0	130,000	533,242	1,863,769	0	2,527,011	1,031,939
Missouri	0	62,942	556,420	1,181,429	49,800	1,850,591	2,058,512
Montana	0	0	490,558	3,121,107	125,000	3,736,665	3,972,187
New Mexico	0	163,842	1,073,088	2,300,000	0	3,536,930	5,303,941
North Dakota	0	120,863	184,652	1,273,687	100,000	1,679,202	1,806,390
Ohio <sup>2</sup>	0	600,023	3,426,398	6,114,681	2,300,000	12,441,102	10,158,537
Oklahoma	0	0	312,527	1,340,608	100,000	1,753,135	1,813,135
Pennsylvania <sup>2</sup>	0	2,457,849	2,900,811	26,705,364	0	32,064,024	42,329,359
Texas	0	0	197,694	0	0	197,694	1,652,971
Utah	0	0	415,562	1,320,747	0	1,736,309	2,096,941
Virginia	0	397,007	647,660	3,347,037	2,700,000	7,091,704	6,715,333
West Virginia	0	0	5,736,471	25,620,893	3,000,000	34,357,364	27,872,041
Wyoming	0	2,865,989	1,330,051	26,672,041	0	30,868,081	29,185,448
Crow Tribe	0	0	93,980	456,571	0	550,551	685,892
Hopi Tribe	0	0	0	215,000	0	215,000	2,842,812
Navajo Tribe	0	0	824,190	7,425,609	0	8,249,799	4,270,653
<b>Total</b>	<b>\$0</b>	<b>\$8,430,421</b>	<b>\$25,367,254</b>	<b>\$147,314,571</b>	<b>\$10,389,279</b>	<b>\$191,501,525</b>	<b>\$198,471,365</b>

1. Funding for these grants is derived from the 2002 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. Included in this category are costs for program support (personnel, budgeting, procurement, etc.), Abandoned Mine Land inventory management, and program policy development. Indirect costs associated with the administration of the program may also be included.

4. 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 non-water supply, water supply, and non-coal project costs, and includes \$7,259,002 in funding for the Appalachian Clean Streams Program.

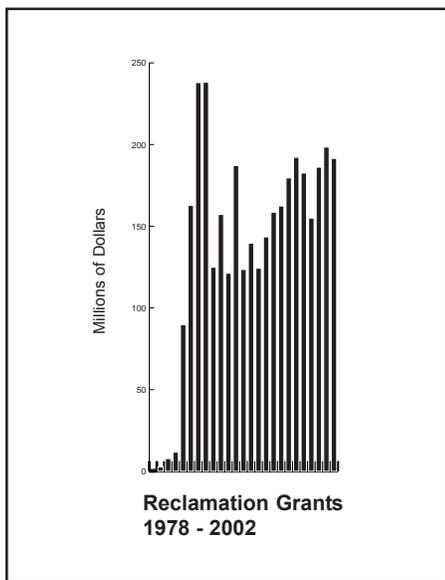
5. This category contains emergency project, administrative, and indirect costs.



Experience has shown that helping the industry achieve compliance reduces the need for additional regulatory resources. To assist in compliance, the Office of Surface Mining provides preprinted forms to all active coal mining companies on the e-filing website or by mail and provides guidance by phone and mail. Because of

Abandoned underground mine openings that drain water are closed using a "wet seal." At this reclaimed abandoned mine entry portal in West Virginia rock was pushed in and around the opening and the entire area covered with topsoil and grass planted. The pipe installed under the fill ensures that water collecting in the mine does not build up behind the rock closure and wash it out.

factors beyond the Office of Surface Mining's control, such as company financial difficulties and errors, some nonpayment and non-reporting will probably always be present. When such instances of noncompliance are found, auditors and collection staff examine each issue and determine how similar occurrences can be avoided in the future. The high compliance rate can be attributed to this proactive cooperative approach, and the overall efficiency of the collection and audit activities.



### Grants to States and Tribes

Starting with Texas in 1980, the Office of Surface Mining began approving state reclamation programs. Currently, all primacy states except Mississippi have approved abandoned mine land reclamation programs. In addition, the Crow, Hopi, and Navajo Indian Tribes have approved programs. In 2002, the states and tribes received grants totaling \$191,501,525 to carry out the emergency and non-emergency Abandoned Mine Land programs.

Since 1979, when the states began receiving abandoned mine land administrative grants to operate their programs and construction grants to complete reclamation projects, \$3,261,045,007 has been distributed from the fund. Grant obligations (the amount used by the states) for 2002 are shown in Table 3<sup>4</sup>.

Simplified grant funding of state abandoned mine land programs started in 1994. This grant application process eliminates the requirement for separate advance approval of each reclamation

project before a grant is awarded to the state. States now receive amounts based on appropriated spending levels and are held accountable for using those funds in accordance with their approved abandoned mine land reclamation plans. The Office of Surface Mining is no longer involved in cumbersome and detailed pre-award scrutiny of state grant applications. During 2002, the Office of Surface Mining awarded 96 percent of the Abandoned Mine Land grants to the states within 60 days of receiving the grant application.

### 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 distribution is too small for the state to administer a program.

During 2002, Alaska, Arkansas, Iowa, Kansas, Maryland, Missouri, North Dakota, and Oklahoma were eligible for minimum-level program funding and received such grants during the year. Minimum program funding was \$1,500,000 for 2002 (\$100,000 less than 2001). The eight eligible programs received a total of \$7,602,718 in 2002. This funding supplements the formula-based grant and brings those eight states

This joint Natural Resources Conservation Service/Arkansas Department of Environmental Quality project resulted from a cooperative agreement to reclaim abandoned mine sites together. The reclamation of this site eliminated many health and safety hazards. The public is no longer in danger and the site is being integrated back into the natural Arkansas landscape. Ground-water degradation has been eliminated and a dangerously crooked stretch of state highway was eliminated. This was an excellent synergistic opportunity between federal, state, and county authorities that saved the taxpayers thousands of dollars.



4. Larger total obligations (shown in table 3) than total distribution (shown in table 1) result from previous year carry-over or funding from past years distributions that were not used until 2002.

# ABANDONED MINE LAND RECLAMATION



This abandoned mine reclamation was the Ocean Underground Mine, which began operation about 1870 (above). During World War I, approximately 90 percent of all steamship coal used by U.S. warships came from this mine. But, when mining was completed in the 1940's the unreclaimed site was abandoned leaving entrances to the mine open, refuse piles, and a large group of buildings. After reclamation, all abandoned mine hazards were eliminated and the site is once again an asset to the nearby Maryland community. This view shows the stream running through the site located on its original channel and free of sedimentation.

Prior to the Rural Abandoned Mine Land reclamation this Indiana abandoned mine site had unstable highwalls and water-filled pits (left). Its close proximity to residential areas created dangerous conditions and resulted in the death of one young boy who fell through the frozen water. Today, with the abandoned mine hazards eliminated, the site has been turned into an attractive resource for the community.

to the minimum-program level. Once minimum-program states or tribes complete their high priority projects listed in the National Inventory of Abandoned Mine Land Problems, their annual grants are limited to state-share funds.

## State Set-Aside

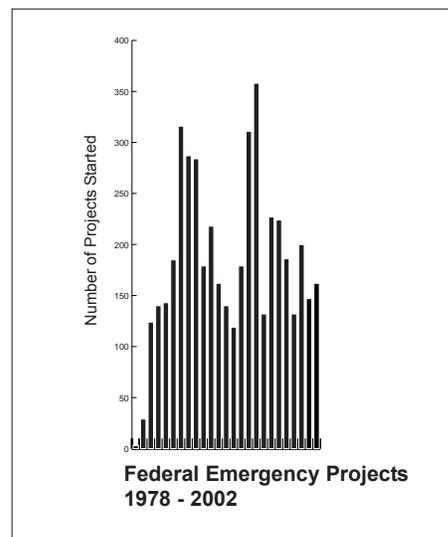
Beginning in 1987, Public Law 100-34 authorized states to set aside up to 10 percent of the state-share portion of their annual abandoned mine land reclamation grants. Set-aside money was deposited into special trust funds and became available, along with interest earned, for use by the state for reclaiming abandoned mine land problems after August 3, 1992, the original expiration date for the collection of

abandoned mine land reclamation fees. (Subsequent legislation has extended that date to September 30, 2004.) Statutory amendments contained in Public Law 101-508 created a new acid mine drainage set-aside program that does not supersede the transfer of funds deposited under the original 1987 program. The funds set aside under the new program were available for use beginning in 1996, and only to reclaim eligible priority 1 and 2 abandoned coal mine land problems. In 2002, 11 states set aside \$8,430,421.

## Subsidence Insurance

Public Law 98-473 authorized states and tribes with approved reclamation programs to use abandoned mine land funds to establish 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 receive an annual subsidence insurance grant of up to \$3,000,000, awarded from the state's share of the Abandoned Mine Land Fund. In 2002, no subsidence insurance grants were issued. Through 2002, the Office of Surface Mining has granted a total of \$11,799,058 to Colorado, Indiana, Kentucky, Ohio, West Virginia, and Wyoming for this purpose.

## Emergency Program



Emergency reclamation projects are those involving abandoned mine land problems that present a danger to public health, safety, or general welfare and which require immediate action to eliminate the problem.

Following passage of the Surface Mining Law, the Office of Surface Mining performed all emergency reclamation; however, as programs were approved, many states took over emergency programs. In 2002, the following states implemented emergency programs: Alabama, Alaska, Arkansas, Illinois, Indiana, Kansas, Missouri, Montana, North Dakota, Ohio, Oklahoma, Virginia, and West Virginia. The Office of Surface Mining funds the states with emergency programs using federal share funds (in addition to formula-based allocations) to complete the projects. The Office of Surface Mining completes emergency projects in California, Colorado, Iowa, Kentucky, Maryland, Michigan, Mississippi, New Mexico, Pennsylvania, Rhode Island, Tennessee, Texas, Utah, Washington, and Wyoming, as well as on all tribal lands. It is anticipated that Iowa will assume the responsibility for the emergency program in 2003.

Investigations of potential emergency problems (called "complaint" investigations) are undertaken by state reclamation agencies or by the Office of Surface Mining. Potential emergency problems are referred to the states or Office of Surface Mining from affected citizens, municipalities, emergency response agencies, and other state agencies. Information on how to report emergency problems can be found at [www.osmre.gov/amlemerg.htm](http://www.osmre.gov/amlemerg.htm).

Following identification of a potential emergency problem, a technical investigation is performed, usually within 48 hours, and an emergency determination made. Of the 1,144 potential emergencies referred to the states and Office of Surface Mining in 2002, 341 were determined to be emergencies, 786 were determined to be not of an emergency nature or not related to coal mining, and

**TABLE 4: RECLAMATION PROJECTS STARTED**

	2002		Emergency 1978-2002			Non-Emergency 2002	
	Federal	State	Federal	State	Total	Federal	State
Alabama	0	6	10	91	101	0	11
Alaska	0	0	0	1	1	0	3
Arkansas	0	0	1	18	19	0	1
California	0	0	5	0	5	2	0
Colorado	1	0	100	0	100	0	10
Crow Tribe	0	0	0	0	0	0	2
Georgia	0	0	0	0	0	1	0
Hopi Tribe	0	0	0	0	0	2	0
Illinois	0	15	51	247	298	0	0
Indiana	0	18	94	121	215	0	28
Iowa	0	0	22	0	22	0	2
Kansas	0	37	270	601	871	0	3
Kentucky	66	0	935	0	935	0	29
Louisiana	0	0	0	0	0	0	0
Maryland	0	0	17	0	17	0	5
Michigan	1	0	13	0	13	0	0
Mississippi	0	0	0	0	0	0	0
Missouri	0	0	6	2	8	0	3
Montana	0	0	7	13	20	0	7
Navajo Nation	0	0	6	0	6	0	4
New Mexico	0	0	15	0	15	0	6
North Dakota	0	2	15	13	28	0	6
Northern Cheyenne	0	0	2	0	2	0	0
Ohio	0	30	190	258	448	0	10
Oklahoma	0	7	47	17	64	0	2
Pennsylvania	90	0	2,195	0	2,195	0	82
Rhode Island	0	0	3	0	3	0	0
Southern Ute Tribe	0	0	1	0	1	0	0
Tennessee	2	0	17	0	17	2	2
Texas	0	0	6	0	6	0	1
Utah	0	0	0	0	0	0	4
Virginia	0	22	30	125	155	0	19
Washington	2	0	50	0	50	4	0
West Virginia	0	50	179	682	861	0	22
Wyoming	0	0	38	0	38	0	44
<b>Totals</b>	<b>162</b>	<b>187</b>	<b>4,325</b>	<b>2,189</b>	<b>6,514</b>	<b>11</b>	<b>306</b>

17 were still under investigation on September 30, 2002. Problems which were not emergencies; but, were otherwise eligible for reclamation are considered for high priority projects.

During 2002, states obligated \$10.4 million (see Table 3) and the Office of Surface Mining obligated \$10.1 million on emergency reclamation projects (see Table

5). No state expenditures exceeded the Congressionally-imposed "cap" of \$4.5 million which can be spent in any state within a year. In 2002, the states and the Office of Surface Mining started 349 Abandoned Mine Land emergency projects in 15 States (see Table 4). As usual, most emergencies occurred in Pennsylvania, West Virginia, Kentucky, and Kansas.

# ABANDONED MINE LAND RECLAMATION

**TABLE 5: FEDERAL PROJECT OBLIGATIONS**

State or Tribe	Emergency	High Priority	1978-2002 <sup>1</sup>
Alabama	\$0	\$0	\$13,934,015
Alaska	0	0	194,638
Arkansas	0	0	84,904
California	0	60,851	2,352,939
Colorado	37,559	0	1,985,429
Georgia	0	196,589	3,833,685
Illinois	0	0	5,376,749
Indiana	0	0	4,032,023
Iowa	2,465	0	1,440,907
Kansas	0	0	5,094,172
Kentucky	6,686,258	0	111,159,221
Maryland	0	0	2,806,857
Michigan	1,000	0	3,151,360
Missouri	0	0	8,015,909
Montana	0	0	729,058
New Mexico	0	0	2,364,696
North Carolina	0	0	205,407
North Dakota	0	0	1,723,933
Ohio	0	0	18,279,310
Oklahoma	0	0	1,232,159
Oregon	0	0	42,275
Pennsylvania	3,053,847	0	111,634,006
Rhode Island	0	0	490,469
South Dakota	0	0	143,461
Tennessee	122,046	1,134,378	24,378,434
Texas	0	0	289,849
Utah	0	0	123,791
Virginia	0	0	10,095,658
Washington	197,429	309,259	7,310,108
West Virginia	0	0	29,023,226
Wyoming	0	0	1,067,101
Cheyenne River Sioux Tribe	0	0	2,803,165
Crow Tribe	0	0	1,097,895
Fort Berthold Tribe	0	0	69,972
Fort Peck Tribe	0	0	147,991
Hopi Tribe	0	0	1,263,409
Jacarillo Apache Tribe	0	0	59,998
Navajo Tribe	0	0	2,222,792
Northern Cheyenne Tribe	0	0	585,044
Southern Ute Tribe	0	0	94,206
Rocky Boy Tribe	0	0	60,188
Uintah/Ouray Tribe	0	0	138,738
Ute Mountain Tribe	0	0	14,300
White Mountain Apache Tribe	0	0	1,838
Wind River Tribe	0	0	73,267
Zuni Tribe	0	0	125,009
Undistributed	0	0	580
<b>Total</b>	<b>\$10,100,604</b>	<b>\$1,701,077</b>	<b>\$381,354,141</b>

1. Includes prior year contract deobligations and upward adjustments.

## Non-Emergency Program

Under Sections 402 and 407 of the Surface Mining Law, the Secretary of the Interior is authorized to expend Abandoned Mine Reclamation Fund monies for non-emergency reclamation of high priority problems that present an extreme danger to the public. A non-emergency is defined in the Surface Mining Law regulations (30 CFR 870.5) as “a condition that could reasonably be expected to cause substantial harm to persons, property, or the environment.” Until 1980, when states and Indian tribes began to receive approval for their Abandoned Mine Land programs, the Office of Surface Mining administered all non-emergency reclamation. However, since that time, state and tribal programs have assumed responsibility for correcting abandoned mine land problems and currently use 99 percent of non-emergency reclamation funds. During 2002, the Office of Surface Mining initiated 11 non-emergency projects and the states and tribes initiated 306 non-emergency projects.

The Abandoned Mine Reclamation Fund also is used to reclaim problems created by non-coal mines. To be eligible for funding, a non-coal project must be a priority 1 (threat to health and safety), or the state or Indian tribe must certify it has addressed all known coal-related problems. Table 6 summarizes both emergency and non-emergency abandoned coal and non-coal mine reclamation project accomplishments through 2002.

## Post-Surface Mining Law Reclamation

As authorized by the 2002 appropriations, Federal Civil Penalties collected under Section 518 of the Surface Mining Law were used to reclaim lands mined and abandoned after August 3, 1977. In 2002, the Office of Surface Mining funded two reclamation projects in Kentucky costing a total of \$90,858. An additional \$156,356 in unobligated funds will be carried over for use in 2003 reclamation projects.

## Appalachian Clean Streams Program

The Appalachian Clean Streams Program began as an initiative in the fall of 1994 by the Office of Surface Mining. The Program supports local efforts to eliminate environmental and economic impacts of acid mine drainage from abandoned coal mines. The mission is to facilitate the efforts of citizen groups; university researchers; the coal industry; corporations; the environmental community; and local, state, and federal government agencies in cleaning streams polluted by mine drainage. During 2002, \$6.9 million was distributed to 12 states (Alabama, Illinois, Indiana, Iowa, Kentucky, Maryland, Missouri, Ohio, Oklahoma, Pennsylvania, Virginia, and West Virginia) and 17 acid mine drainage cleanup projects were begun. This funding provided the incentive for other

**Figure 1**

	Clean Streams Projects		Watershed Projects	
	Started in 2002	Completed Since 1994	Started in 2002	Completed Since 1999
Alabama	1	3	1	0
Illinois	0	1	0	0
Indiana	3	9	2	2
Kentucky	2	6	0	0
Maryland	0	4	4	5
Ohio	2	8	2	0
Oklahoma	0	1	0	0
Pennsylvania	8	8	8	15
Tennessee	0	0	1	0
Virginia	1	1	0	1
West Virginia	0	6	0	5
<b>Totals</b>	<b>17</b>	<b>48</b>	<b>18</b>	<b>28</b>

sources to contribute to the projects, and during 2002 this funding grew to over \$1.3 million. Since 1996, when the program began, 95 Clean Streams Program projects have been funded by the Office of Surface Mining and 48 have been completed (see Figure 1).

Following is an example of a successful Appalachian Clean Streams Program project completed during 2002.

■ The Pennsylvania Department of Environmental Protection reclaimed the Bells Gap Run project using a \$166,455 Appalachian Clean Streams Program grant and \$337,515 from Pennsylvania's Growing Greener funds. There were two separate abandoned mine sites included in the project. The first site was a 110 gallon/minute discharge coming from an inadequately reclaimed abandoned surface mine. Water was percolating through the exposed acidic spoil and seeping out at down-slope locations. The project reclaimed the surface mine, providing surface drainage and vegetation, and constructed a vertical flow alkalinity producing wetland to treat the water. The second site used an anoxic limestone drain to treat a four gallons/minute discharge from an underground mine. Together, these two projects improved two miles of Bells Gap and Lloydville Runs.

A landslide above this Kentucky house (left) required emergency work to prevent further damage. Surface and subsurface drains at the top of the hill divert water around the house. The concrete wall will provide a solid base at the bottom of the hill and prevent future sliding. The large pipe covered with gravel behind the wall will prevent water buildup and keep added pressure off the wall. As the last step in the reclamation process, the entire site will be graded and revegetated.

Abandoned mine openings such as this one in Pennsylvania are extremely dangerous (below). Partially caved in at the entrance, this example is typical of abandoned mine openings found throughout the country in areas where underground coal mining has taken place. Abandoned sites like this should be reported so they can be reclaimed (see [www.osmre.gov/amlemerg.htm](http://www.osmre.gov/amlemerg.htm)).



**TABLE 6:  
1978-2002 ABANDONED MINE LAND RECLAMATION ACCOMPLISHMENTS**  
PRIORITY 1 AND 2 (PROTECTION OF PUBLIC HEALTH, SAFETY AND GENERAL WELFARE) AND  
EMERGENCY PROJECTS<sup>7</sup>

	Clogged Stream <sup>1</sup>	Clogged Stream Land <sup>2</sup>	Dangerous Highway <sup>3</sup>	Dangerous Impoundment <sup>4</sup>	Dangerous Pile & Embankment <sup>2</sup>	Dangerous Slide <sup>2</sup>	Dangerous Gas <sup>4</sup>	Hazardous Equipment & Facilities <sup>2</sup>	Hazardous Water Body <sup>4</sup>	Industrial/Residential Waste <sup>2</sup>	Portal <sup>4</sup>	Polluted Water: Agricultural & Industrial <sup>4</sup>	Polluted Water: Human Consumption <sup>4</sup>	Subsidence <sup>2</sup>	Surface Burning <sup>2</sup>	Underground Mine Fire <sup>2</sup>	Vertical Opening <sup>4</sup>
Alaska	0	0	11,190	4	6	0	0	1,420	2	4	25	0	0	0	0	0	36
Alabama	2	168	239,440	1	1,846	21	0	470	67	25	1,001	5	13	23	68	0	388
Arkansas	1	0	58,076	1	751	0	0	2	73	25	24	0	0	11	4	0	102
California	0	0	0	0	0	0	0	0	0	0	31	0	0	1	0	0	40
CERT Tribes <sup>6</sup>	0	0	7,170	0	475	0	0	6	30	9	73			35			18
Colorado	0	0	52,142	0	29	0	0	2	0	2	2,159	3	0	48	35	159	3,039
Crow Tribe	0	1	2,267	1	58	23	0	32	1	0	14	3	0	16	0	0	5
Georgia	0	0	9,150	3	3	0	0	0	0	0	112	0	1	0	0	0	11
Hopi Tribe	0	0	11,662	0	0	0	0	8	0	0	9	0	0	0	0	0	2
Iowa	7	640	56,285	3	819	0	0	4	22	11	1	12	2	2	0	0	20
Idaho	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Illinois	20	1,290	32,861	7	234	3	20	306	2	71	185	11	1	75	103	0	1,104
Indiana	14	121	117,163	6	718	3	3	95	7	32	68	15	7	154	15	0	335
Kansas	1	9	135,275	1	109	3	0	2	1	24	1	3	0	24	5	0	823
Kentucky	43	8,590	24,930	101	414	1,997	0	204	30	28	1,607	6	6,476	50	224	58	124
Maryland	5	50	44,030	1	197	66	0	22	20	32	34	23	6	15	0	0	6
Michigan	0	0	950	0	0	0	0	7	2	0	0	0	1	0	8	0	39
Missouri	11	1,514	67,302	6	499	0	0	27	11	71	35	34	15	4	19	7	132
Montana	8	85	22,460	3	173	1	1	216	1	323	1,052	17	12	494	302	69	579
Navajo Nation	0	1	85,413	4	513	7	0	5	0	5	705	19	0	10	3	0	373
North Carolina	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
North Dakota	0	0	65,549	4	303	35	0	14	18	2	13	6	0	1,241	12	0	88
New Mexico	0	1	0	0	9	0	0	17	0	0	460	4	1	35	35	32	774
Ohio	33	5,165	46,809	7	96	373	4	45	9	34	239	1	78	86	89	3	180
Oklahoma	12	1	213,814	0	0	0	0	13	182	6	170	4	3	12	0	0	109
Oregon	0	0	0	0	0	0	0	3	0	0	12	0	0	0	0	0	3
Pennsylvania	94	140	718,276	45	598	37	0	308	119	20	252	27	31	2,431	122	915	481
Rhode Island	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0
South Dakota	0	0	135	0	0	0	0	4	0	0	5	0	0	1	0	0	1
Tennessee	0	147	32,795	1	399	66	0	31	36	14	192	5	7	6	28	0	10
Texas	0	0	45,615	0	1,359	0	0	0	15	0	58	0	0	6	0	0	336
Utah	14	9	3,425	1	138	3	19	178	0	2	2,467	2	0	184	43	29	829
Virginia	73	838	25,780	23	259	242	0	217	2	2	944	0	1,614	11	51	0	99
Washington	0	0	0	0	3	0	0	7	0	0	30	0	0	6	15	0	82
West Virginia	46	150	190,422	518	4,238	488	4	515	6	36	2,138	45	9,248	285	446	19	138
Wyoming	114	1,634	483,141	136	1,924	25	0	179	371	29	499	1	0	1,122	41	36	381
<b>Total</b>	<b>498</b>	<b>20,554</b>	<b>2,803,527</b>	<b>877</b>	<b>16,170</b>	<b>3,393</b>	<b>51</b>	<b>4,359</b>	<b>1,027</b>	<b>807</b>	<b>14,615</b>	<b>246</b>	<b>17,516</b>	<b>6,394</b>	<b>1,668</b>	<b>1,327</b>	<b>10,692</b>

**TABLE 6:  
1978-2002 ABANDONED MINE LAND RECLAMATION ACCOMPLISHMENTS  
PRIORITY 3 (ENVIRONMENTAL RESTORATION)<sup>7</sup>**

	Bench <sup>2</sup>	Industrial/Residential Waste <sup>2</sup>	Equipment/Facility <sup>4</sup>	Gob <sup>2</sup>	Highwall <sup>3</sup>	Haul Road <sup>2</sup>	Mine Opening <sup>4</sup>	Pit <sup>2</sup>	Spoil Area <sup>2</sup>	Slurry <sup>2</sup>	Slump <sup>2</sup>	Water Problem <sup>5</sup>
Alaska	0	0	0	7	0	0	0	0	47	9	0	0
Alabama	23	14	8	224	31,135	2	48	0	9,048	5	12	379
Arkansas	0	0	0	0	0	0	0	0	8	0	0	0
CERT Tribes <sup>5</sup>	0	0	2	6	1,500	0	1	7	80	0	0	50
Colorado	3	6	7	159	2,028	0	18	83	829	0	0	1
Crow	6	0	0	28	1,995	12	2	18	25	0	4	0
Georgia	3	0	0	3	400	0	0	3	7	0	0	0
Hopi Tribe	0	0	0	25	51	15	0	10	10	0	0	0
Iowa	0	2	0	1	1,467	5	1	19	440	0	0	0
Illinois	1	6	148	2,408	10,880	178	60	574	1,874	1,112	1	836
Indiana	0	75	177	1,292	15,046	227	21	73	1,770	829	2	2,305,070
Kansas	0	0	1	89	3,200	0	0	23	316	10	0	0
Kentucky	604	0	53	232	2,000	0	69	4	1,016	58	5	0
Maryland	7	1	2	56	4,535	2	6	22	263	0	1	88
Michigan	0	0	1	27	0	1	0	1	10	0	11	0
Missouri	0	4	5	142	16,824	1	0	96	1,341	69	0	86
Montana	1	76	58	147	1,170	1	230	34	875	0	19	2,741
Navajo Nation	36	1	2	136	280	98	62	111	265	0	0	1
North Dakota	0	0	0	0	0	0	0	0	0	0	0	0
New Mexico	3	0	11	68	0	6	4	2	244	2	0	0
Ohio	0	0	3	129	9,620	0	19	17	411	0	0	0
Oklahoma	0	0	0	0	0	0	0	0	0	0	0	0
Oregon	0	0	0	0	0	0	1	0	0	0	0	0
Pennsylvania	0	0	21	52	8,208	0	21	106	1,988	1	31	91,041
Tennessee	76	0	15	67	230	8	0	78	359	0	4	360
Texas	0	0	0	8	0	0	0	0	436	0	0	0
Utah	4	7	64	255	550	3	0	8	55	1	16	20
Virginia	0	1	25	20	13,000	1	52	0	3	0	0	120
West Virginia	0	0	0	55	22,340	0	4	5	182	0	0	622
Wyoming	0	0	0	39	0	91	0	7,069	8,017	199	0	0
<b>Total</b>	<b>767</b>	<b>193</b>	<b>603</b>	<b>5,675</b>	<b>146,459</b>	<b>651</b>	<b>619</b>	<b>8,363</b>	<b>29,919</b>	<b>2,295</b>	<b>106</b>	<b>2,401,415</b>

1. Miles  
2. Acres  
3. Feet  
4. Count (Number of occurrences)  
5. Gallons/minute.  
6. CERT is the Council of Energy Resources Tribes which includes: Blackfeet; Cheyenne River Sioux; Fort Berthold (Mandan, Hidatsa, and Arikara); Fort Peck (Assiniboin and Sioux); Northern Cheyenne; Jicarilla Apache, Laguna Pueblo; Rocky Boys (Chippewa and Cree); San Carlos Apache; Southern Ute, Ute Mountain Ute; White Mountain Apache; and Wind River (Arapaho and Shoshone).  
7. These statistics do not include Office of Surface Mining emergency project accomplishments.

# ABANDONED MINE LAND RECLAMATION



Surface subsidence resulted when the roof collapsed in an abandoned underground mine 150 feet below a residential area adjacent to a high school in Fairmont, West Virginia. After drilling 320 boreholes, 2,000 cubic yards of concrete was pumped into the boreholes. The resulting concrete pillars support the mine's roof and will prevent future subsidence.

This watershed is part of the City of Altoona water supply, and the removal of the metals and acidity from the streams will reduce costs of water treatment at the filtration and treatment facility located at the downstream reservoir. The Pennsylvania Department of Environmental Protection worked closely with the Blair County Conservation District and the City of Altoona in developing and constructing this successful acid mine drainage treatment project.

## Watershed Projects

As part of the Appalachian Clean Streams Program in 2002, \$2.7 million was included in the budget to fund watershed projects with local not-for-profit organizations that undertake acid mine drainage reclamation projects. An additional \$4.4 million was contributed by outside sources. The maximum award for each cooperative agreement was \$100,000. These funds were primarily used for the construction phase of the work; however, administrative costs associated with completion of the projects were allowable. In 2002, 16 new (totalling \$1,344,469) and 5 amendments to existing watershed

cooperative agreements (totalling \$214,590) were awarded (see Figure 2) and 18 projects were started. Since 1999, 28 watershed projects have been completed.

Significant on-the-ground improvement has been made by watershed projects during 2002. For example, the Mountain Watershed Association Sagamore Mine Drainage Project located in northeast Fayette County Pennsylvania. There are about 30 miles of streams, with 17 miles severely impacted by drainage from abandoned coal mines in the watershed.

As a watershed partner, the Agriculture Department's Natural Resources Conservation Service completed a watershed restoration plan in 2000. That plan identified 119 sources of abandoned mine drainage. Of those, ten were targeted for treatment because they contributed more than 90 percent of the total problem in the watershed.

The Sagamore Mine Drainage Remediation Project is the first acid mine drainage project completed in the watershed. The project included the collection of underground mine seeps, relocation and reclamation of a streamside coal refuse pile, and design and construction of two distinctly different treatment systems. One system includes two large wetland areas, that treats water high in iron and aluminum; but, is "net alkaline" (no alkalinity in the form of limestone needs to be added to cause the metals to fall out of solution). A special feature of this system are two wind mills that operate air pumps. The 20-foot tall

windmills pump air into the water, enhancing the process that leads to precipitation of the iron. The second system is an underground anoxic limestone drain that the acidic water flows through. The limestone dissolves in the water, and raises the pH enough to cause the metals to fall out in the wetlands.

**Figure 2**

Four Rivers RC&D Area, Inc. Enos Lake (Indiana)	\$69,280
Tuscarawas Soil & Water Conservation District Linden Mine (Ohio)	100,000
National Wild Turkey Federation Simmons Run (Ohio)	100,000
Huff Run Watershed Restoration Partnership, Inc. Huff Run Pit #1 (Ohio)	100,000
Western MD RC&D Fazenbaker (Maryland)	62,000 <sup>1</sup>
Western MD RC&D North Branch Casselman (Maryland)	100,000
Georges Creek Watershed Association Potomac Hill (Maryland)	100,000
Blacklick Creek Watershed Assn. Webster Mine Drainage (Pennsylvania)	80,000 <sup>1</sup>
Mountain Watershed Assn., Inc. Gallentin Site (Pennsylvania)	34,250 <sup>1</sup>
Mountain Watershed Assn., Inc. Sagamore #2 (Pennsylvania)	28,340 <sup>1</sup>
Wood Duck Chapter of Trout Unlimited Cold Stream (Pennsylvania)	99,783
Tri-Area Recreation Authority Arthur Gardner (Pennsylvania)	100,000
Headwaters Charitable Trust Kyler Run AMD (Pennsylvania)	100,000
Headwaters Charitable Trust Howe Bridge (Pennsylvania)	100,000
Headwaters Charitable Trust Blue Valley Phase II (Pennsylvania)	52,400
Little Toby Creek Watershed Assn. Brandy Camp Project (Pennsylvania)	15,000
Western PA Conservancy Big Run #2 Project (Pennsylvania)	85,506
Shamokin Creek Restoration Carbon Run Site (Pennsylvania)	22,500
Cumberland Mountain RC&D Bear Creek #2 (Tennessee)	100,000
Black Diamond RC&D, Inc. Guest River (Virginia)	100,000
Lower West Fork Watershed Assn. Nixon Run Site (West Virginia)	10,000 <sup>1</sup>
<b>Total</b>	<b>\$1,559,059</b>

1. Amendment

The Office of Surface Mining contributed \$107,000 of the total project cost of \$358,000. Other financial partners included the Natural Resources Conservation Service, Environmental Protection Agency, and the Western Pennsylvania Watershed Protection Foundation. The Pennsylvania Department of Environmental Protection provides maintenance, and is an active funding and design partner in several of the other acid mine drainage remediation projects in the watershed.

The completion of this project provided the Association and community with a successful example of what can be accomplished when people and groups work together. The project site is crossed by a rails to trails hike/bike trail, that connects several of the Indian Creek Communities. The local school system is using the site for environmental field trips, and local youth groups have planted trees and shrubs along the trail. Mountain Watershed Association has successfully leveraged their success on this project to improve public involvement in environmental issues affecting the watershed and has been successful in starting additional projects.

**Summer Watershed Internship Program**

The Office of Surface Mining and Environmental Protection Agency initiated the Summer Watershed Internship program in 1999; and in 2002, funded 31 interns in eight states. Since the program began, 97 interns have been placed in nine states (see Figure 3), all of

them working directly for watershed groups on acid mine drainage issues.

The internship program enables college students (juniors and above) to bring technical expertise and youthful energy to volunteer watershed organizations. Each intern spends a semester working in a watershed, and receives college credit for his or her efforts. In 2002, the Office of Surface Mining funding provided a \$2,000 stipend and \$500 for project expenses to each intern. In every case, the interns strengthened the capacity of the sponsoring watershed group, adding to their monitoring data, developing watershed plans, and building public awareness.

**Vista Initiative**

During 2002 the Office of Surface Mining created pilot programs that provided three full-time VISTA Watershed Development Coordinators in Tennessee and five in West Virginia. These coordinators monitor acid mine drainage discharge and conduct educational programs. The Office of Surface Mining coordinates the volunteers and provides a \$5,000 administrative support cooperative agreement to each watershed sponsor. During the Fall of 2002, eight more coordinators were funded in Tennessee and West Virginia and discussions are ongoing in Alabama, Maryland, and Virginia for 2003 coordinator funding.

**Brownfields Initiative**

During 1999, the Office of Surface Mining initiated the first successful Environmental Protection Agency Brownfields pilot project for an entire coal-impacted watershed. This project resulted in an inventory, assessment, and planning for the cleanup of Dark Shade Creek in Pennsylvania. Dark Shade Creek

is the worst polluted river in Pennsylvania. During 2002, the Office of Surface Mining conducted Brownfields training at Dark Shade for watershed representatives and their interns. This training provides program information and has already resulted in two new Brownfields projects in Tennessee and Kentucky.

**Soccer Initiative**

The University of Virginia College at Wise was a 2002 U.S. Soccer Foundation grant recipient. The Virginia Department of Mines, Mineral and Energy completed reclamation work at the college highwall site using soil and rock to eliminate a dangerous highwall. The borrow site was designed and reclaimed to be used as an official sized soccer field. Also, the Virginia Department of Mines, Mineral and Energy has partnered with the Lonesome Pine Soil and Water Conservation District to construct a parking lot adjacent to the field. This is one of three pilot projects that has been initiated by the Office of Surface Mining and the U.S. Soccer Foundation.

**Inventory of Abandoned Mine Land Problems**

The Surface Mining Law, 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 that meet the public health, safety, and general welfare criteria of Section 403(a)(1) and (2). This inventory is

**Figure 3**

State	Number of Interns			
	2002	2001	2000	1999
Alabama	1	0	3	0
Kentucky	0	1	2	0
Maryland	2	2	1	0
Ohio	4	3	2	1
Pennsylvania	8	12	5	3
Tennessee	3	1	3	1
Virginia	3	2	1	0
West Virginia	9	11	6	4
Indiana	1	1	0	1
<b>Total</b>	<b>31</b>	<b>33</b>	<b>23</b>	<b>10</b>

Abandoned 1950's and 60's mining in the Crabtree Fork watershed had caused sedimentation that completely filled this Dickenson County, Virginia stream channel. Rainfall caused frequent flooding of the roads and homes along the creek. When the reclamation was completed, over 25,000 cubic yards of sediment were removed from 9,500 feet of stream channel. Today, with stream bank stabilization complete, flooding has been eliminated and the aquatic habitat is being restored.



# ABANDONED MINE LAND RECLAMATION

maintained and updated to reflect reclamation accomplishments as required by Section 403(c).

The Office of Surface Mining maintains its inventory on the Abandoned Mine Land Inventory System, which is accessible from the web at [www.osmre.gov/aml/inven/zintroin.htm](http://www.osmre.gov/aml/inven/zintroin.htm). The system creates reports on abandoned mine land accomplishments and problems that still require reclamation. This was the eighth year the states and Indian tribes managed their own data, entering it electronically into the Office of Surface Mining's inventory system. In 2002, this process resulted in 1,275 records added, 4,437 modified, and 146 deleted.

Before reclamation, this 50-acre site adjacent to an active Indiana coal mine consisted of a very large abandoned gob pile and a slurry pond. The site was the principal source of acid mine drainage that was polluting the local watershed. The area was graded and covered with approximately two feet of shale and unconsolidated subsoil material, then revegetated to pasture and hay fields. Costs to complete this reclamation project were shared by the mining company and the landowner, saving the public over \$200,000 in abandoned mine land funds.



**Figure 4**

Completed	\$1.9 billion	17.7 percent
Funded	0.2 billion	1.9 percent
Unfunded	8.6 billion	80.4 percent
<b>Total</b>	<b>\$10.7 billion</b>	<b>100 percent</b>

As of September 30, 2002, the system contained information for 17,231 problem areas, mostly related to abandoned coal mines. (A problem area is a geographic area that contains one or more abandoned mine problems. Problem area boundaries are delineated by the extent of their effect on surrounding land and water, not just the abandoned mine sites.)

Although the Abandoned Mine Land Program is one of the Nation's most successful environmental restoration programs, with over \$1.5 billion worth of coal-related high priority problems reclaimed, many projects have yet to be funded. The inventory of unfunded coal-related problems is reduced each year by state, Indian tribe, and federal reclamation projects. Unfortunately, new problems are discovered as development expands into old coal mining areas and new problems arise such as subsidence and mine fires. As of September 30, 2002, a breakdown of (Priority 1, 2, and 3) costs from the Inventory System show over \$8.6 billion of unreclaimed problems (see Figure 4).

During 2002, the Bureau of Land Management continued to store its federal lands abandoned mine inventory in a specially modified version of the Office of Surface Mining inventory system. People accessing either the Office of Surface Mining or Bureau of Land Management version of the system will have access to both agencies' abandoned mine land inventories. Using the geographic information system capabilities, it will be possible to query both databases. Future plans also include access to the U.S. Forest Service and National Park Service abandoned mine inventories.

## Reclamation Awards

After more than 25 years of abandoned mine land reclamation funded under the Surface Mining Law, thousands of dangerous health and safety problems have been eliminated. To enhance communication about achievements in abandoned mine land reclamation, the Office of Surface Mining has presented awards to those state and Indian Abandoned Mine Land programs responsible for completion of the most outstanding reclamation. (See [www.osmre.gov/amlrules01.htm](http://www.osmre.gov/amlrules01.htm) for a description of the awards program and the 2003 rules.) This year five awards

were presented at the 2002 annual meeting of the National Association of Abandoned Mine Land Programs.

■ National Abandoned Mine Land & Mid-Continent Region Awards -- The Indiana Division of Reclamation's Sunshine Mine Reclamation Project in Bicknell, Indiana, won the national and regional awards for elimination of a 25-acre area of gob, slurry, mine drainage, and derelict buildings that travelers referred to as "the ugly old coal mine at the edge of town." The project included regrading refuse, spreading 100 tons per acre of agricultural lime, covering the material with four feet of soil, and planting vegetation. In addition, almost 5,000 linear feet of erosion control features were installed. Most drainage from the reclaimed site has been directed into a small wetland that improves site aesthetics, eliminates offsite sedimentation, and enhances water quality downstream.

■ Appalachian Region Award -- The Maryland Abandoned Mine Land Section of the Bureau of Mines' Kempton Coal Waste Stabilization and Doser Installation Project in Kempton, Maryland, won the Appalachian regional award for reclamation of an early 1900's underground mine that was discharging about 3.5 million gallons of highly acidic mine drainage per day. Discharges from a ventilation airshaft and an 18" diameter borehole had been responsible for eliminating aquatic habitat in more than 35 miles of the Potomac River. The reclamation efforts included installing a water-powered dosing system immediately adjacent to the airshaft discharge. In addition, a total of 160,000 cubic yards of coal refuse was removed from the Kempton Glades Wetland, designated a Wetland of Special State Concern because of its biologically unique environment.

■ Western Region Award and People's Choice Awards<sup>5</sup> -- The New Mexico Abandoned Mine Land Bureau's Sugarite Canyon Project in Raton, New Mexico, won the western regional award for its reclamation of the Sugarite Canyon. This reclamation stabilized sides of the steep-walled canyon, which were covered with large areas of eroding coal mine waste. The project used a unique design that included construction of straw bale terraces with seedlings planted behind the straw mulch, which provided immediate control of water erosion and long-term stabilization of the steep slopes. This difficult abandoned mine problem has been successfully reclaimed and no longer poses a safety hazard to visitors of the Sugarite Canyon State Park.

For additional information on the award program and the 2003 program rules see [www.osmre.gov/awardwin01.htm](http://www.osmre.gov/awardwin01.htm) or [www.osmre.gov/pdf/aml2003.pdf](http://www.osmre.gov/pdf/aml2003.pdf) for a illustrated description of the 2002 award winning reclamation.

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 Logan County, West Virginia. The project contained 38 acres of burning refuse that was excavated and quenched using water from a ten-acre pond constructed on the project site. Today, 20 years after the project's completion, the area is covered by a wide variety of vegetation and it is difficult to identify traces of the past abandoned mine land hazards.



5. Using the Office of Surface Mining web site, the public selects one reclamation project they think is best. This project received the most votes and became the winner of the People's Choice Award.