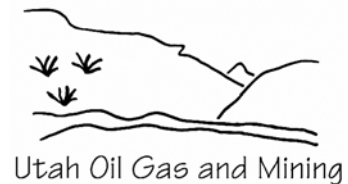


ANNUAL SUMMARY EVALUATION REPORT
of the
COLORADO – UTAH ABANDONED MINE LAND REVIEW TEAM
for the
COLORADO INACTIVE MINE RECLAMATION PROGRAM
For
EVALUATION YEAR 2002
(October 1, 2001, through September 30, 2002)



December 2, 2002

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ACRONYMS

AML	Abandoned Mine Land
AMLIS	Abandoned Mine Land Inventory
AMR	Abandoned Mine Reclamation
BLM	Bureau of Land Management (of the U.S. Dept. of the Interior)
CIMRP	Colorado Inactive Mine Reclamation Program
DFD	Denver Field Division
DOGM	Utah Division of Oil, Gas and Mining
EPA	United States Environmental Protection Agency
MSHA	Mine Safety and Health Administration (of the U.S. Dept. of Labor)
NAAMLPL	National Association of Abandoned Mine Land Programs
OSM	Office of Surface Mining (of the U.S. Dept. of the Interior)
SMCRA	Surface Mining Control and Reclamation Act of 1977, as amended
USFS	Forest Service (of the U.S. Dept. of Agriculture)

I. Introduction

Title IV of the Surface Mining Control and Reclamation Act of 1977 (SMCRA) established the Abandoned Mine Reclamation Fund. The primary purpose of the Fund is to mitigate the effects of past mining. The Office of Surface Mining Reclamation and Enforcement (OSM) administers the Abandoned Mine Reclamation Fund on behalf of the Secretary of the Interior. OSM awards grants to States and Tribes from the Fund to reclaim abandoned mines and pay their administration costs. The program puts the highest priority on correcting the most serious abandoned mine land (AML) problems that endanger public health, safety, general welfare, and property. OSM, State, and Tribal AML programs work together to achieve the goals of the national program. OSM also works cooperatively with the States and Tribes to monitor their AML programs.

Directive AML-22 generally describes how OSM evaluates State and Tribal AML reclamation programs. It calls such evaluations AML “enhancement and performance reviews.” A team of State and Federal personnel, called the Colorado-Utah AML Review Team, has been completing these reviews of the Colorado Inactive Mine Reclamation Program (CIMRP) and the Utah Abandoned Mine Reclamation (AMR) Program since it was first formed in January 1996. The team includes representatives of CIMRP, the Utah AMR Program, and OSM’s Denver Field Division (DFD). Members of the team during the 2002 evaluation period included: Frank Atencio, Grants Management Specialist, OSM-DFD; Dave Bucknam, CIMRP Supervisor; Mark Mesch, Administrator, Utah AMR Program; and Ron Sassaman, Environmental Protection Specialist, OSM-DFD. This report summarizes our review and evaluation of the Colorado Inactive Mine Reclamation Program for evaluation year 2002. That year spans the period of October 1, 2001, through September 30, 2002.

II. General Information on the Colorado Program

On June 11, 1982, the Secretary of the Interior approved Colorado’s AML plan (“State reclamation plan”) under Title IV of the Surface Mining Control and Reclamation Act (SMCRA). That approval allows Colorado to reclaim abandoned mines in the State in non-emergency AML projects. CIMRP, of the Division of Minerals and Geology (DMG) in the Department of Natural Resources, administers Colorado’s AML program under its approved plan. The Denver Field Division of OSM’s Western Regional Coordinating Center works with CIMRP to fund and approve AML projects in Colorado and to evaluate AML reclamation and other aspects of the Program.

Section 405(f) of SMCRA authorizes State and Tribal AML programs to apply to OSM each year for a grant to support their programs and reclaim specific projects. Grants OSM awards to CIMRP are based on the calendar year. Because the *evaluation* year (on which this report is based) includes the period of October of one year through September of the following year, CIMRP’s grants span parts of two successive evaluation periods. The administration funding in those grants applies to a single year. Construction funding awarded in those grants is available for three years.

Colorado's SMCRA funding did not change significantly during the past two years. OSM awarded a total of \$2,510,811 to CIMRP in the 2001 grant. That grant funded 14 positions and the Program's administrative activities. It also funded reclamation of seven coal and ten noncoal projects and project maintenance. In Colorado's 2002 grant, OSM awarded a total of \$2,650,000 to CIMRP. That grant also funded 14 positions and Program administration. In addition, it funded reclamation of six coal and fifteen noncoal projects and maintenance of previously completed projects. In September 2002, OSM also awarded to CIMRP a grant for \$60,000 to fence, delineate, and characterize a coal outcrop fire on public land in western Colorado. Appendices 1 and 2 show Colorado's AML reclamation accomplishments and remaining reclamation needs based on data from the Abandoned Mine Land Inventory System (AMLIS).

The State's approved Colorado Mine Subsidence Protection Program is administered by an insurance brokerage firm, which CIMRP oversees. A total of 860 active members were enrolled in the insurance program at the end of September 2002, a decrease of 31 members since September 2001. About 89.9 percent of those members live in the Colorado Springs area and 8.6 percent reside in the area of the Boulder/Weld coal field. Another 1.2 percent of the program's members live in the foothills of the Rocky Mountains and the remaining 0.3 percent live on Colorado's Western Slope. Members filed five claims during the period of October 1, 2001, through September 30, 2002. Three of those claims were still open as of September 30, 2002. Investigations concluded that the other two claims were not caused by abandoned mine-related subsidence.

Colorado does not have an OSM-approved emergency coal reclamation program.

III. Noteworthy Accomplishments

Increasing public awareness of hazards associated with abandoned mines is believed to prevent and reduce accidents involving abandoned mines. Outreach efforts inform the public of resources available to address AML problems while drawing on the public and special interest groups, in turn, to inform the Program of AML-related needs. CIMRP continued its efforts to increase public AML awareness and outreach during this evaluation period. In October 2001, CIMRP staff met with the Inactive Mine Reclamation Advisory Council and the Colorado Mined Land Reclamation Board. January 2002 activities included attending a mine tour for Environmental Learning for Kids and co-sponsoring a conference of Colorado Preservation, Inc. In February 2002, CIMRP entered an exhibit at Colorado Preservation, Inc. and gave a presentation at Powell Middle School. The Program's March 2002 public awareness and outreach activities included judging entries in the Mesa County Science Fair, staffing an exhibit at the Grand Junction Safety Fair, and attending an organization meeting for MSHA's "**Stay Out – Stay Alive**" 2002 campaign. CIMRP contributed an article for the "Stay Out – Stay Alive" theme for the Spring 2002 edition of the newsletter for the National Association of Abandoned Mine Land Programs.

CIMRP was just as active in public awareness and outreach activities in the second half of the evaluation year. April activities included attending the Grand Junction Safety Fair and a "Stay Out-Stay Alive" organization meeting, as well as participating in MSHA's mine safety awareness program for two successive weeks. In May 2002, Program staff attended and spoke at the Hardrock Mining 2002 conference, entered an exhibit in the Grand Junction Rendezvous, and participated in a media event with MSHA for the "Stay Out – Stay Alive" program. Severe drought and a forest fire that was believed to have been started by an underground coal fire kept the Program busy throughout the month of June 2002 responding to public and media inquiries (SEE the related discussion in Part V of this report). The Program's mid-year activities also included touring the Silverton mining district with the Inactive Mine Reclamation Advisory Council. During that time, it also contributed to an article in the *Colorado Springs Gazette* about coal mine-related subsidence in the Colorado Springs area and to another article in the *Eagle Valley Enterprise* about a recent AML project in the area. CIMRP's August 2002 activities involved its ongoing exhibit at the State Fair in Pueblo. September 2002 saw the Program again sponsor the Newspaper in Education Program in Grand Junction and staff an exhibit at the popular "Taste of Colorado" Labor Day event in downtown Denver. Also during September, CIMRP provided speakers for a meeting of the Clear Creek County Metal Mining Association and for a mountain learning presentation at Cortez Middle School. That month, the Program also presented an AML-related education and safety session at the annual NAAML meeting in Park City, Utah.

CIMRP was involved in other related activities throughout 2002. They included publishing news releases and media advisories on the "Stay Out – Stay Alive" theme and fact sheets about abandoned mines, tourist mines, and car tours. The Division of Minerals and Geology published a booklet entitled "Best Practices in Abandoned Mine Land Reclamation: the remediation of past mining activities."

As in previous years, CIMRP continued to develop partnerships with various agencies to address mining-related concerns. In many cases, the resulting projects were funded by sources other than OSM. Many of these projects addressed water quality concerns while others abated hazards typically found in projects funded under OSM grants. During the 2002 evaluation year, the Program participated in partnerships with the U.S. Environmental Protection Agency (EPA) on six noncoal projects funded under section 319 non-point source provisions of the Clean Water Act and, in two cases, with matching funds from severance taxes. Five of those projects addressed water quality problems in the Animas River Basin caused by mine waste, direct mine discharges, and contamination of mine water from contact with ore bodies. One of those projects is related to mining education with the Museum of Mining and Industry in El Paso County. Yet another partnership involving water quality remediation brought CIMRP together with the EPA and USFS for the Mary Murphy Mine project near St. Elmo. In addition, the Program received funding from the BLM under at least 15 task orders for more typical mine hazard abatement. In several cases, those task orders supplemented SMCRA-funded projects. CIMRP also received funds from the USFS for similar work in at least eight other task orders during this period as well, a number of which also supplemented SMCRA-funded projects.

Colorado's Program continued to protect wildlife and wildlife habitat through its reclamation, with particular emphasis on bats. Colorado continued its significant contribution to the nationwide effort to protect bats and bat habitat by constructing specialized mine closures. In addition, a CIMRP staff member attended and spoke at the bat gate design technical interactive forum hosted by OSM and Bat Conservation International in Austin, Texas, in March 2002.

IV. Results of Enhancement and Performance Reviews

Our team signed the "Colorado-Utah AML Review Team Performance Agreement" on February 3, 1998. The performance agreement describes the team's purpose, team members' responsibilities, and three general principles of excellence that the team developed to review and evaluate the Colorado and Utah AML programs' performance. The agreement applied to the 1998, 1999, 2000, 2001, and 2002 evaluation years. We updated the agreement every year with current-year schedules and to describe the principles of excellence and performance measures we planned to review. We also updated the performance measures to specify any particular aspects of the programs that we planned to focus on. We updated the performance agreement for our 2002 reviews and evaluations on December 11, 2001.

We emphasized on-the-ground or end-results when we developed the principles and measures in the agreement. Each general principle of excellence had one or more specific performance measure(s). We decided which performance measures to review and evaluate in each year of the agreement. Performance measures described: Why we selected a certain topic; what the review population and sample sizes would be; how we would conduct the review and report the results; and our schedule for completing the review. The two principles of excellence, and the specific performance measures we chose for the 2002 review of the Colorado Inactive Mine Reclamation Program, are described below.

Principle of Excellence 1: The State's on-the-ground reclamation is successful.

- *Performance Measure (b):* Is reclamation successful on a long-term basis?

Principle of Excellence 3: The State must have systems to properly manage AML funds.

- *Performance Measure (g):* Do the State's procedures for managing set-aside funds support the intent of SMCRA?

Results of our 2002 reviews and evaluations are summarized below. These summaries are based on information we gathered from field visits to AML projects, interviews with CIMRP, DMG, and Natural Resources Department staff, and reviews of the Program's project specifications, grant applications and reports, and internal State and AMLIS inventories. We described our review and evaluation results in much greater detail in enhancement and performance review reports that we wrote for each performance

measure. Those reports are on file in OSM's Denver Field Division. This report, and the supporting enhancement and review reports, describe our reviews and evaluations of performance measures 1(b) and 3(g).

A. Summary Evaluation of Performance Measure 1(b)

Our team evaluated this performance measure to determine if Colorado's reclamation is successful on a long-term basis. We selected this topic for a cyclical review in 2002 because reclamation success is an overriding goal of the AML program. For the purposes of this review, we defined "long-term" reclamation as a project Colorado completed more than three years before the date of our revised performance agreement. We focused on one project in the upper Animas River Basin in San Juan County with the goal of visiting every feature in that area of the project. Our evaluation sample also included two features of a second project that were conveniently located along our travel route.

Colorado's specifications, closeout reports, monitoring reports, and grant performance reports provided detailed information for our evaluation. We looked for problems at each reclaimed opening while empirically evaluating the immediately surrounding site conditions. We based our determination of long-term reclamation success on two factors. First, we considered if the specific measures Colorado prescribed in its project specifications for hazard abatement were intact and functional. Second, we considered whether the State's reclamation continued to improve restored areas over their previously abandoned condition. In this evaluation, improvement essentially meant protecting public health and safety. All the closures we visited were accessible despite being located at high elevation in remote areas. The State's reclamation of these noncoal mine openings was limited to hazard abatement and did not directly address waste piles, drainage, or structures. If we observed problems at the closures we visited, we determined if they were described in the project specifications, if they occurred since Colorado completed reclamation, if they were hazardous or not, and if maintenance was needed to correct them. We did not statistically analyze our observations.

All the features we looked at were reclaimed mine portals, vertical shafts, inclined shafts, and stopes. All openings were priority 1 hazards at abandoned noncoal mines. Colorado took advantage of our field review to document the condition of the reclaimed openings we visited and to record their GPS locations for monitoring purposes. We also saw several mining-related structures and pieces of machinery during our field review. Such remnants of old mines often are historically significant. Colorado did not disturb these resources at the locations we visited.

The team concluded overall that Colorado's reclamation was successful on a long-term basis. We visited a total of 65 constructed mine closures in the two sample projects. Colorado completed the two sample projects about 11.8 years and 4.8 years ago. The 17 portals we visited were safeguarded with steel grates with locking access doors, stone bulkheads with locking access doors, steel grates, and a bat gate on a corrugated metal pipe. All portal closures were intact and functional. Colorado used eight types of

closures to safeguard the 48 vertical openings that we visited. They included: Pre-cast concrete panels with locking access doors; polyurethane foam with corrugated metal pipes and locking access doors; backfills; steel grates with locking access doors; steel grates alone; polyurethane foam with backfills; pre-cast concrete panels alone; and pre-cast concrete panels with backfill. Of the 48 closures we viewed in vertical openings, all but one were intact and functional and we were uncertain about a second opening. Backfill in one safeguarded vertical opening settled, creating a hazardous situation. Second, we located a stope that was open and appeared to be hazardous and were unable to clearly identify it as being part of a CIMRP project.

We recommended that Colorado schedule and perform maintenance to address the settling of backfill in one vertical opening and the open stope that needs to be clearly identified. The Program completed the maintenance work before the end of the evaluation period and was working to identify the stope.

C. Summary Evaluation of Performance Measure 3(g)

This is the first time the team evaluated whether the State's procedures for managing set-aside funds support the intent of SMCRA, though we previously reviewed various grants financial management elements of CIMRP's program. We met with Division of Minerals and Geology staff who have administrative record keeping responsibilities for the set-aside fund account to see how the fund is being identified and kept separate from other State accounts. We also wanted to determine if expenditures from the set-aside fund are consistent with the intent of title IV of SMCRA and to look at the authority structure for approving expenditures from that fund. Our review sample included combined balance sheets and statements of revenue and expenses for the set-aside fund for Fiscal Years 2001 and 2002.

Colorado's set-aside trust fund includes two separate sub-accounts. Set-aside money that OSM awarded to CIMRP before October 1, 1991, along with interest earned on that money, may be used by the State to address abandoned coal and non-coal mine problems for the purposes of title IV of SMCRA after August 3, 1992. Set-aside money OSM awarded to the State after October 1, 1992, may be used by CIMRP to address only abandoned coal mine problems after September 30, 1995. One sub-account in the set-aside fund contains the pre-October 1, 1991, funds for coal and non-coal problems and the other contains the post-October 1, 1991, funds for coal problems only. Each sub-account in this fund is kept separate and distinct on the State's balance sheets and statements of revenue and expense. Colorado maintains a comprehensive balance record for each sub-account in the set-aside fund that lists all deposits and interest earned. The accounting division provides quarterly balance sheets to the CIMRP supervisor.

At the time of our evaluation, CIMRP had not expended any money from the set-aside fund. The State policies, which govern this established trust, are contained in a document known as "THE AMENDED COLORADO ABANDONED MINE RECLAMATION SET-ASIDE TRUST FUND." CIMRP interprets the provisions of this

document to mean that the State understands this fund will only be used to address abandoned mine land problems when Federal AML funding stops.

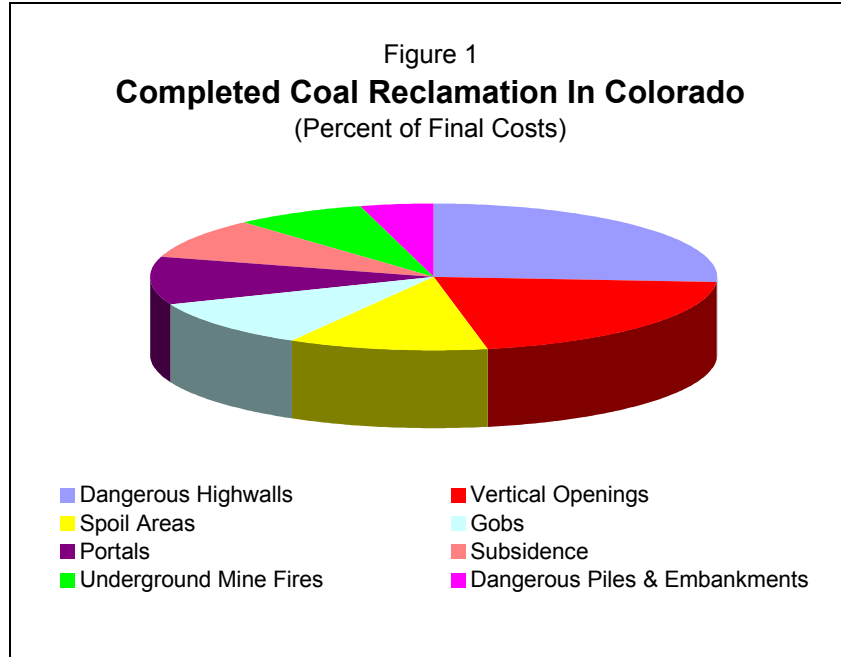
Colorado Mined Land Reclamation Board Members are the appointed trustees of the set-aside fund. They ensure that all such funds are deposited with the State Treasurer for safekeeping. As trustees, the Board members must also approve any requests by the CIMRP to use this special trust account.

The team found that the Colorado Reclamation Set-Aside Trust Fund is safeguarded by the manner in which it was established with separate sub-accounts and with the Colorado Mined Land Reclamation Board functioning as Trustee. Based on this finding, we concluded that Colorado's set-aside fund is properly administered and protected consistent with OSM policy and guidelines.

V. Accomplishments and Inventory Reports

Appendices 1 and 2 list the abandoned coal and noncoal mine problems Colorado included in AMLIS and how many of those problems CIMRP reclaimed so far. They also show the estimated reclamation costs of unreclaimed coal and noncoal problems and how much the State's completed coal and noncoal reclamation cost.

Title IV of SMCRA stresses reclamation of abandoned coal mine-related problems because the Abandoned Mine Reclamation Fund is generated by a fee assessed on coal produced from active mines. By the end of the 2002 evaluation period, CIMRP reclaimed 147 coal projects since the Secretary approved its program effective June 11, 1982, and has funding to reclaim eleven more. Addressing eight types of problems associated with abandoned coal mines required about 90.6 percent of the almost \$12.5 million cost of reclaiming those projects. Those problem types include: Dangerous highwalls (23.6%); vertical openings (18.9%); spoil areas (10.3%); gobs (9.7%); portals (9.4%); subsidence (8.1%); underground mine fires (6.9%); and dangerous piles and embankments (3.7%). Seven of these eight types of problems (dangerous piles and embankments excluded) combined to require most of Colorado's completed coal reclamation costs in the 2001 evaluation year as well, though their respective percentages of the total cost varied somewhat. Thirteen other types of problems comprised the remaining 9.4 percent of CIMRP's completed abandoned coal mine reclamation in 2002. Figure 1 below shows CIMRP's abandoned coal mine-related reclamation accomplishments.

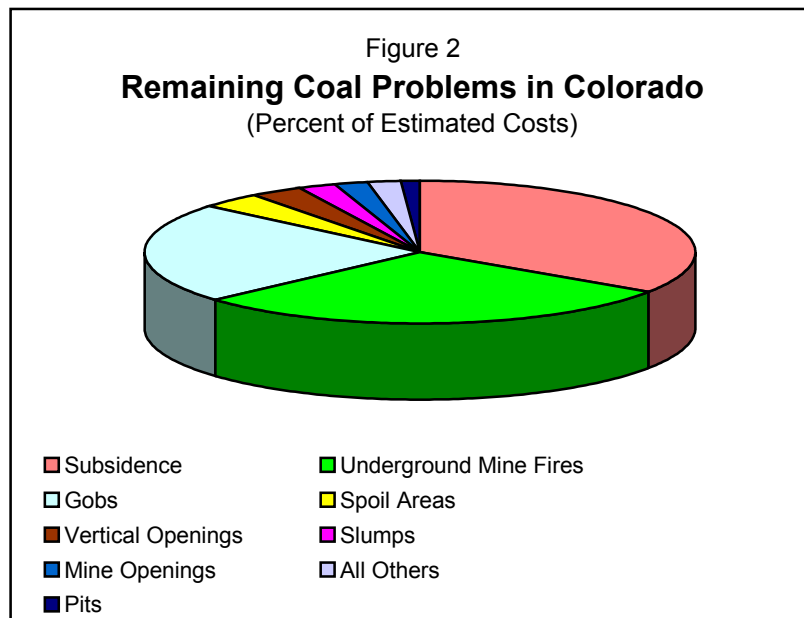


OSM continues to award grant funds to Colorado to reclaim abandoned coal mines. While the Program has made significant progress toward addressing known coal problems in the State since the Secretary approved Colorado’s program, the State has not certified under section 411(a) of SMCRA that it addressed all known abandoned coal mine problems within its borders. As Appendix 1 shows, over \$38 million in unfunded, unreclaimed problems are included in the Colorado’s inventory of coal hazards in AMLIS. About 86.1 percent of that estimated cost is associated with three problem types. They include: Subsidence (34.5%); underground mine fires (28.7%); and gobs (22.9%). These are the same problem types and respective approximate percentages that we noted in this context in the 2001 evaluation period. Eighteen other problem types make up the remaining 13.9 percent of the estimated unfunded cost of reclamation. As the third problem type comprising most of Colorado’s unfunded coal reclamation costs, gob involves priority three environmental hazards where the need for abatement is somewhat less urgent.

Experience shows that subsidence and underground mine fires are two of the most expensive and technically difficult abandoned coal mine problems to deal with effectively. The severe drought of 2002 gave a sense of urgency to Colorado’s completion of a project funded in its 2002 grant to assess the potential hazards of 29 known underground mine fires throughout the State. That project was well underway when an underground coal fire in South Canyon was believed to have sparked a catastrophic forest fire near Glenwood Springs, Colorado, on June 8, 2002. That fire, known as the “Coal Seam Fire,” burned over 12,000 acres, destroyed 29 homes, forced the temporary evacuation of about 3,000 people, and continued to burn in a wilderness area north of Glenwood Springs well into September 2002. Ironically, Colorado’s 2001 grant also funded a project to investigate and characterize an underground mine fire in an area just east of where the Coal Seam Fire was believed to have started. Contracting activities for that work were underway at the end of this evaluation period.

CIMRP continues to develop projects to address abandoned coal-mine related subsidence problems. One project funded in its 2001 grant addresses subsidence caused by an underground mine fire about 15 miles west of the area impacted by the Coal Seam Fire described above. In addition, Colorado’s subsidence insurance program investigates claims of damage related to abandoned mine subsidence. The discussion in part II of this report describes the subsidence insurance program’s activity during this evaluation year.

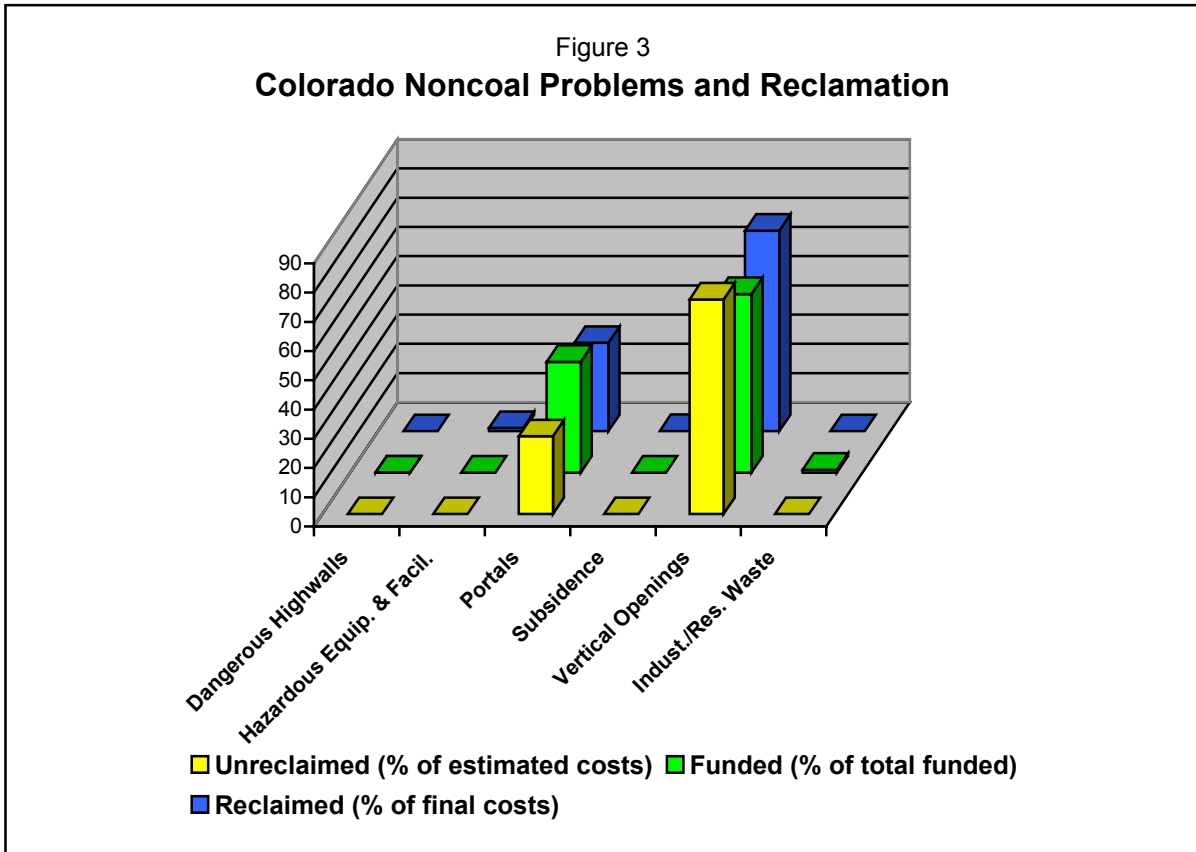
Most of the remaining estimated cost of reclaiming other coal-related problems is associated with spoil areas (3.5%), vertical openings (3.3%), slumps (2.1%), lower priority mine openings (1.9%), and pits (1.2%). These are the same problem types we noted in this context in the previous year, and their respective percentages are unchanged as well. The combination of subsidence, underground mine fires, and gobs with these four problem types makes up about 98.1 percent of the estimated cost of reclaiming Colorado’s remaining abandoned coal mine problems. Figure 2 below further illustrates the scope of Colorado’s remaining abandoned coal mine problems.



Appendix 2 summarizes the noncoal problems Colorado inventoried and the State’s noncoal reclamation accomplishments. CIMRP has made a significant effort over the years to address the State’s high priority noncoal hazards. Nevertheless, known abandoned noncoal mine problems still number in the tens of thousands and are found in many areas of Colorado. The Program estimates that over \$15.7 million are needed to abate the remaining noncoal hazards Colorado inventoried in AMLIS, not including work already funded and uninventoried problems. Portals and vertical openings still make up 100 percent of that estimated cost. Abandoned noncoal mine features pose immediate and extreme hazards to public health and safety in part because they are so numerous and widespread. Increasingly dispersed outdoor recreation, home and road

construction, and other factors combine to make abandoned noncoal mines and their attendant features increasingly dangerous.

CIMRP continues to respond to the noncoal threat by reclaiming abandoned noncoal mines. OSM funded 162 noncoal projects in grants it awarded to CIMRP since 1985. Of that total, CIMRP completed 139 noncoal projects to date. Appendix 2 shows that CIMRP's completed noncoal reclamation addressed dangerous highwalls, portals, subsidence, and vertical openings at a cost of over \$18.4 million. In terms of mine openings alone, CIMRP has safeguarded at least 4,415 portals and vertical shafts at abandoned noncoal mines. The State also has funded work in the amount of \$2,004,000 to address dangerous highwalls, industrial and residential waste, portals, and vertical openings that is not yet complete. Figure 3 below illustrates the percentage each category of inventoried, unreclaimed noncoal problem comprises of Colorado's estimated unfunded reclamation costs. It also shows the amount of ongoing work that is funded and how much CIMRP's completed reclamation of noncoal problems cost so far.



Appendix 1

Colorado Abandoned Mine Reclamation Program Coal Reclamation Accomplishments and Remaining Reclamation Needs*

Problem Type and Description	Unfunded		Funded		Completed		Total	
	Units	Costs	Units	Costs	Units	Costs	Units	Costs
Bench	58 acres	\$201,500	0	0	3 acres	\$31,044	61 acres	\$232,544
Dangerous Highwalls	1,030 feet	\$30,000	500 feet	\$40,000	51,992 feet	\$2,955,885	53,522 feet	\$3,025,885
Dangerous Piles & Embankments	0	0	12 acres	\$90,000	28.5 acres	\$459,432	40.5 acres	\$549,432
Equipment & Facilities	73 (count)	\$108,000	0	0	7 (count)	\$14,657	80 (count)	\$122,657
Gobs	570.3 acres	\$8,729,954	30 acres	\$213,253	158.6 acres	\$1,210,367	758.9 acres	\$10,153,574
Highwall	1,100 feet	\$82,500	0	0	2,027.5 feet	\$46,387	3,127.5 feet	\$128,887
Hazardous Equipment & Facilities	1(count)	\$2,000	0	0	1(count)	\$1	2 (count)	\$2,001
Haul Road	4 acres	\$13,000	0	0	0	0	4 acres	\$13,000
Industrial / Residential Waste	3 acres	\$13,000	8	\$84,000	8 acres	\$311,776	19acres	\$408,776
Mine Openings	303 (count)	\$725,000	3 (count)	\$3,206	18 (count)	\$62,592	324 (count)	\$790,798
Other	28.0	\$104,000	1.0	\$5,000	5.0	\$48,916	34.0	\$157,916
Portals	32 (count)	\$136,060	38(count)	\$119,746	504(count)	\$1,171,146	574 (count)	\$1,426,952
Pits	98 acres	\$441,900	0	0	82.9 acres	\$387,062	180.9 acres	\$828,962
Polluted Water: Agric. & Industrial	0	0	1 (count)	\$50,000	3 (count)	\$22,481	4 (count)	\$72,481
Subsidence	179.6 acres	\$13,130,000	2 acres	\$10,000	43.4 acres	\$1,012,240	225 acres	\$14,152,240
Spoil Area	398.6 acres	\$1,347,595	0	0	829 acres	\$1,286,756	1,227.6 acres	\$2,634,351
Surface Burning	1acre	\$5,000	5 acres	\$70,000	35 acres	\$238,404	41 acres	\$313,404
Slump	25 acres	\$804,000	0	0	0	0	25 acres	\$804,000
Underground Mine Fire	176.5 acres	\$10,900,000	30 acres	\$2,980,000	156.5 acres	\$863,278	363 acres	\$14,743,278
Vertical Openings	118 (count)	\$1,242,967	27 (count)	\$137,961	277 (count)	\$2,369,396	422 (count)	\$3,750,324
Water Problems	39 gal/min	\$23,000	1 gal/min	\$25,000	1 gal/min	\$6,000	41 gal/min	\$54,000
COLORADO TOTAL COSTS		\$38,039,476		\$3,828,166		\$12,497,820		\$54,365,462

* This table is based on a Problem Type Unit and Cost Summary Report from the Abandoned Mine Land Inventory System as of 10/3/2002

NOTE: Completed cost of \$1 means that problem type's reclamation was incidental to reclamation of another problem type.

Appendix 2

Colorado Abandoned Mine Reclamation Program
Non-Coal Reclamation Accomplishments and Remaining Reclamation Needs*

Problem Type and Description	Unfunded		Funded		Completed		Total	
	Units	Costs	Units	Costs	Units	Costs	Units	Costs
Dangerous Highwalls	0	0	1	\$1,000	150 feet	\$2,498	151 feet	\$3,498
Hazardous Equipment & Facilities	0	0	0	0	1 (count)	\$205,000	1 (count)	\$205,000
Industrial/Residential Waste	0	0	1 acre	\$20,000	0	0	1 acre	\$20,000
Portals	1,164 (count)	\$4,181,820	193(count)	\$759,000	1,654 (count)	\$5,567,918	3,011 (count)	\$10,508,738
Subsidence	0	0	0	0	2 acres	\$10,000	2 acres	\$10,000
Vertical Openings	2,492 (count)	\$11,550,753	360(count)	\$1,224,000	2,761(count)	\$12,631,372	5,613 (count)	\$25,406,125
COLORADO TOTAL COSTS		\$15,732,573		\$2,004,000		\$18,416,788		\$36,153,361

* This table is based on a Problem Type Unit and Cost Summary Report from the Abandoned Mine Land Inventory System as of 10/1/2002

NOTE: Completed cost of \$1 means that problem type's reclamation was incidental to reclamation of another problem type.