

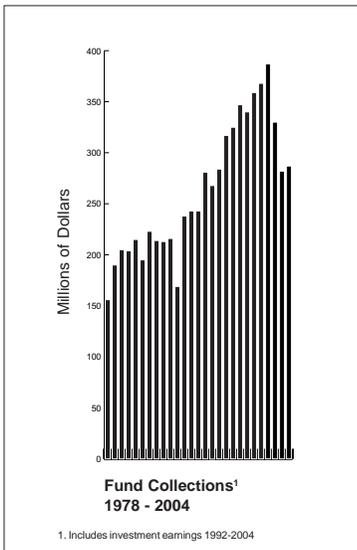


Abandoned mine land

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 establishes the Abandoned Mine Land Reclamation Program, which provides for the restoration of lands mined and abandoned or left inadequately restored before August 3, 1977. The program is implemented through an emergency program (for sudden problems presenting a high probability of substantial harm to the health, safety or general welfare of people before the danger can be abated under the normal program operating procedures) and a non-emergency program. States and tribes with approved programs carry out these responsibilities using grants administered by the Office of Surface Mining

Abandoned Mine Reclamation Fund



The program is funded from the collection of fees from active mining operations. Since 1978, fees have been assessed at the rate of 35 cents per ton of surface mined coal, 15 cents per ton for coal mined underground, and 10 cents per ton for lignite coal. The fees are deposited in the Abandoned Mine Reclamation Fund,

which is used to pay the costs of abandoned mine land reclamation projects. From January 30, 1978, when the first fees were paid, through September 30, 2004, the

Photo to left: Reclamation of this West Virginia abandoned mine site eliminated 6,000 linear feet of highwall and sealed four mine openings. To prevent future damage, an underdrain 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. Since 1977 more than 16,000 underground mine portals have been closed.

fee collections totaled \$7,085,103,212. For the same period, appropriations from the Fund totaled \$5,493,809,291.

Under the provisions of the Surface Mining Law, the authority to collect abandoned mine land fees was limited in time. This authority has been extended by law on three separate occasions to date, including the most recent extension by way of a continuing resolution. As of the date of this writing, the fee collection authority is slated to expire on November 20, 2004.

Unfortunately, despite remarkable achievements in the past 27 years, the job of remediating abandoned mine land-related hazards and problems is far from complete. More than \$3 billion worth of health and safety coal-related abandoned sites remain in the Office of Surface Mining's inventory of hazardous sites, as well as another \$3.6 billion worth of identified high-priority coal problems affecting the general welfare of individuals in the coalfields and numerous environmental coal-related problems. These are not "ugly landscapes" that need to be made more attractive; they are serious, life-threatening, high-priority coal mine hazards that originate from mines abandoned before passage of the Surface Mining Law in 1977. A 2003 study completed by the Office of Surface Mining estimated that 3.5 million Americans live less than one mile from health and safety hazards created by abandoned coal mines. It is clear that fee collections for the purpose of abandoned mine land reclamation must be reauthorized to abate the hazards and eliminate these historic problems from the Nation's coalfields.

Reauthorization

The Bush Administration has been working diligently on taking the steps necessary to finish the job Congress gave the Office of Surface Mining in 1977. In his 2004 budget, President Bush called for reauthorization of the Office of Surface Mining's authority to collect the fees

reclamation

that make up the Abandoned Mine Reclamation Fund. As a result, the Office of Surface Mining established a dialogue with many of the people that have an interest in how the abandoned mine land fee is reauthorized. The goal of these discussions was to get stakeholders thinking about what has changed since the program was started more than 27 years ago and how to revise and or enhance the program to help finish the job more efficiently and effectively.

Through review and analysis of the Abandoned Mine Land Program as well as discussions with government officials, members of Congress, industry representatives and citizen advocates, the Office of Surface Mining came to the conclusion that, while significant achievements have been made in reclaiming mine sites abandoned prior to the enactment of the Surface Mining Law, various factors have changed considerably since 1977, creating a fundamental imbalance in the way funds for the Abandoned Mine Land Program are allocated. It became clear that the ability of the

Abandoned Mine Land Program to meet its primary objective of abating abandoned mine land problems on a priority basis is being hindered by a statutory allocation formula that results in a progressive distribution of resources away from the most serious abandoned mine land problems.

The Surface Mining Law allocates abandoned mine land fee revenues into several accounts within the Abandoned Mine Reclamation Fund. Expenditures from these accounts are subject to Congressional appropriation. Fifty percent of the fees collected from current coal production in each state is allocated to an account established for that state. Likewise, 50 percent of the fees collected from current coal production on Indian lands is allocated to an account established for the tribe having jurisdiction over those lands. The funds in these individual "state share" and "tribal share" accounts can only be used to provide abandoned mine land grants to the state or tribe for which the account is established. The state or tribe

must generally follow the priorities established by the Surface Mining Law in making spending decisions, concentrating first on abandoned mine land sites that pose a significant risk to human health, safety, or the general welfare, then on environmental problems. Once a state or tribe certifies that it has completed remediation of all coal-related sites, it is free to spend its state share money on other authorized projects such as public facilities for areas adversely affected by coal mining practices. Table 1 shows 2004 collections and funding by states.

Twenty percent of the total Abandoned Mine Reclamation Fund income is allocated to the "historical production" account. Funds in this account must be used to provide abandoned mine land grants to the states and tribes. Each eligible state and tribe is entitled to a percentage of the annual outlays from this account in an amount equal to its percentage of the nation's total historical coal production--that is, coal produced prior to 1977. Thus, the proportional



Located in the Sugarite Canyon of New Mexico, this abandoned mine land 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. This 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.

Table 1: Abandoned Mine Lands Fee Collections and Funding¹

State/Tribe	AML Collections	State Share Distribution ²	Federal Share Distribution ²	Emergency Distribution ²	Clean Streams Distribution ^{2 and 3}	Total Distribution ²
Alabama	\$3,981,358	\$1,289,499	\$1,638,480	\$400,000	\$286,733	\$3,614,712
Alaska	443,812	147,206	1,352,794	25,000	0	1,525,000
Arkansas	7,167	517	1,499,483	15,000	0	1,515,000
Colorado	7,581,382	1,771,619	798,511	0	0	2,570,130
Illinois	5,815,770	2,202,250	6,069,988	800,000	724,163	9,796,401
Indiana	10,620,707	3,061,012	1,976,198	350,000	320,069	5,707,279
Iowa	0	2,728	1,497,272	60,000	172,359	1,732,359
Kansas	28,861	31,966	1,468,034	465,000	0	1,965,000
Kentucky	26,383,324	9,370,452	5,948,973	0	712,218	16,031,643
Louisiana	385,776	100,955	0	0	0	100,955
Maryland	1,085,650	251,201	1,248,799	0	163,052	1,663,052
Mississippi	359,685	0	0	0	0	0
Missouri	208,841	70,917	1,429,083	50,000	171,356	1,721,356
Montana	11,024,151	3,435,934	0	125,000	0	3,560,934
New Mexico	3,605,738	1,585,359	194,129	0	0	1,779,488
North Dakota	3,077,944	898,834	601,166	100,000	0	1,600,000
Ohio	4,928,254	1,812,823	3,720,981	2,300,000	492,295	8,326,099
Oklahoma	523,733	157,870	1,342,130	100,000	152,613	1,752,613
Pennsylvania	11,908,673	4,368,150	19,621,212	0	2,061,792	26,051,154
Tennessee	795,026	0	0	0	0	0
Texas	4,701,054	1,488,290	0	0	0	1,488,290
Utah	3,378,554	1,080,832	462,200	0	0	1,543,032
Virginia	6,434,806	1,998,459	1,825,926	1,850,000	305,236	5,979,621
Washington	2,123,418	0	0	0	0	0
West Virginia	31,089,321	9,515,372	11,276,717	3,000,000	1,238,114	25,030,203
Wyoming	135,322,196	30,320,649	0	0	0	30,320,649
Crow Tribe	2,263,755	544,738	0	0	0	544,738
Hopi Tribe	1,252,660	403,997	0	0	0	403,997
Navajo Nation	7,691,784	2,276,464	0	0	0	2,276,464
Total	\$287,023,400	\$78,188,093	\$63,972,076	\$9,640,000	\$6,800,000	\$158,600,169

1. The Abandoned Mine Land fee collections reported in Table 1 are accounted for using a "Cash Basis" criteria or the recognition of revenue when it is received. Abandoned Mine Land revenue reported in the financial statements may include other amounts.
 2. 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 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.
 3. Includes only Supplemental State Grants, not Watershed Cooperative Agreements.

entitlement for each state or tribe from this account is fixed. As is the case with state share money, each state or tribe must follow the priorities established in the Surface Mining Law in making spending decisions using money from the historical production account. However, unlike the allocation of state share money, once the state or tribe certifies that all eligible coal-related reclamation has been completed, it is no longer entitled to further allocations from the historical production account. For the most part, the Office of Surface Mining finds a direct correlation between the severity of abandoned mine land problems in a state and the amount of coal that was removed before the enactment of the Surface Mining Law. Thus, by

distributing funds according to historical coal production, we are getting more funds to those states that have the most high-priority problems.

Ten percent of the total Abandoned Mine Reclamation Fund income is allocated to an account for use by the Department of Agriculture for administration and operation of its Rural Abandoned Mine Program. The remaining 20 percent of the total Abandoned Mine Land Reclamation Fund income is allocated to cover federal operations including the federal Emergency Program, the federal High-Priority Program, the Clean Streams Program, the Fee Compliance Program, the Small Operator Assistance Program, and overall program administrative costs.

In the early years of the Abandoned Mine Land Program, fee income was generally aligned with the magnitude of abandoned mine Land problems--75 percent of the income came from the East, where 94 percent of the abandoned mine land problems existed, and 25 percent of the income came from the West, where 6 percent of the abandoned mine land problems existed. Correspondingly, the state share portion of the grants was generally, but coincidentally being distributed in amounts roughly proportional to the abandoned mine land problem, much like the historical production portion of the grants is intentionally distributed. Significant proportions of abandoned mine land coal reclamation was accomplished during those early years of the program. Over the past 27 years, coal production and fee collections have shifted away from areas with high historical production and into the areas where there are fewer or no remaining abandoned mine land problems. Because 71 percent of the total grant dollars is based on current production, there has been a corresponding shift of abandoned

mine land resources away from the areas with the most significant problems.

From the program's inception in 1977 through 1993, about 99 percent of the state grant dollars were used to reclaim abandoned coal mine sites. Ninety five percent of that money was used for high-priority abandoned mine land reclamation. From 1994 through 2002, as current production shifted to regions with fewer abandoned mine land problems, only 71 percent of the state grant dollars were used to reclaim abandoned coal mine sites, and only 64 percent was used for high-priority abandoned mine land reclamation. This trend will continue as more states, which are entitled to 71 percent of the total grant dollars, complete their high priority abandoned mine land reclamation work and then continue working on low priority sites and other authorized projects while other states are still decades away from completing reclamation of the most critical high-priority sites. This means that even though an extension of the fee is

necessary if the Office of Surface Mining and the states have any hope of completing the job, a change in the allocation formula is necessary if the job is to be completed in an efficient and effective manner.

Thus, through reauthorization, the Office of Surface Mining is attempting to accomplish the following goals:

- to extend authorization for collection of fees on coal production to fund the reclamation of lands and water damaged by past coal mining practices;
- to revise the abandoned mine reclamation program to focus on coal-related sites that present a danger to public health or safety;
- to honor commitments made to states, tribes and the unassigned beneficiaries of the United Mine Workers Combined Benefit Fund; and
- to provide for enhancements, efficiencies and the effective use of abandoned mine land funds.



In Pennsylvania, not far from the home of the famous goundhog, Punxsutawney Phil, the Adrian Southeast Reclamation Project was located in the backyards of homes in the village of Adrian. A 1960s surface coal mining operation left an unreclaimed site that posed a danger to local residents and had damaged the near by streams. Over 6,000 feet of dangerous highwalls were eliminated, and three deep mine openings sealed. During reclamation, great care was taken to protect the natural state of a stream flowing next to the site. With reclamation complete, the abandoned mine hazards are removed and the area is once again integrated with the adjacent topography. When looking at the site today it's difficult to imagine the abandoned mine land problems that existed before the site was reclaimed. On September 30, 2004, there were over 1,000,000 feet of dangerous highwalls that needed reclamation in Pennsylvania.

With this in mind, the Office of Surface Mining prepared legislation to accomplish these goals. The legislation was introduced on behalf of the Administration in the House of Representatives by Representative John Peterson as H. R. 3778. The same legislation was introduced in the Senate by Senator Arlen Specter as S. 2049. The legislation would make it possible to finish this job in 25 years instead of the 60-100 years it would take under the current system. It would also make it possible to remove an average of 142,000 Americans from risk every year. To support this legislation, the President requested a record increase of \$53 million for the Abandoned Mine Land Program in his 2005 budget proposal--the largest funding increase since states established their abandoned mine land programs almost 20 years ago. In summary, this bill would:

- extend authorization for collection of fees on coal production to fund the reclamation of lands and water damaged by past coal mining practices to September 30, 2018;

- revise the Abandoned Mine Land Program to focus on those coal-related sites that present a danger to public health or safety by changing the statutory formula used to allocate collections;

- provide to the states and tribes that have certified completion of their coal problems their unappropriated state share balances over a ten year period;

- establish revenue neutral program funding by reducing fees 20 percent over the life of the extension;

- provide for additional funding for health care benefits for unassigned beneficiaries under the United Mine Workers of America Combined Benefit Fund;

- promote re-mining as a cost-effective way of achieving reclamation of abandoned mine lands; and

- provide for more efficient collection and audit of taxes and fees on coal production.

The Administration's bill would allow the Office of Surface Mining and the states to complete reclamation of high priority sites sooner, getting more people in the coalfields out of danger in less time. Additional funding for health care benefits for unassigned beneficiaries in the United Mine Workers Combined Benefit Fund can be provided. The commitments made in the past will be honored and 50 percent of the fees collected to date will be returned to the states and tribes. Finally, the Office of Surface Mining and the states can accomplish these feats at a cost \$3.2 billion less than the amount required under a simple extension of the fee in its current format.

While the Administration bill provides an effective and cost-efficient solution to the issues, several other bills have been introduced which encompass the Administration's fundamental goals while differing in



The Shirley Basin Project, located south of Casper, Wyoming, reclaimed five large abandoned open pit uranium mines. Mining operations that began in 1959 left about seven-and-a-half square miles of land containing large water-filled pits, and over 72 million cubic yards of mine waste, much of it contaminated with radioactive materials. Over three miles of the Little Medicine Bow River was rerouted, returning the river to its original drainage pattern. Almost six miles of highwall were eliminated and stabilized, 37 miles of erosion control diversions were constructed, and over eight miles of ephemeral stream channels were reconstructed. At a cost of \$30 million dollars, this was one of the largest reclamation projects in the country to be funded by the Abandoned Mine Reclamation Fund. Eight years of work have eliminated the hazards and created a valuable recreation area and wildlife habitat.



An early 1900s underground mine was discharging about 3.5 million gallons of highly acidic mine drainage per day before reclamation was completed at this site in Kempton, Maryland. Discharges from the ventilation air shaft and an 18" diameter borehole were responsible for eliminating aquatic habitat in over 35-miles of the Potomac River. A water powered dosing system was installed immediately adjacent to the air shaft discharge. In addition, 160,000 cubic yards of coal refuse were removed from the Kempton Glades Wetland - designated a Wetland of Special State Concern because of its biologically unique environment. Today, aquatic habitat recovery has been achieved in the Potomac River and Lurel Run immediately below the discharge. And the Kempton Glades has been returned to its natural condition. On September 30, 2004, there were over 150 acres of dangerous piles and embankments that needed reclamation in Maryland.

the methods to achieve those goals. In the House, Representatives Barbara Cubin and Nick Rahall introduced H. R. 3796. In the Senate, Senator Craig Thomas introduced S. 2086, Senators Jay Rockefeller, Jim Bunning and Christopher Bond introduced S. 2008, and Senator Jay Rockefeller introduced S. 2211. Hearings on the various bills have been held in both the House and Senate but none of the bills have moved out of their respective committees.

As of the date of this writing, a proposed nine-month extension of the current abandoned mine land

authority is pending before the Senate as part of the Department of the Interior's appropriation bill and a similar provision is anticipated to be taken up in the House of Representatives. However, pending passage of an appropriation bill, a continuing resolution is in effect to continue to fund governmental operations. A specific extension of the abandoned mine land fee collection authority was made part of the continuing resolution, keeping the current authority and fee rates in place through November 20, 2004.

United Mine Workers of America Combined Benefit Fund

Beginning in 1996, as provided by Section 402(h) of the Surface Mining Law, the Office of Surface Mining has made an annual transfer of the estimated interest earnings of the Abandoned Mine Reclamation Fund to the United Mine Workers of America Combined Benefit Fund. This cash transfer is used to defray anticipated health care costs for unassigned beneficiaries, who are retired coal miners and their dependents for whom no operating coal company is responsible. The amount of the transfer is capped at \$70 million per year.

An adjustment, to reflect any difference between actual and estimated interest earnings, is made in the year following the transfer. One year after that, or two years after the payment, after most actual health care expenses are known, an adjustment is made to each transfer to reflect actual expenses. Adjustments are also made to this transfer based on court cases or bankruptcies that affect the number of unassigned beneficiaries. These adjustments are still being made, as far back as the initial 1996 payment.

In 2004, the annual transfer was \$49 million, reduced by adjustments to prior years of \$34 million mainly due to court cases, resulting in an actual cash disbursement of \$15 million. The 2003 annual payment was \$48 million, increased by prior year adjustments of \$8 million and an additional onetime payment of \$34 million based on the Omnibus Appropriations Act (Public Law 108-7). Table 2 summarizes the Fund account for the past two years.

The United Mine Workers of America Combined Benefit Fund provided medical benefits for 17,394 unassigned beneficiaries in 2004 living in 45 states. States with the

largest number of beneficiaries are Pennsylvania (4,935), West Virginia (3,957), Kentucky (2,507), Virginia (1,200) and Ohio (883).

The Energy Policy Act of 1992 amended the Surface Mining Law to extend collection of the reclamation fees through September 30, 2004, with an additional requirement that after that date the fee must be established at a rate sufficient to continue to provide for transfers to the Combined Benefit Fund with respect to unassigned beneficiaries. That is, the Law provides that even if the abandoned mine land fee expires, operators must continue to pay fees to fund annual transfers to the Combined Benefit Fund. Under the Surface Mining Law, transfers can take place only in years in which operators pay fees. Because collections would only replace funds transferred to the Combined Benefit Fund, the fees would be significantly lower than the current fees.

On September 17, 2004, the Office of Surface Mining promulgated new rules that implement this statutory provision should it be needed. The rules provide that the Office of Surface Mining will determine fee rates for coal produced after September 30, 2004, on an annual basis using a formula designed to ensure that fee collections for each year equal the amount transferred from the Abandoned Mine Reclamation Fund to the Combined Benefit Fund at the beginning of that year.

The new fee rates will be based upon estimates of the Combined Benefit Fund's needs for unassigned beneficiaries, the Abandoned Mine Reclamation Fund's estimated interest earnings, and projected coal production for which there is a reclamation fee payment obligation. The rates will be adjusted as necessary to reflect any differences between estimated and actual Combined Benefit Fund expenditures, Abandoned Mine Reclamation Fund interest earnings, and fee collections in prior years. Under the Surface Mining Law, total transfers each year may not exceed the amount of interest earned by the Abandoned Mine Reclamation Fund during that year, Combined Benefit Fund expenditures for health care benefits for unassigned beneficiaries during that year, or \$70 million, whichever is the smallest number.

The Office of Surface Mining will publish a *Federal Register* notice 30 days before the start of each fiscal year stating what the fees will be during that year. In addition, the Office of Surface Mining will also notify permittees individually via Payer Letters.

Table 2: Abandoned Mine Land Reclamation Fund Status

	Cash Basis	
	2004	2003
Balance, Start of Year	\$1,927,410,405	\$1,900,317,749
Fees, debts, and interest collected	287,023,400	282,554,597
Interest earned on investments	45,694,566	23,619,923
Total Earnings	332,717,966	\$306,174,520
Disbursements	202,081,325	189,223,581
Transfers to the United Mine Workers	14,966,929	89,858,283
Total Disbursements and Transfers	217,048,254	\$279,081,864
Balance, End of the Year	\$2,043,080,117	\$1,927,410,405



The Sunshine Mine Reclamation Project in Bicknell, Indiana eliminated a 25-acre abandoned mine site containing gob, slurry, acid mine drainage, and derelict buildings that travelers referred to as "the ugly old coal mine at the edge of town." The project included regrading the 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 is directed into a small wetland that improves site aesthetics, eliminates off-site sedimentation, and enhances water quality downstream. The water has gone from a pH of 2.7 to a high of 6.9. The site is no longer a hazard to the local residents and it once again has potential for productive use.

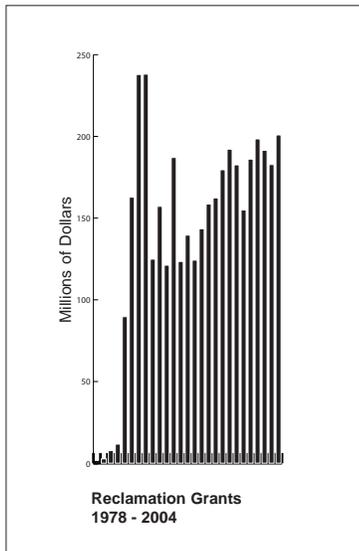
If Congress reauthorizes the abandoned mine land reclamation fee before it expires, the published rule will not be needed. However, if Congress does not act before the fee expires, the necessary rules will be in place to ensure that fee collection and transfers to the Combined Benefit Fund continue uninterrupted.

Fee Collection

The Office of Surface Mining collects fees from coal operators through voluntary reporting, audit, and debt collection. In 2004, the initial rate of those reporting and paying on time was 92.88 percent. Through follow-up and other work with the operators, the compliance rate was raised to 99.98 percent, resulting in total collections of \$287,023,400 for the Fund. Experience has shown that helping the industry achieve compli-

ance 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 factors beyond the Office of Surface Mining's control, such as company financial difficulties and errors, some nonpayment and non-reporting will probably always occur. 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 states⁶ except Mississippi have approved abandoned mine land reclamation programs. In addition, the Crow, Hopi, and Navajo Indian tribes have approved abandoned mine land programs. In

2004, the states and tribes received grants totaling \$200,905,692 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, \$3,579,356,901 has been distributed from the Fund. Grant obligations (the amount states use) for 2004 are shown in Table 3⁷.

During 2004, the Office of Surface Mining awarded 100 percent of the abandoned mine land grants to the states within 60 days of receiving the grant applications.

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

During 2004, 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-level program funding

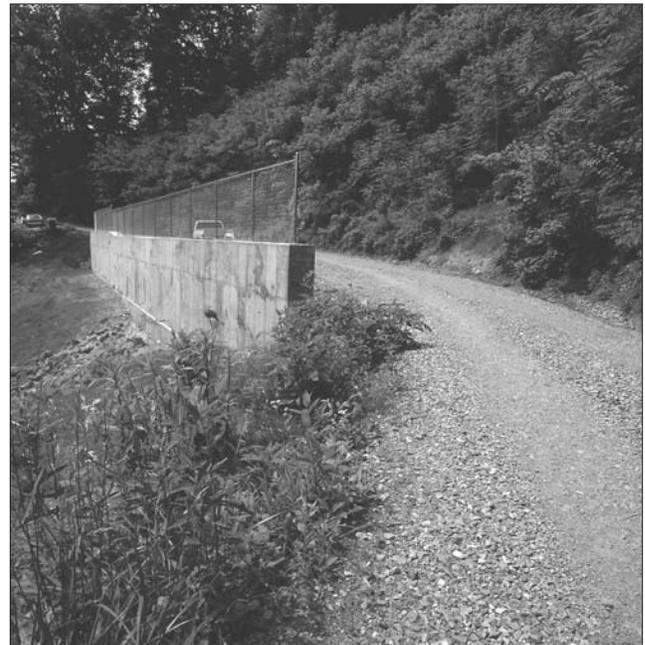
remained at \$1,500,000 for 2004. The eight eligible programs received a total of \$7,687,275 in 2004.

This funding supplements the formula-based grant and brings those eight states to the minimum-program level. Once minimum-program states or tribes complete their high priority projects listed in the National Abandoned Mine Land Inventory System, 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 is deposited into special trust funds and becomes available, along with interest earned, for use by the state for reclaiming future abandoned mine land problems.

In 1990, Public Law 101-508 created an acid mine drainage set-aside program. Under this program a state may set aside up to 10 percent of the state-share or historic coal funds received annually in acid mine drainage trust funds. Funds from an acid mine drainage fund may be expended to implement an approved acid mine drainage abatement and treatment plan.



Repairing roads damaged from landslides in steep-sloped Appalachia often involves construction of concrete retaining walls. In this example, water draining from an abandoned mine above the road has saturated the side of the hill below the road. The water acted as a lubricant, causing the hillside under the road to slide down the hill. Rerouting the drainage has prevented a recurrence of the problem.

6. Primacy states (Alabama, Alaska, Arkansas, Colorado, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Mississippi, Missouri, Montana, New Mexico, North Dakota, Ohio, Oklahoma, Pennsylvania, Texas, Utah, Virginia, West Virginia, and Wyoming) have approved regulatory programs and responsibility to implement the Surface Mining Law within their boundaries.
7. Larger total obligation (shown in Table 3) than total distribution (shown in Table 1), result from previous year carry over or funding from past years distribution that were not used until 2004.

Table 3: Abandoned Mine Land Grants

State/Tribe	Subsidence Insurance	10% Program Set-Aside ²	Administration ³	Project Costs ⁴	Emergency ⁵	2004 Total	2003 Total
Alabama	\$0	\$0	\$488,987	\$2,726,629	\$400,000	\$3,615,616	\$4,213,705
Alaska	0	0	303,512	1,196,488	25,000	1,525,000	1,525,000
Arkansas	0	0	386,975	1,113,025	15,000	1,515,000	1,538,868
Colorado	0	0	596,000	2,135,777	0	2,731,777	3,038,000
Illinois	0	827,224	1,762,745	6,406,432	800,000	9,796,401	9,873,103
Indiana	0	503,721	1,154,390	3,737,395	350,000	5,745,506	5,837,883
Iowa	0	0	177,000	1,523,749	60,000	1,760,749	1,759,957
Kansas	0	0	297,545	1,371,783	465,000	2,134,328	2,234,092
Kentucky	0	0	1,899,308	14,726,255	0	16,625,563	16,464,521
Louisiana	0	0	148,905	0	0	148,905	118,454
Maryland ¹	0	258,000	571,350	1,568,702	0	2,398,052	2,712,330
Missouri	0	0	155,000	353,162	180,000	688,162	286,773
Montana	0	0	511,910	3,044,539	125,000	3,681,449	3,855,391
New Mexico	0	177,949	1,035,829	3,480,468	0	4,694,246	1,814,300
North Dakota	0	118,302	179,221	1,231,697	100,000	1,629,220	1,643,013
Ohio ¹	0	559,573	1,671,325	5,116,772	2,300,000	9,647,670	8,963,948
Oklahoma	0	0	231,619	1,420,994	100,000	1,752,613	1,680,000
Pennsylvania ¹	0	2,398,936	3,049,876	38,282,891	0	43,731,703	26,191,170
Texas	0	0	226,337	2,780,108	0	3,006,445	3,383,160
Utah	0	0	390,626	1,836,155	0	2,226,781	2,173,966
Virginia	0	382,439	544,797	3,545,260	1,850,000	6,322,496	6,811,754
West Virginia ¹	0	1,039,604	4,714,729	23,586,567	4,000,000	33,340,900	39,343,844
Wyoming	282,992	3,032,065	1,191,306	32,865,098	0	37,371,461	32,982,649
Crow Tribe	0	0	94,503	476,621	0	571,124	464,419
Hopi Tribe	0	0	0	200,000	0	200,000	667,246
Navajo Tribe	0	0	2,311,002	1,733,522	0	4,044,524	3,202,765
Total	\$282,992	\$9,297,813	\$24,094,797	\$156,460,089	\$10,770,000	\$200,905,691	\$182,780,311

1. Funding for these grants is derived from the 2004 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 \$6,628,644 in funding for Appalachian Clean Streams Program projects.
5. This category contains emergency project, administrative, and indirect costs.

In 2004, 10 states set aside \$9,297,813. The Office of Surface Mining has granted a total of \$74,226,973 through 2004 to 16 states and three tribes for their set aside trust funds.

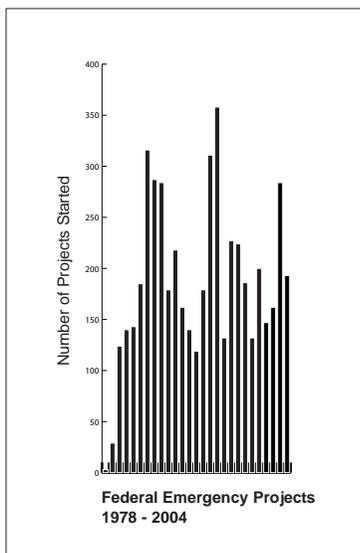
Subsidence Insurance

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 a subsidence insurance grant of up to \$3,000,000, awarded from the state's share of the Abandoned Mine Land Reclamation Fund.

In 2004, one subsidence insurance grant was issued to the state of Wyoming for \$31,348. Through 2004, the Office of Surface Mining has granted a total of \$11,886,006 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 that 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 administration of emergency programs. In 2004, the following states were implementing emergency programs: Alabama, Alaska, Arkansas, Illinois, Indiana, Iowa, 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 is responsible for emergency projects in California, Colorado, Georgia, Kentucky, Louisiana, Maryland, Michigan, Mississippi, New Mexico, Pennsylvania, Rhode Island, Tennessee, Texas, Utah, Washington, and Wyoming, as well as on all tribal lands.

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 the 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. Following identification of a potential emergency problem, a technical investigation is performed, usually within 48 hours, and an emergency determination made. Of the 983 potential emergencies referred to the states and Office of Surface Mining in 2004, 363 were determined to be emergencies, 501 were determined to be not of an emergency nature or not related to coal mining, and 119 were still under investigation on September 30, 2004.

Problems which are not emergencies; but, are otherwise eligible for reclamation, are considered for funding as high priority projects.

During 2004, states obligated \$10.8 million (see Table 3) and the Office of Surface Mining obligated \$8.6 million on emergency reclamation projects (see Table 5). No state expenditures exceeded the Congressionally-imposed "cap" of \$4.5 million on expenditures in any state within a single year. In 2004, the states and the Office of Surface Mining started 347 abandoned mine land emergency projects in 19 States (see Table 4). As usual, most emergencies occurred in Pennsylvania and Kentucky.

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 as an abandoned mine land reclamation problem that meets one of the priorities of Section 403(a) or 411(c) or (f) in the Surface Mining Law. 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 2004, the Office of Surface Mining initiated 13 non-emergency projects and the states and tribes initiated 329 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 2004.

Post-Surface Mining Law Reclamation

As authorized by the 2004 Appropriations Act, 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 2004, the

Table 4: Reclamation Projects Started

	Emergency		Non-Emergency				
	2004		1978-2004			2004	
	Federal	State	Federal	State ²	Total ²	Federal	State ³
Alabama	0	11	10	115	125	0	7
Alaska	0	0	0	1	1	0	2
Arkansas	0	1	1	20	21	0	3
California	0	0	5	0	5	1	0
Colorado	5	0	106	0	106	0	23
Crow	0	0	0	0	0	0	2
Georgia	0	0	0	0	0	0	0
Hopi	0	0	0	0	0	0	2
Illinois	0	7	51	263	314	0	13
Indiana	0	17	94	153	247	0	38
Iowa	0	1	22	1	23	0	1
Kansas	0	41	270	658	928	0	4
Kentucky	45	0	1,088	0	1,088	0	22
Louisiana	0	0	0	0	0	0	0
Maryland	1	0	19	0	19	0	3
Michigan	0	0	13	0	13	3	0
Mississippi	0	0	0	0	0	0	0
Missouri	0	1	6	5	11	0	5
Montana	0	1	7	14	21	0	10
Navajo	0	0	6	0	6	0	10
New Mexico	0	0	16	0	16	0	9
North Dakota	0	1	15	14	29	0	8
Northern Cheyenne	0	0	2	0	2	0	0
Ohio	0	22	190	305	495	0	49
Oklahoma	0	4	47	25	72	0	3
Pennsylvania	136	0	2,501	0	2,501	0	45
Rhode Island	0	0	3	0	3	0	0
Ute Reservation	0	0	1	0	1	0	0
Tennessee	2	0	19	0	19	3	0
Texas	0	0	6	0	6	0	1
Utah	0	0	0	0	0	0	3
Virginia	0	15	30	160	190	0	24
Washington	4	0	57	0	57	6	0
West Virginia	0	32	179	762	941	0	34
Wyoming	0	0	38	0	38	0	35
Total	193	154	4,802	2,496	7,298	13	356

Office of Surface Mining funded six civil penalty projects in Kansas, Kentucky, Oklahoma, Pennsylvania, and Virginia costing a total of \$255,000. An additional \$83,135 in unobligated funds will be carried over for use in 2005 reclamation projects.

Clean Streams Program

The Clean Streams Program began as the Appalachian Clean Streams Initiative in the fall of 1994. 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 acid mine drainage. The program is carried out by state abandoned mine reclamation programs and nonprofit organizations.

Supplemental State Grants

Eligible state programs are funded by the Office of Surface Mining to address acid mine drainage problems. These grants act as “seed money” to encourage other organizations to contribute funding for the projects. During 2004, the Office of Surface Mining provided 12 states⁸ with \$6,628,644. Since 1994 when the supplemental state grants began, the Office of Surface Mining has provided \$43,830,886 for 117 projects, 93 have been completed (see Figure 1) and outside funding grew to over \$28 million on the projects.

One of the successful Clean Streams Program projects begun during 2004 was the Cherry Austin Acid Mine Drainage Reclamation Project located in Tuscaloosa County, Alabama. The site was reclaimed in November 1996, by the Alabama Department of Industrial Relations under the state Abandoned Mine Land Program, to eliminate a 1,200 linear-foot dangerous highwall. Reclaimed at the same time were 17 acres of unstable and eroding mine spoils, a small garbage dump, and a 0.1 acre coal slurry impoundment. Although three times as much acid-neutralizing material as should have been required was used at the site, there are still signs of acid mine drainage. The drainage from the site goes into Holt Lake (a drinking water source for the City of Tuscaloosa) a little over a mile downstream.

Alabama Abandoned Mine Land Program staff identified the acidic water draining into the creek as a priority project under the Clean Streams Program and requested assistance from the Office of Surface Mining to quantify the water quality problems. Samples taken showed pH values consistently at 3.3 to 3.4 and high metal content (total iron at 45.25 mg/l, aluminum at 4.5 mg/l; and manganese at 6.95 mg/l). The Office of Surface Mining also provided assistance to the state by developing water treatment options.

8. Missouri did not obligate any 2004 Clean Streams Funds in 2004.

**Figure 1
Clean Streams Program Projects**

	<i>Clean Streams Projects</i>		<i>Watershed Projects</i>	
	<i>Started in 2004</i>	<i>Completed Since 1994</i>	<i>Started in 2004</i>	<i>Completed Since 1999</i>
Alabama	2	6	0	1
Illinois	2	4	0	0
Indiana	1	20	0	2
Iowa	1	1	0	0
Kentucky	2	10	0	0
Maryland	0	5	1	8
Missouri	0	4	0	0
Ohio	3	10	2	6
Oklahoma	1	2	0	0
Pennsylvania	4	19	16	20
Tennessee	0	0	0	0
Virginia	0	2	1	1
West Virginia	3	10	3	8
Total	19	93	23	46

Work began on the project June 30, 2004. It included installation of an alkaline-addition pretreatment to raise alkalinity of the acid mine drainage before it entered a passive treatment system. The added alkalinity raises the pH of the drainage to over 5.0 and precipitates the aluminum into a collection pond before the water enters the passive treatment system. The Alabama program staff will continue water quality testing at the site to determine the success of the alkaline pretreatment before additional reclamation is done at the site.

A second Clean Streams Program project started in 2004, the Sugar Creek Abandoned Mine Land Reclamation Project, is located in the Allegheny River Watershed of western Pennsylvania. The mine drainage at this site flowed from the abandoned Snow Hill Mine which was operated from the early 1930s until about 1960. The project included restoration of a 15-acre hazardous coal refuse pile and the passive treatment of an abandoned mine discharge, both of which were severely impacting water quality in Sugar Creek. The reclamation has resulted in a dramatic improvement in water quality. Over three miles of Sugar Creek have been restored and indigenous aquatic life reestablished. Fish and macro-invertebrates have already begun to return to this once-polluted waterway.

This is an outstanding example of partnership, persistence, and use of ever-improving technology to address an abandoned mine problem. The Clean Streams Program funding provided the necessary resources for the community to eliminate the water pollution and restore the environmental health of the watershed.

Table 5: Federal Project Obligations

State or Tribe	Emergency	High Priority	1978-2004 ¹
Alabama	\$0	\$0	\$13,934,015
Alaska	0	0	194,638
Arkansas	0	0	84,904
California	0	73,936	2,626,403
Colorado	230,796	0	2,204,658
Georgia	0	155,831	4,112,330
Illinois	0	0	5,376,749
Indiana	0	0	4,032,023
Iowa	0	0	1,438,442
Kansas	0	0	5,094,172
Kentucky	4,703,376	0	118,173,597
Maryland	25,383	0	3,081,712
Michigan	0	271,049	3,648,382
Missouri	0	0	8,015,909
Montana	0	0	729,058
New Mexico	0	0	2,366,041
North Carolina	0	0	205,407
North Dakota	0	0	1,723,933
Ohio	0	0	18,295,299
Oklahoma	0	0	1,232,159
Oregon	0	25,000	67,275
Pennsylvania	2,945,796	0	113,373,430
Rhode Island	0	0	556,229
South Dakota	0	39,135	182,596
Tennessee	227,839	1,200,000	25,430,270
Texas	0	0	289,849
Utah	0	0	123,791
Virginia	0	0	10,139,469
Washington	368,141	416,826	8,254,677
West Virginia	0	0	29,023,226
Wyoming	0	0	1,067,101
Cheyenne Rive 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	4,296
Total	\$8,501,331	\$2,181,777	\$393,839,852

1. Includes prior year contract deobligations and upward adjustments.

Table 6-a:
1978-2004 Abandoned Mine Land Reclamation Accomplishments
Priority 1 and 2 (Protection of Public Health, Safety and General Welfare) and
Emergency Projects⁷

	Clogged Stream ¹	Clogged Stream Land ²	Dangerous Highway ³	Dangerous Impoundment ⁴	Dangerous Pile & Embankment ⁵	Dangerous Slide ⁶	Dangerous Gas ⁷	Hazardous Equipment & Facilities ⁸	Hazardous Water Body ⁹	Industrial/Residential Waste ¹⁰	Portal ¹¹	Polluted Water: Agricultural & Industrial ¹²	Polluted Water: Human Consumption ¹³	Subsidence ¹⁴	Surface Burning ¹⁵	Underground Mine Fire ¹⁶	Vertical Opening ¹⁷
Alaska	0	0	11,190	4	6	0	0	1,420	2	4	26	0	0	0	21	0	36
Alabama	1	198	268,127	1	1,454	21	0	470	75	25	1,034	5	14	34	68	0	389
Arkansas	1	0	61,076	1	753	0	0	2	77	28	27	0	0	12	4	0	107
California	0	0	0	0	0	0	0	0	0	0	34	0	0	1	0	0	41
CERT Tribes*	0	0	7,170	0	475	0	0	6	30	9	73	0	0	35	0	0	18
Colorado	0	0	51,992	0	41	0	0	4	0	10	2,741	3	0	50	35	171	3,625
Crow Tribe	1	0	2,267	1	58	23	0	32	1	0	15	3	0	16	0	0	5
Georgia	0	0	11,050	3	3	0	0	0	0	0	112	1	0	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	8	657	59,290	3	829	0	0	5	23	12	1	13	2	2	0	0	20
Idaho	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Illinois	21	1,290	57,386	7	301	3	22	348	9	72	192	11	1	91	115	0	1,186
Indiana	14	176	121,418	6	623	4	3	97	7	32	68	15	7	188	15	1	344
Kansas	1	9	139,700	1	111	3	0	2	1	27	0	3	0	24	8	0	1,014
Kentucky	45	8,904	27,213	114	444	2,057	0	214	42	27	1,909	6	8,420	50	224	58	145
Maryland	5	63	43,130	2	224	66	0	25	20	35	41	83	44	15	1	0	6
Michigan	0	0	950	0	0	0	0	7	2	0	0	0	1	0	8	0	44
Missouri	11	1,514	72,002	6	502	0	0	28	11	71	35	34	15	4	19	7	161
Montana	10	93	22,460	3	174	1	1	246	1	391	1,100	17	12	494	302	69	622
Navajo Nation	0	1	106,613	4	658	7	0	5	0	5	795	19	0	12	3	0	380
North Carolina	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
North Dakota	0	0	72,099	4	317	35	0	14	18	2	13	6	0	1,346	17	0	108
New Mexico	0	2	280	0	10	0	0	17	0	0	463	4	1	35	35	32	898
Ohio	38	5,403	60,504	7	96	405	4	52	10	34	342	53	213	127	94	3	235
Oklahoma	13	1	229,354	0	0	0	0	15	197	7	171	5	3	13	0	0	110
Oregon	0	0	0	0	0	0	0	3	0	0	12	0	0	0	0	0	3
Pennsylvania	103	140	824,482	47	567	45	0	321	122	20	278	24	203	2,455	123	1,015	528
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	35,595	3	448	68	0	31	44	14	192	7	13	6	28	0	11
Texas	0	0	48,715	0	1,461	0	0	0	16	0	66	0	0	17	0	0	358
Utah	14	9	3,925	1	390	3	19	219	0	2	2,917	2	0	186	43	29	1,567
Virginia	74	848	30,050	27	261	272	0	220	2	2	965	0	1,795	12	51	0	105
Washington	0	0	0	0	3	0	0	7	0	0	30	0	0	7	15	0	84
West Virginia	51	167	198,122	613	4,565	532	5	577	7	37	2,294	63	10,989	362	455	20	147
Wyoming	114	1,634	510,136	138	1,962	25	0	181	371	29	514	3	0	1,150	12	41	565
Total	525	21,256	3,088,093	996	16,736	3,570	54	4,580	1,088	895	16,474	380	21,733	6,751	1,696	1,446	12,881

Table 6-b:
1978-2004 Abandoned Mine Land Reclamation Accomplishments
 Priority 3 (Environmental Restoration)⁷

	Bench ²	Industrial/Residential Waste ²	Equipment/Facility ⁴	Gob ²	Highwalls ³	Haul Road ²	Mine Opening ⁴	Pit ²	Spoil Area ²	Slurry ²	Slump ²	Water Problem ⁵
Alaska	0	0	0	7	0	0	0	0	47	9	0	0
Alabama	23	16	8	282	32,455	2	50	0	9,683	8	11	379
Arkansas	0	0	0	0	0	0	0	0	86	0	0	0
CERT Tribes*	0	0	2	4	1,500	0	1	7	80	0	0	0
Colorado	3	6	7	162	2,028	0	18	131	829	0	0	1
Crow	6	0	0	35	2,245	12	2	32	27	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	2,900	5	1	21	440	0	0	0
Illinois	1	6	160	2,550	10,880	210	66	623	1,895	1,112	1	2,896
Indiana	0	107	178	1,362	14,896	227	26	377	1,888	966	3	6,305,068
Kansas	0	0	1	89	3,200	0	0	23	316	10	0	0
Kentucky	599	0	53	225	2,000	0	69	4	832	66	5	60
Maryland	10	1	2	58	5,335	2	6	22	263	0	1	73
Michigan	0	0	1	27	0	1	0	1	10	0	11	0
Missouri	0	5	5	146	16,824	1	0	96	1,373	69	0	86
Montana	1	90	58	147	1,170	1	230	34	875	0	19	2,741
Navajo Nation	39	1	2	136	280	122	63	144	265	0	0	3
North Dakota	0	0	0	0	0	0	0	0	0	0	0	0
New Mexico	3	0	29	75	0	10	29	2	332	2	0	0
Ohio	0	0	3	162	9,620	0	19	18	418	0	0	100
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	25	126	9,299	0	22	75	2,492	1	195	91,872
Tennessee	76	0	15	67	230	8	3	85	359	0	4	360
Texas	0	0	0	8	0	0	0	0	466	0	0	0
Utah	4	7	64	255	550	5	0	8	55	1	16	20
Virginia	0	1	25	23	13,000	1	52	0	12	0	0	120
West Virginia	0	0	3	75	33,141	0	4	5	217	2	0	622
Wyoming	0	0	0	39	0	91	0	7,137	8,063	199	0	0
Total	768	242	641	6,089	162,004	713	662	8,858	31,340	2,445	270	6,404,401

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.

Watershed Cooperative Agreements

In 1999, the Office of Surface Mining began the Watershed Cooperative Agreement Program as part of the Clean Streams Program. The purpose was to provide funds in the form of cooperative agreements to not-for-profit organizations, especially small local watershed organizations, to clean streams affected by acid mine drainage. Applicants are required to have other partners contributing either funding or in-kind services.

Since the program began in 1999, the Office of Surface Mining has awarded 116 cooperative agreements and amendments at a cost of \$10,330,061, and 46 projects have been completed. During 2004, 31 cooperative agreements and 12 amendments to existing agreements were awarded for a total of \$3,527,677 (see Figure 2). Agreements are normally limited to a maximum of \$100,000 and are used primarily for the construction phase of the projects; however, administrative costs associated with completion of a project are also allowable.

Significant on-the-ground improvement has been made by these watershed projects. For example, the Pine Creek/Babb Creek watershed in Tioga County, Pennsylvania, is known for heavily forested mountains, exceptional trout waters, beautiful scenery and numerous outdoor recreation opportunities, including biking, hiking, camping, hunting, fishing, and fall foliage tours. The Babb Creek portion of the watershed has been heavily impacted by contamination from coal mining activities beginning before the Civil War and continuing through World War II.

In 1990, the Babb Creek Watershed Association and its partners began restoration of the watershed by installing several limestone diversion wells. The immediate success of these wells in raising the pH of Babb Creek and improving the downstream water quality led the association to undertake more ambitious projects. The Pennsylvania Department of Environmental Protection has dedicated significant technical and financial resources to assist the Watershed Association. With this support, the Association began planning, design and construction of several vertical flow ponds to treat mine drainage. They also addressed abandoned surface mines which were shown to be contributing to the degradation of Babb Creek

**Figure 2
Watershed Cooperative Agreements**

Project/Organization	Grant Amount
Maryland	
Rice AMD Remediation Project Western MD RC&D Council Inc.	\$100,000.00
Midlothian AMD	
Western Maryland RC&D	125,000.00
Crellin Tipple AML Project Garrett County Community Action Agency	100,000.00
Ohio	
West Misco Reclamation Project Clay Valley Foundation	113,000.00
Jobs Hollow Reclamation Project Rural Action Inc.	125,000.00
Pennsylvania	
Gallentine Phase II AMD Project ¹ Mountain Watershed Association, Inc.	25,500.00
Robbins Hollow Passive Treatment System Project Trout Unlimited Inc. ¹	50,000.00
Boggs Road Montour Run Watershed Association	54,000.00
Clinton Road Montour Run Watershed Association	73,000.00
Booker Discharge Remediation Project Kiskiminetas Watershed	42,000.00
North Branch Robbins Hollow Trout Unlimited	129,175.00
Rattler Mine A2-2 Babb Creek Watershed Association ¹	50,000.00
Hunters Drift Babb Creek Watershed Association ¹	50,000.00
Rattler Mine A2-3 and A2-4 Babb Creek Watershed Association ¹	25,000.00
Arthur Cardner Reclamation Project Tri-Area Joint Recreation Authority ¹	50,000.00
JB #1 Raccoon Creek Stream Restoration Inc.	150,000.00
Shade Creek Reitz No.1 Shade Creek Watershed Association	100,000.00
Wells Creek Restoration Project Southern Alleghenies Conservancy ¹	6,365.00
Hamilton Discharge Watershed Project Penns Corner Conservancy Charitable Trust ¹	29,000.00
Wells Creek Skeria Site Southern Alleghenies Conservancy ¹	6,965.00
Wells Creek Moore Site Southern Alleghenies Conservancy ¹	6,471.00
Cessna Run Discharge Penns Corner Conservancy Charitable Trust	100,000.00
Wilson Run Discharge Penns Corner Conservancy Charitable Trust	160,000.00
Permapress Discharge Mountain Watershed Association	8,000.00
East Branch Two Mile Run Discharge Headwaters RC&D Council	112,000.00
Little Toby Creek Blue Valley Discharge Toby Creek Watershed Association	150,000.00
Finleyville Shreves Run Southern Alleghenies Conservancy	50,000.00
Cessna Run Discharge ¹ Penns Corner Conservancy Charitable Trust	23,203.00
Kenrock Surface Mine Reclamation Southern Alleghenies Conservancy Charitable Trust	61983.00
Latrobe Foundation Project Loyalhanna Watershed Association	112,140.00
Babb Creek Mitchell Project Babb Creek Watershed Association	150,000.00
Camp Lutherlyn Stream Restoration Inc.	27,000.00
East Branch Two Mile Run Discharge ¹ Headwaters RC&D Council	10,000.00
Coal Pit Lower System Blacklick Creek Watershed Association	140,000.00
Test Multi Project Award ¹ National Fish and Wildlife Foundation	350,000.00
Virginia	
Upper Mason AMD Project Hands Across the Mountains	100,000.00
West Virginia	
Sovern Run Site 62 Friends of the Cheat	15,211.00
Slabcamp Run Friends of Deckers Creek	100,000.00
Upper Mainstem Morris Creek Watershed Assoc.	120,000.00
Lower Mainstem Morris Creek Watershed Assoc.	120,000.00
Opossum Hollow Morris Creek Watershed Assoc.	41,881.50
Pringle Run - Pace Acid Mine Drainage Friends of the Cheat	69,096.00
Upper Muddy Creek Friends of the Cheat	96,687.00
Total	\$3,527,677.50

1. Amendments to existing agreements.

In 1999, the Department of Environmental Protection removed five miles of Pine Creek below its confluence with Babb Creek from the state's list of impaired waters, crediting the work in Babb Creek for the action. In 2002, the Office of Surface Mining recognized Signor Brothers Enterprises with a national Excellence in Surface Mining Reclamation Award for a re-mining permit adjacent to Babb Creek in which a half-mile of coal refuse deposited under an abandoned railroad grade was removed. The land was replanted and significant streambank improvements were made. In 2001, Pennsylvania awarded the Association 2.2 million dollars in *Growing Greener* funds in the largest single award made up to that date. Those funds were used to construct passive treatment systems for six underground mine discharges. Completed in early 2004, these systems are bringing to substantial

completion one of the most comprehensive and successful coal mine drainage watershed restoration programs in Pennsylvania. Many miles of streams have been significantly improved, with the restoration of aquatic habitat and trout fisheries where there were none for decades.

The Office of Surface Mining, through its Watershed Cooperative Agreement Program, and the Appalachian Clean Streams Program is proud to be a partner in this effort, having contributed over \$500,000 in direct financial assistance to the Watershed Association for mine drainage treatment projects. Combined with funding from other sources, over 5.4 million dollars have been expended in restoration of the water quality of Babb Creek.



Prior to reclamation, Babb Creek had washed into a late 1800s coal refuse pile and was eroding refuse downstream and causing acid mine drainage. A local mine operator designed refuse removal and stream bank protection methods that eliminated 22,000 tons of refuse without harming the creek and completing the work using money from the sale of the coal. An innovative technique was the use of large equipment to load the refuse during frozen winter weather. This greatly reduced possible sediment problems. Today, with reclamation complete, downstream surveys report increased macro-invertebrate and fish populations and a five-mile stream segment of Babb Creek was removed from the Pennsylvania Department of Environmental Protection's list of impaired streams. On September 30, 2004, there were over 30 miles of clogged streams caused by abandoned mines that needed reclamation in Pennsylvania

Summer Watershed Internship Program

The Office of Surface Mining and the Environmental Protection Agency initiated the Summer Watershed Internship program in 1999, and in 2004, funded 33 interns in seven states. Since the program began, 145 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 2004, 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.

In 2004, the Office of Surface Mining/VISTA watershed development team is thirty watersheds strong, serving volunteer groups in seven states from Pennsylvania to Alabama. These full-time positions (and the dedicated individuals that fill those positions) are building critical capacity in the volunteer group they serve -- bringing new awareness and expertise to address acid mine drainage; building strong partnerships with state agencies, other federal agencies, and nonprofit foundations; creating a base of community volunteer support within their watersheds for environmental improvement; and raising the money needed to support this good work. In the last 18 months, the team enlisted 2,784 volunteers who worked 32,727 hours. In that same 18 months, these volunteers built collaborative partnerships that created over one million dollars in documented in-kind donations and raised over half a million dollars in cash grants. The watershed development team is creating a solid base of environmental stewardship in watersheds across the seven states that are part of the Office of Surface Mining Clean Streams Program, thus building a future for environmental conservation and improvement across the region.

In 2004, the Office of Surface Mining VISTA Watershed Development Team received the Interior Department's Environmental Achievement Award, one of 11 projects selected nationally.

**Figure 3
Number of Interns**

State	2004	2003	2002	2001	2000	1999
Alabama	1	1	1	0	3	0
Kentucky	0	0	0	1	2	0
Maryland	2	1	2	2	1	0
Ohio	1	5	4	3	2	1
Pennsylvania	7	9	8	12	5	3
Tennessee	3	1	3	1	3	1
Virginia	1	3	3	2	1	0
West Virginia	8	6	9	11	6	4
Indiana	0	0	1	1	0	1
Total	23	26	31	33	23	10

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

The Office of Surface Mining maintains its inventory on a computer system, which is accessible from the web at 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 10th year the states and Indian tribes managed their own data, entering it electronically into the Office of Surface Mining's inventory system. In 2004, this process resulted in 1,721 records added, 5,375 modified, and 455 deleted.

Office of Surface Mining/VISTA Initiative⁹

The Office of Surface Mining and AmeriCorps/VISTA are working together to place full-time VISTA staff in coal-impacted watersheds across coal country. These VISTA positions are funded by the national VISTA program and include a three-year commitment to the sponsoring watershed group. The Office of Surface Mining provides a cooperative agreement of \$5,000 for administrative support during the first year a program is in operation and coordinates the activities.

9. VISTA, Volunteers in Service to America, was first organized in the 1960s and is now a part of the Corporation for National Service, a Federal agency. VISTA, AmeriCorps and the National Community Conservation Corps (NCCC) are the three primary initiatives of the Corporation for National Service. The Office of Surface Mining provides a \$5,000 Cooperative Agreement to nonprofit watershed groups that sponsor Office Of Surface Mining/VISTA positions for administrative support in their first year.

As of September 30, 2004, the system contained information for 18,257 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.)

The Abandoned Mine Land Reclamation Program is one of the Nation's most successful environmental restoration programs, with over \$1.6 billion worth of coal-related high priority problems reclaimed. However, 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 continued to arise as development expands into old coal mining areas and as subsidence and mine fires occur. As of September 30, 2004, the inventory system shows \$8.6 billion of unreclaimed problems (see Figure 4).

Also, during 2004, the Bureau of Land Management continued to store its federal lands abandoned mine

**Figure 4
Inventory Costs¹**

Completed	\$2.2 billion	20.2 percent
Funded	0.2 billion	2.2 percent
Unreclaimed	8.6 billion	77.6 percent
Total	\$11.0 billion	100 percent

1. Includes priority 1, 2, and 3 and coal and non-coal costs.

inventory in a specially modified version of the Office of Surface Mining inventory system.

Reclamation Awards

After more than 27 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



The town of Eckhart Mines, Maryland, takes its name from the coal mining that began in 1828. Unfortunately, coal waste removed between 1872 and the 1930s was deposited at the mine entrance located in the town. A drainage tunnel was supposed to carry stream flows through the site as coal refuse was dumped in the valley; but, the tunnel was failing. Any further blockage would have created an unstable coal refuse dam in a residential neighborhood. Over 140 thousand cubic yards of coal refuse was removed, and following excavation of the tunnel, stream channels were lined with rip-rap. The site was regraded to reduce erosion and stabilize the steep slopes, then revegetated with grasses, legumes, shrubs, and trees. This project eliminated a very dangerous potential abandoned mine land problem, improved the environmental quality of the stream, and removed a 50-year-old eyesore from the residential community of Eckhart Mines.

completion of the most outstanding reclamation. (See www.osmre.gov/amrules01.htm for a description of the awards program and the 2005 rules.) This year five awards were presented at the 2004 annual meeting of the National Association of Abandoned Mine Land Programs.

Appalachian Regional and National Awards

West Virginia Office of Abandoned Mine Lands & Reclamation

Neds Branch Impoundment - Gilbert, West Virginia

Following heavy winter rain, a 12-acre abandoned coal refuse dam located in southern West Virginia failed, releasing thousands of yards of slurry, coal refuse, and debris into the valley below. Declared an emergency, the two-phase work plan began by moving coal waste, slurry, and debris out of the hollow and roadway to reestablish access to nearby homes. Phase 2 included stabilizing the slurry embankment, establishing drainage control, and regrading the site.

When completed, more than one-half million cubic yards of refuse and rock had been excavated, 6,000 feet of drainage control channels and piping built, four deep mine portals sealed, and 43 acres revegetated.

Mid-Continent Regional Award

Indiana Division of Reclamation

Coles Creek Project - Scalesville, Indiana

Prior to reclamation, this Indiana abandoned mine site consisted of coal waste covered mine roads, acidic impoundments, acid drainage problems, and 95-acres of barren coal waste.

During reclamation all coal waste throughout the site was consolidated and encapsulated into one large area to eliminate its acid producing characteristics. Surface water was redirected through a series of shallow passive wetland treatment cells before leaving the site. These impoundments were planted with native vegetation and now provide water treatment and a diverse wildlife habitat.

Western Regional Award

New Mexico Abandoned Mine Land Bureau

Cerrillos South Mine Safeguard Project - Cerrillos, New Mexico

This abandoned mine reclamation project eliminated hazardous underground mine openings in the Cerrillos Hills Historic Park, a public open space located in an area containing over 1,300 years of mining history.

The project minimized abandoned mine hazards to the visiting public, added stability to the interpretative

trails system, and preserved the historic mining landscape. Work included closing shafts with high-tensile steel wire mesh, steel bat cupolas, and polyurethane foam plugs.

When completed the reclamation included eliminating the hazardous conditions at 67 open shafts, 17 pits, and one adit, all of which were dangerous to the people using the park.

Peoples Choice Award¹⁰

Wyoming Abandoned Mine Land Division

Snake River Gravel Pit Project - Flagg Ranch, Wyoming

Located between the Grand Teton National Park and the South Entrance to Yellowstone National Park, this abandoned gravel pit was reclaimed to be a self-sustaining wetland-riparian ecosystem.

Field experiment results were used to determine the project design and five distinct planting zones were constructed. More than 600 thousand native seed grown plants and 35 thousand willow cuttings were planted on the reclaimed land.

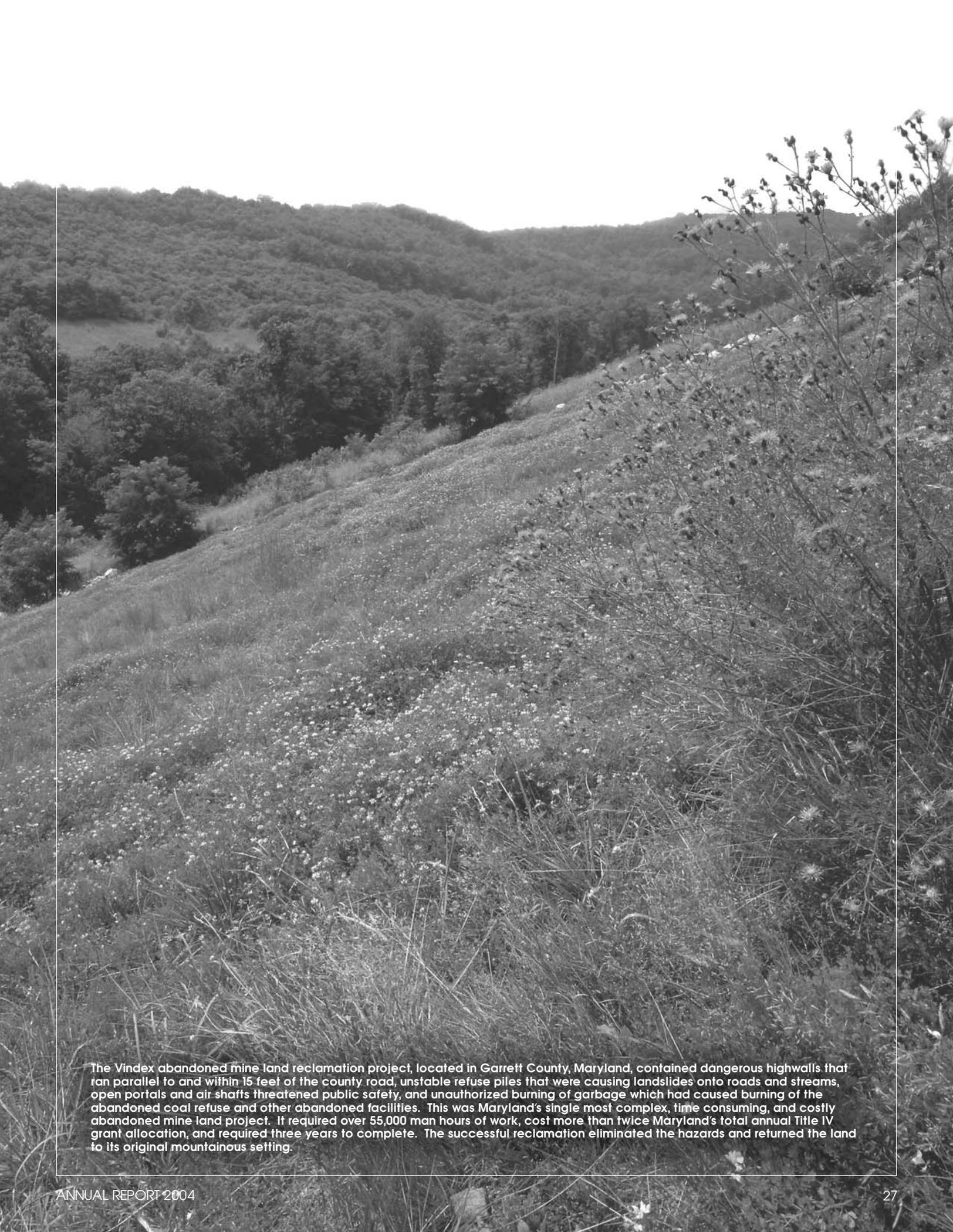
The success of this project shows that a damaged riparian habitat can be reclaimed to its original, pristine condition.

Portfolio of Abandoned Mine Land Reclamation

Since 1977, hundreds of active and abandoned mine sites have been visited and the reclamation work documented with photographs. This year, in an effort to better show successful abandoned mine reclamation -- a picture is worth a thousand words -- this section of the 2004 Annual Report presents a portfolio of on-the-ground results of abandoned mine land reclamation since the program began.

The photographs show no indication of the dangerous abandoned mine problems that existed before reclamation. Most show landscapes typical of rural areas throughout the country -- which is clear evidence of the successful reclamation completed by the Abandoned Mine Land Program. This portfolio is a picture of achievement under the Surface Mining Law that all Americans can take pride in, and should reassure everyone living in the coal fields that abandoned mine health and safety hazards can be eliminated.

10. 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 2004 winner of the People's Choice Award



The Vindex abandoned mine land reclamation project, located in Garrett County, Maryland, contained dangerous highwalls that ran parallel to and within 15 feet of the county road, unstable refuse piles that were causing landslides onto roads and streams, open portals and air shafts threatened public safety, and unauthorized burning of garbage which had caused burning of the abandoned coal refuse and other abandoned facilities. This was Maryland's single most complex, time consuming, and costly abandoned mine land project. It required over 55,000 man hours of work, cost more than twice Maryland's total annual Title IV grant allocation, and required three years to complete. The successful reclamation eliminated the hazards and returned the land to its original mountainous setting.



Although not required by the Surface Mining Law, many abandoned mine sites are returned to more valuable new land uses. Regrading the land's surface can be a major part of the reclamation process and can be a substantial part of the total project cost. Because golf course construction also requires extensive surface grading, they are a logical use if the economic demand is great enough at the mine site location. This pastoral golf course, located just outside Pittsburgh, Pennsylvania was constructed on an abandoned coal mine. Reclamation included removing the highwalls, grading the topography to meet the golf course specifications, placing topsoil on the regraded land, and the planting the grass and trees. Today, it is a successful golf course without any indication of the abandoned coal mine that once existed at this location.



The Veca Pit was a Tennessee Valley Authority uranium mine abandoned in the 1970s. The site was especially hazardous because a road ran very close to the top of the highwall. The highwall was failing and the no-trespassing fence had actually fallen into the contaminated pit below. During reclamation the bottom of the pit was raised above the water level with clean material and the contaminated soil covered with a clay liner. This reclamation has eliminated the dangerous abandoned mine hazards and the site is now populated with deer, antelope, owls, rabbits and other small game.



The Oklahoma partnership approach to reclamation of abandoned mine land is a joint effort of the Oklahoma Abandoned Mine Land Reclamation Program and the Agriculture Department's Natural Resources Conservation Service. By sharing resources, both people and money, the two agencies reduced costs, eliminated duplication of services, and achieved outstanding abandoned mine reclamation. Here at this reclaimed site in Rogers County, the combined effort resulted in the elimination of three hazardous highwalls and a significant source of acid mine drainage that was flowing into the Claremore municipal water supply.



Before reclamation this rich wetland was the site of a 96-acre abandoned coal mine near Pella, Iowa. Using money from the Abandoned Mine Reclamation Fund the project eliminated unvegetated spoil and flooded mine pits that were causing acid mine drainage. With reclamation complete the wetland aids in eliminating the acidic runoff and is a viable habitat that is actively used by migratory waterfowl.



The first state abandoned mine land project to use a grant from the Abandoned Mine Reclamation Fund was approved in August 1981. This project included the closure of a dangerous abandoned underground mine opening located in a Benwood, West Virginia, city park. Although fenced, the opening was readily accessible to children playing in the park. Reclamation work included clearing the area around the mine opening, demolishing an old fence and metal steps leading into the mine, sealing the opening with concrete blocks, filling in the void with rock and soil, and revegetating the site. Today the site is free of abandoned mine land dangers and the only reminder of this problem is a marker located on the hillside behind the swing.



For many years the trees used for the National Christmas Pageant of Peace tree-lighting ceremony on the Ellipse in Washington, D.C. were grown on tree farms located on reclaimed mine land. One year they came from this Christmas tree farm in Garrett County, Maryland, that was previously a reclaimed abandoned coal mine. Following the month-long pageant, the balled-and-burlaped trees were transported to permanent locations at parks throughout the Washington, D.C. area. The scotch pine in the center of this photo was used for the holidays and is now a large tree growing next to the Office of Surface Mining Headquarters in Washington, D.C.