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Cover Photo: Deer on a reclaimed area of the Trapper Mine in Colorado.

Inside Cover Photo: OSMRE helped Alabama's Abandoned Mine Reclamation Program with a gob fire that posed health and safety concerns for citizens living and working nearby.

tions, associations, and foundations for the purposes of this fitle; (4) recovered moneys as provided for in this title; and (5) Interest credited to the fund under subsection (e), (c) Use of moneys Moneys in the fund may be used for the following purposes: (1) reclaim of land and water resources adversely affected by past coal mining, including but not limited to reclamation and restoration of abandoned surface mine areas, abandoned coal processing areas, and abandoned coal refuse disposal areas; sealing and filling abandoned di is: planting of land adversely affected by past coal mining to prevent erosion and sedimentation; prevention, abatement, treatment, and control of water politifion created by coal mine drainage including restoration of stream beds, and construction and operation of water ement, and control of burning coal refuse disposal areas and burning coal in sifu; prevention, abatement, and control of coal mine subsidence; and establishment of self-sustaining, individual State administered programs to insure private property against dama nce resulting from underground goal mining in those States which have reclamation plans approved in accordance with section 503 of this Act: Provided. That funds used for this purpose shall not exceed \$3,000,000 of the funds made available to any State under of this Act. (2) acquisition and filling of voids and sealing of funnets, shafts, and entryways under section 409; (3) acquisition of land as provided for in this title; (4) enforcement and collection of the reclamation fee provided for in section 402 of this title; (5) restoration, reck ontrol, or prevention of adverse effects of coal mining which constitutes an emergency as provided for in this title; (6) grants to the States to accomplish the purposes of this title; (7) administrative expenses of the United States and each State to accomplish the purpose fer section 411; (9) for the purpose of section 507(c), except that not more than \$10,000,000 shall annually be available for such purpose; (10) for the purpose described in section 402(h); and (11) all other necessary expenses to accomplish the purposes of this title. SE MATION (a) Payment; rate 6 All operators of coal mining operations subject to the provisions of this Act shall pay to the Secretary of the Interior, for deposit in the fund, a reclamation fee of 31.5 cents per ton of coal produced by surface coal mining and 13.5 cents per ton by underground mining or 10 per centum of the value of the coal at the mine, as determined by the Secretary, whichever is less, except that the reclamation fee for lighte coal shall be at a rate of 2 per centum of the value of the coal at the mine, or 9 cents per ton, whichever 403 - OBJECTIVES OF FUND (a) Priorities Expenditure of moneys from the fund on lands and water elicible pursuant to section 404 for the purposes of this title, except as provided for under section 411, shall reflect the following priorities in the order stated: (1)(A) the proealth, safety, and property from extreme danger of adverse effects of coal mining practices; (B) the restoration of land and water resources and the environment that - (i) have been degraded by the adverse effects of coal mining practics ent to a site that has been or will be remediated under subparagraph (A); (2)(A) the protection of public health and safety from adverse effects of coal mining practices; (B) the restoration of land and water res nment that - (i) have been degraded by the adverse effects of coal mining practices; and (ii) are adjacent to a site that has been or will be remediated under subparagraph (A); and (3) the coal mining practices including measures for the conservation and development of s water resources and the environment previously degraded by adverse effects of PREAMBLE To provide for the cooperation between the Secretary agricultural productivity: SECTION 404 - ELIGIBLE LANDS AND WATER Lands those which were mined for coal or which were affected by such mining, w or reclamation or drainage abatement expenditures under this title are of the Interior and the States with respect to the regulation of surface coal section 411, and abandoned or left in an inadequate reclamation sta mining operations, and the acquisition and reclamation of abandoned mines, and for other responsibility under State or other Federal laws. 410. SECTIO purposes. Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act may be cited as the "Surface Mining Control and Reclamation Act of 1977" Not later than the end of the one hundred and eighty-day TITLE II - OFFICE OF SURFACE MINING REGLAMATION AND ENFORCEMENT SECTION 201 - OFFICE OF SURFACE promulgate and publish in the Federal Register regul MINING RECLAMATION AND ENFORCEMENT (a) Establishment There is established in the Department of the Interior, the Office program incorporating the provisions of title IV and es of Surface Mining Recramation and Enforcement (hereinalter referred to as the "Office") (b) Appointment, compensation, duties, etc., of and approval of State programs consisting of the Director, employees The Office shall have a Director who shall be appointed by the President, by and with the advice and consent of the Senate approval of State Rectamation Plan by the Secre and shall be compensaled at the rate provided for level V of the Executive Schedule under section 53152 of the United States Code, and such other section 503, the Secretary shall grant, on a employees as may be required. Pursuant to section 5108, fille 5, and after consultation with the Sacretary, the Director of the Office of Personnel Managemen to subsection 402(g) and which are nece shall determine the necessary number of positions in general schedule employees in grade 16, 17, and 18 to perform functions of this tille and shall allocate such approved by the Secretary. (k) Eligible positions to the Secretary. The Director shall have the responsibilities provided under subsection (c) of this section and those diddes and responsibilities relating to the functions of the Office which the Secretary may assign, consistent with this Act. Employees of the Office shall be recruited on the basis of their professional competence and considered as a "State" for the purp administer the provisions of this Act, providing that no legal authority, program, or function in any Federal agency which has as its purpose promoting the development or use of pos ADVERSELY AFFECTED BY momer minimal transported for regulating the health and safety of miners under provisions of the Federal Coal Mine Health and Safety Act of 1969 (63 Stat. 742), shall be transferred in of fact; notice; right of entry I the Office, (c) Duties of Secretary The Secretary, acting through the Office, shall - (1) administer the programs for controlling surface coal mining operations which are required by this Act review and approve or disapprove State programs for controlling surface coal mining operations and reclaiming abandoned mined lands, make those investigations and inspections necessar to insure compliance with this Act; conduct hearings, administer oaths, issue subpoenas, and competitive attendance of witnesses and production of written or printed material as provided for in this Act, issue case-and-dexist orders; review and vacate or modify or approve orders and decisions, and order the suspension, revocation, or will modify of any permit for failure to comply with any of the provisions of this Act or any rules and regulations adopted pursuant thereto; (2) publish and promulgate such rules and regulations as may be necessary to carry out the purposes and provisions of this Act; (3) administer the State grant-to-end program for the development of State programs for surface and mining and reclamation operations provided for millle V of this Act; (4) administer the program for the purchase and reclamation of abandoned and unreclaimed mined areas pursuant to title IV of this Act; (5) administer the surface mining and reclamation research and fernonstration project authority provided for in this Act; (6) consult with other agencies of the Federal Government having expertise in the control and reclamation of surface mining ap States, local-governments, and other eligible agencies in the coordination of such programs; (7) maintain a continuing study of surface mining and reclamation operations in the United States, (8) develop and maintain an Information and Date Center on Surface Coal Mining, Reclamation, and Surface Impacts of Underground Mining, which will make such data available to the public and the Faderal, regional, State, and local agencies conducting or concerned with land use planning and agencies concerned with surface and underground mining and reclamation operations; (9) assists the ors to enter upon such prevent the adverse States in the development of State programs for surface coal mining and reclamation operations which meet the requirements of the Act, and at the same time, reflect local requirements. environmental and agricultural conditions; (10) assist the States in developing objective scientific criteria and appropriate procedures and institutions for determining those areas of a State to be giving notice by mail to designated unsultable for all or certain types of surface coal mining pursuant to section 522; (11) monitor all Federal and State research programs dealing with coal extraction and use and recommend to Congress the research and demonstration projects and necessary changes in public policy which are designated to (A) improve feasibility of underground coal mining, and (B) improve surface mining er of general circulation and reclamation techniques directed at eliminating adverse environmental and social impacts; (12) cooperate with other Federal agencies and State regulatory authorities to minimize duplication of Secretary, his agents inspections, enforcement, and administration of this Act, and (13) perform such other duties as may be provided by law and relate to the purposes of this Act, (d) Restriction on use of Federal coal ursuant to an approved mine health and safety inspectors The Director shall not use either permanently or temporarily any person charged with responsibility of inspecting coal mines under the Federal Coal Mine Health on the property adversely 1969, unless he finds and publishes such finding in the Federal Register, that such activities would not interfere with and Safety Act of y other property to have inspections under the 1969 Act. (e) Conflict of interest; penalties; rules and regulations; report to ry or expedient to restore Congress No employee of the Office or any other Federal employee effects. Such entry shall be performing any function or duty under this Act shall for the protection of public have a direct or indirect financial interest in of be construed as an act of underground or surface coal mining operations. Whoever knowingly The moneys expended for such work and the benefits accruing to the provisions of the above sentence shall, upon conviction, be punished by a fine of ses so entered upon shall be chargeable against such land a \$2,500, or by imprisonment for not more than one year, or both. The Director shall (1) within sixty days or offset any claim in or any action. brought by any owner of any intere regulations, in accordance with section 553 of title 5, United States Code, to establish the methods by which the provisions of this subsection will be monitored and for any alleged damages by virtue of such entry: Provided, however, Th enforced, including appropriate provisions for the filing by such employees and the review of statements and supplements thereto concerning their financial interests is not intended to create new rights of action or eliminate existing immunities. which may be affected by this subsection, and (2) report to the Congress as part of the annual report (section 706) on the actions taken and not taken during the on: grants States are encouraged as part of their approved State programs, to r preceding calendar year under this subsection. (f) Petition for issuance, amendment, or repeal of rule; filing; hearings or investigation; notice of denial (1) ed and unreclaimed mined lands within their boundaries and, if necessary, to acquire or After the Secretary has adopted the regulations required by section 501 of this Act, any person may petition the Director to initiate a proceeding for nds to the Secretary or the appropriate State regulatory authority under appropriate Fe the issuance, amendment, or repeal of a rule under this Act. (2) Such petitions shall be filed in the principal office of the Director and shall set a matching basis to States in such amounts as t s. The Secretary is authorized to make grants on ate for the purpose of carrying out the provisions of forth the facts which it is claimed established that it is necessary to issue, amend, or repeal a rule under this Act. (3) The Director may this title but in no event shall any grant exceed 90 pe hold a public hearing or may conduct such investigation or proceeding as the Director deems appropriate in order to determine of acquisition of the lands for which the grant is made. When a State has made any such land available to the whether or not such petition should be granted. (4) Within ninety days after filing of a petition described in paragraph ent under this title, such State shall have a preference right to purchase such lands after reclamation at fair market value (1), the Director shall either grant or deny the petition. If the Director grants such petition, the Director shall THE ENVIRONMENTAL IMPACTS OF SURFACE COAL N promptly commence an appropriate proceeding in accordance with the provisions of this Act. later than the end of the ninety-day period immediately following If the Director denies such petition, the Director shall so notify the petitioner in regulations covering an interim regulatory procedure for surface coal m writing setting forth the reasons for on and incorporating the provisions set out in section 502(c) of this Act. The is

meaning of section 102(2)(C) of the National Environmental Policy Act of 1969 (4)

any new or previously mined or abandoned site for surface coal mining operations on lands on which such operations are regulated by a State unless such person has obtained a permit from the State's regulatory authority. (b) Interim standards All surface coal mining operations are regulated by a State unless such person has obtained a permit from the State's regulatory authority. (b) Interim standards All surface coal mining operations on lands on which such operations are regulated by a State unless such person has obtained a permit from the State's regulatory authority. (b) Interim standards All surface coal mining operations on lands on which such operations are regulated by a State unless such person has obtained a permit from the State's regulatory authority. (b) Interim standards All surface coal mining operations are regulated by a State unless such person has obtained a permit from the State's regulatory authority. (b) Interim standards All surface coal mining operations are regulated by a State unless such person has obtained and a state of the standards are regulated by a State unless such person has obtained and a standard and a stan hich such operations are regulated by a State which commence operations pursuant to a permit issued on or after six months from August 3, 1977, shall comply, and such permits shall contain terms requiring compliance. SECTION 503 - STATE PROGRAMS (a) Regulation

rim regulations shall be deemed not to be a major Federal action within the not be promulgated and published by the Secretary until he has - (A) published proposed than thirty days after such publication to submit written comments thereon; (B) obtained the w under this section which relate to air or water quality standards promulgated under the authority of the Feder Control Act, as amended (33 U.S.C. 1151-1175), and the Clean Air Act, as amended (42 U.S.C. 1857 et seq.); and (C) held at least one public hearing on the proposed regulations. SECTION 502 - INITIAL REGULATORY PROCEDURES (a) State regulation No person sha

nit to the Secretary, by the end of the eighteenth- month 12 period beginning on August 3, 1977, a State program which demonstrates that such State has the capa **ABOUT OSMRE** administrative and technical personnel, and sufficient funding to enable the State to regulate surface coal mining and reclamation operations in accordance w nt of a permit system, meeting the requirements of this little for the regulation of surface coal mining and reclamation operations for coal on lands within the S ection 522 provided that the designation of Federal lands unsuitable for mining shall be performed exclusively by the Secretary after consultation with the Sta

nits for surface coal mining and reclamation operations with any other Federal or State permit process applicable to the proposed operations; and (7) rules and ressued by the Secretary pursuant to this Act. SECTION 505 - STATE LAWS (a) No State law or regulation in effect on August 3, 1977, or which may become effective thereafter, shall be superseded by any provision of this Act or any regulation issued pursu. sofar as such State law or regulation is inconsistent with the provisions of this Act. (b) Any provision of any State law or regulation in effect upon August 3, 1977, or which may become effective thereafter, which provides for more stringent land use and environmental confi sion of any State law or regulation in effect on August 3, 1977, or which may become effective thereafter, which provides for the control and regulation of surface mining and reclamation operations for which no provision is contained in this Act shall not be constru with this Act. SECTION 506 - PERMITS (a) Persons engaged in surface coal mining within State; time limit; exception No later than eight months from the date on which a State program is approved by the Secretary, pursuant to section 503 of this Act, or no later than eight date on which the Secretary has promulgated a Federal program for a State not having a State program pursuant to section 504 of this Act, no person shall engage in or carry out on lands within a State any surface coal mining operations unless such person has first obtained. uch State pursuant to an approved State program or by the Secretary pursuant to a Federal program. SECTION 508 - RECLAMATION PLAN REQUIREMENTS (a) Each reclamation plan submitted as part of a permit application pursuant to any approved State program or nder the provisions of this Act shall include, in the degree of detail necessary to demonstrate that reclamation required by the State or Federal program can be accomplished. SECTION 516 - SURFACE EFFECTS OF UNDERGROUND COAL MINING OPERATIONS (a) I s The Secretary shall promulgate rules and regulations directed toward the surface effects of underground coal mining operations, embodying the following requirements and in accordance with the procedures established under section 501 of this Act: Provided, however ng any rules and regulations the Secretary shall consider the distinct difference between surface coal mining and underground coal mining. Such rules and regulations shall not conflict with nor supersede any provision of the Federal Coal Mine Health and Safety Act of 1969 n issued pursuant thereto, and shall not be promulgated until the Secretary has obtained the written concurrence of the head of the department which administers such Act. SECTION 517 - INSPECTIONS AND MONITORING (a) Inspections of surface coal mining and rec rations The Secretary shall cause to be made such inspections of any surface coal mining and reclamation operations as are necessary to evaluate the administration of approved State programs, or to develop or enforce any Federal program, and for such purposes author ary shall have a right of entry to, upon, or through any surface coal mining and reclamation operations, SECTION 523 - FEDERAL LANDS (a) Promulgation and implementation of Federal lands program No later than one year after August 3, 1977, the

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PAST COAL MINING PRACT

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The mission of the Office of Surface Mining Reclamation and Enforcement (OSMRE) is to carry out the requirements of the Surface Mining Control and Reclamation Act of 1977 (SMCRA) in cooperation with States and Tribes. OSMRE's primary objectives are to ensure that coal mines are operated in a manner that protects citizens and the environment during mining and assures that the land is restored to productive use following mining and to mitigate the effects of past mining by aggressively pursuing reclamation of abandoned coal mines.



Photo: The signing of the Surface Mining Control and Reclamation Act of 1977.

The OSMRE is a bureau within the United States Department of the Interior. OSMRE is responsible for establishing a nationwide program to protect society and the environment from the adverse effects of surface coal mining operations.

OSMRE was created in 1977 when Congress enacted the Surface Mining Control and Reclamation Act. OSMRE works with states and tribes to ensure that citizens and the environment are protected during coal mining and that the land is restored to beneficial use when mining is finished. OSMRE and its partners are also responsible for reclaiming and restoring lands and water degraded by mining operations before 1977.

Photo: Poster design capturing text from the Surface Mining Control and Reclamation Act of

OSMRE AT A GLANCE

BUDGET AND WORKFORCE FIGURES

- \$255.5 million in 2018 in discretionary funds
- \$632.2 million in mandatory funds
- 398 Full-Time Equivalent positions

To learn more about OSMRE's historical budgets, please visit www.doi.gov/budget/appropriations/.



Photo: Farmers informed about the reclamation of prime farmland soils on active mines as part of Indiana's Prime Farmland Day.



Photo: The wheelhouse at the abandoned Mid-Lothian mine in Chesterfield, County, Virginia. Structures like this are protected on abandoned mine land projects through consultation with State Historic Preservation offices.

ABANDONED MINE LAND PROGRAM www.osmre.gov/programs/aml.shtm

Addresses environmental and public safety hazards on pre-SMCRA mine sites. In Fiscal Year (FY) 2018, the program made more than \$300 million in grants available to states and tribes.

Total Abandoned Mine Land Grants FY 2018: **\$300.7 million**

REGULATORY PROGRAM www.osmre.gov/programs/rcm.shtm

Implements SMCRA and sets administrative and technical standards, performs oversight of state regulatory programs, administers regulatory programs in states that do not have their own approved programs, and provides assistance to state regulatory programs. In FY 2018, the Bureau's Regulatory Program made available \$68 million in regulatory grant funding to state and tribal regulatory authorities.

Total Regulatory Grants FY 2018: **\$68.6 million**

TECHNOLOGY DEVELOPMENT AND TRANSFER PROGRAM

www.osmre.gov/programs/TDT.shtm

Provides technical support, assistance, training, and technology transfer for OSMRE's Abandoned Mine Land (AML) and Regulatory Programs. In FY 2018, the Technology Development and Transfer Program received \$16.3 million of which \$12.8 million was provided in regulation and technology funds, and \$3.5 million was allotted in AML funding.



Approval of Mining Plans For Federal Coal

Fiscal Year (FY) 2018 saw the Office of Surface Mining Reclamation and Enforcement (OSMRE) complete eight mining plan decision documents (across five different states), that recommended approval of mining on lands containing leased Federal coal.

The mining plan recommendations were made after the preparation of environmental documents that analyzed the effects of the proposed actions on the environment in compliance with the National Environmental Policy Act.



Photo: An underground longwall mine at Bull Mountains Mine, Montana.

| Name of Mine | Coal Company | State | Number of Employees | Tons of Recoverable Federal Coal | Average Annual Production (in tons) | Acres |
|-------------------|--------------------------------|-------|------------------------|--|--|--------|
| Belle Ayr | Contura Coal West | WY | 259 | 221.7 million | 20 million | 1,671 |
| Bull Mountains #1 | Signal Peak Energy | MT | 260 | 30.2 million | 9.6 million | 1,725 |
| Cordero Rojo | Cordero Mining, LLC | WY | 383 | 55.8 million | 20 million | 852 |
| Dry Fork | Western Fuels Wyoming, Inc. | WY | 82 | 33.4 million | 6 million | 365 |
| Falkirk Rev 37 | Falkirk Mining Co. | ND | 530 | 2.2 million | 8.5 million | 160 |
| Jim Bridger | Bridger Coal Company | WY | 466 | 4.5 million | 6.5 million | 560 |
| King II | GCC Energy, LLC | СО | 88 | 2.7 million | 1.1 million | 590 |
| Sufco | Canyon Fuel Company, LLC | UT | 450 | 56 million | 6.3 million | 6,175 |
| TOTAL | | | 2,518 | 407 million | 78 million | 12,098 |



Photo: Dry Fork Mine, Wyoming.



Photo: A dragline and shovel removes overburden and loads coal at the Falkirk Mine, North Dakota.



Photo: Belle Ayr Mine, Wyoming.



Photo: King II Mine, Colorado.



Photo: Active mining facilities at the underground Sufco Mine.

Photo Previous Page: OSMRE Employees conduct water tests at The Wilds, a 10,000-acre conservation center built on reclaimed mine lands in southeastern Ohio.

OSMRE's Watershed Cooperative Agreement Grants Flow to Ohio, Pennsylvania, and West Virginia Streams

OSMRE awarded almost \$1 million in watershed cooperative agreement grants to nonprofit watershed restoration groups in Ohio, Pennsylvania, and West Virginia in FY 2018.

Five non-profit organizations across Appalachia shared the funding for work on 10 acid mine drainage (AMD) projects selected through the merit review process for federal funding opportunities. The funds are a part of OSMRE's Watershed Cooperative Agreement Program (WCAP), which provides supplemental financial assistance to nonprofit watershed restoration groups and other non-profit organizations for the construction of AMD treatment facilities that help restore the biological health of local streams.

WCAP grants result in partnerships that encourage long-term commitment to projects through engagement with local communities and environmental conservation. Other contributions from the non-profits' partners added additional funds, over \$3 million, to the projects. FY 2018 funds will focus on a range of projects including the removal of abandoned coal mining spoil piles and the installation and rehabilitation of existing AMD treatment systems to restore water and fisheries.

Between 1999 and 2017, OSMRE awarded 299 cooperative agreement grants totaling nearly \$27 million. With a contribution ratio of 2.5 to 1, approximately \$65 million has been leveraged from additional sources to further the cleanup of streams affected by AMD.



Photo: AMD treatment facility within the Cheat River watershed in West Virginia.

The following watershed projects will benefit from this round of OSMRE WCAP grants:

OHIO

• \$200,000 - Ilesboro Road

PENNSYLVANIA

- \$89,200 Kyler Run Anoxic Limestone Drain #1 (ALD1) Rehabilitation
- \$82,000 Kyler Run Anoxic Limestone Drain #2 (ALD2) Rehabilitation
- \$100,000 Hayes Run
- \$23,500 Howe Bridge Rehabilitation
- \$54,755 Filson 1 and 2 Rehabilitation
- \$100,000 Big Run Enhancement

WEST VIRGINIA

- \$93,600 Valley Highwall #3 Upgrade
- \$100,000 Sandy Run
- \$99,900 Swamp Run #2



Photo: An aerial view of an acid mine drainage treatment facility at Sandy Run in West Virginia.



Highwall #3 upgrade project in West Virginia.



Photo: Swamp Run #2 planned water treatment site in West Virginia.

Rubber Capital Golf Course Bounces Back After AML Emergency

(AND OTHER TALES OF RECLAMATION)

Who would have thought that a PGA golf course temporarily served as home to the easiest hole in the country? Just after the fourth green on the Raymond C. Firestone Public 9 and Driving Range course in Akron, Ohio and just before the residential neighborhood nearby, golfers had the rare opportunity to aim for a hole

6 feet long, 6 feet wide, and 30 feet deep. No, this hole was not an attempt to get the course into a record book; rather, it was a hidden danger waiting to strike. Luckily, thanks to the work of course management, the Ohio Department of Natural Resources (ODNR), and OSMRE, this air shaft from an abandoned mine was filled and sealed. Everyone chipped in to score a hole-in-one

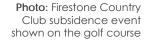
OSMRE, states, and tribes continue to see the impacts of abandoned mine lands (AML) on communities across the U.S. In fact, millions of people live within a mile of an AML issue. As communities grow into more remote areas, once minor AML issues are now becoming greater public risks in need of attention.

OSMRE saw numerous emergency projects pop up in FY 2018 and staff responded quickly to help communities address these serious problems.

for public safety. Naturally, there is the question of how a 30-foot deep hole found its way onto a golf course in the first place. To answer that, it makes sense to start at the beginning. The Brewster Coal Company abandoned its mine in the Coventry Township of Summit County in 1874. All that is known for sure is that sometime



Photo: Workers filling in the hole with concrete near the fourth green at Firestone Country Club.





Top Photo: The air shaft from the former Brewster Mine being filled with concrete at the Firestone Country Club. Center Photo: The shaft that opened up at the Firestone Country Club that created a dangerous situation.

after that year, locals used the land for farming. By 1915, Harvey Firestone purchased 1,000 acres of land, which included the former site of the Brewster Mine, to develop parks and houses for employees of his rubber factory. To keep this large workforce happy, Firestone had the Firestone Country Club constructed on that same land in 1929.

On the eve of the Great Depression, the rubber industry was booming in Akron, and not just for Firestone. The town served as the hub for four major rubber manufacturers, earning it the title, "Rubber Capital of the World." Meanwhile, the total population of the city increased by 201.8 percent. The rising popularity of bicycles, and later cars and trucks, all of which rely on the production of rubber, brought prosperity to the town, but it did not last. During the '60s and '70s, Akron went from rubber to rust, as manufacturing left the Midwest. While Akron was suffering, the Firestone Country Club was thriving, hosting the PGA Championship, the American Golf Classic and the World Series of Golf for multiple years. The city of rubber eventually bounced back, becoming a haven for the development of polymers, a necessity in the age of new technologies. Though both Akron and the Firestone Country Club have visibly changed since the Brewster Coal Company left its mine behind 145 years ago, the legacy of mining has often laid unchanged and invisible, buried beneath the surface. That was, of course, until April 16th of 2018, when the cap placed over the abandoned shaft collapsed into the mine after a period of

Continued page 11

Bottom Photo: The subsidence on the Firestone Country Club golf course is just hundreds of feet from homes







(AND OTHER TALES OF RECLAMATION)

Rubber Capital Continued from page 10

heavy rain. For a hidden danger that posed a threat for over a century, the efforts of OSMRE and ODNR remedied it quite quickly. Three days after the discovery of the air shaft, OSMRE declared the project an emergency, issuing an Authorization to Proceed to ODNR. This authorization allowed ODNR to use abandoned mine land (AML) funds to complete the project. At the cost of \$6,000, the hole was backfilled with concrete and finished with soil and grasses. Less than 90 days later, a spot that was once an eye-sore and a safety hazard was made to be as pristine as the manicured greens that surround it, after the country club replaced the turf – par for the course when doing reclamation work.

DAVIDSON DITCH SUBSIDENCE - COLORADO

OSMRE partnered with the Colorado Inactive Mine Reclamation Program (IMRP) to address an emergency mine subsidence event that occurred below a concrete irrigation ditch just days before water was scheduled to begin flowing.

"If the ditch fails, it would be a catastrophic event for the dwelling located below," said one investigative report from IMRP. Due to the presence of a private residence downhill, the mine subsidence presented an immediate threat to public safety and property. As a result, OSMRE declared the project an emergency. The local area where the subsidence occurred was home to underground mines that were last in use during the 1940s.

Mine subsidence is a surface caving or sinking of a part of the earth's crust due to underground mining excavations. These events can range in size and severity.

To resolve the subsidence event, staff pumped very wet, flowable material to backfill the subsidence openings as close to the bottom of the ditch as possible. The project took approximately two days and at a cost of approximately \$25,000.

Photo: A worker assessing the subsidence event of the Davidson Ditch in Colorado.



SHALLMAR LANDSLIDE - MARYLAND

OSMRE worked on a landslide in Maryland that occurred after heavy rainfall raised the water table and mine pool levels. The slide occurred at the Wolfden Mine in Garrett County which was in operation from 1919-1971.

The landslide affected the only road in and out of the Town of Shallmar. The community was cut off from emergency vehicles and other services. While staff quickly cleared the road, stabilizing the slope is the next critical step.

To confirm that the Wolfden Mine was the cause of the landslide, staff took water samples that showed the chemistry from the mine drainage was extremely similar to that of the landslide. The next step was a geotechnical evaluation: A review of the physical properties of soil and rock to repair damage caused by subsurface conditions. The survey allowed staff to determine the best way to stabilize the land.



Photo: Landslide pushing into a roadway in Maryland.

OSMRE is Flying High After Launch of Unmanned Aircraft Systems Program

In FY 2018 OSMRE's Unmanned Aircraft Systems (UAS) program took to the skies. OSMRE is using UAS to enhance its evaluation of active and abandoned mine sites, especially on large land areas with diverse or complicated topography or on areas such as landslides where unstable, dangerous conditions may be avoided. OSMRE's national and regional aviation management plans



Photo: An image taken by OSMRE employees while operating an Unmanned Aircraft System.

were approved, which for the first time in the Bureau's history, recognize UAS as aircraft. These plans also implement procedures, including, but not limited to, safety, protection of privacy, and mission reporting for transparency.

So far, OSMRE has certified 19 trained pilots and purchased 14 aircraft nationwide to enhance its mission success. OSMRE will continue to train personnel as UAS operators and purchase additional aircraft as needed.

OSMRE is taking advantage of the versatility that comes with UAS which can be mounted with various sensors based on the desired need of the missions. OSMRE is finding that as it develops its expertise, many states are seeking OSMRE assistance in using this technology for data collection and processing on sites that require quick action and accurate digital terrain modeling.

Among the missions flown in FY 2018 was over the abandoned Isabella mine site



Photo: Unmanned Aircraft System image of acid mine drainage treatment ponds at the Flight 93 National Memorial in Pennsylvania.



Photo: OSMRE employees using Unmanned Aircraft Systems during training.

near Uniontown, Pennsylvania. The site has numerous safety and environmental concerns, from polluted water, large unprotected refuse piles, and an impoundment that floods a nearby public road after heavy rainfall.

UAS flights were conducted to generate 3D models and Geographic Information System (GIS) data that can be used to create a reclamation plan to remedy the problems and improve water quality discharges.

In the summer of 2018, Alabama's Department of Labor, Abandoned Mine Land Reclamation Program requested a pre-construction drone mission at Three

Forks AML project site located near Oakman, Alabama. OSMRE pilots delivered orthomosaic images, elevation models, video, and photos. The Alabama AML program liked the results so much that it asked OSMRE to fly two more missions in FY 2019.

Read more about the work being done at the Isabella, Pennsylvania project in the Technology Development and Transfer Program section of this report.





The Wilds:

AN ACID MINE DRAINAGE STUDY

Situated in the Appalachian foothills of rural southeastern Ohio on nearly 10,000 acres of reclaimed coal mine land, The Wilds is a private, non-profit safari park and wildlife conservation center. The facility is home to a number of rare and endangered species from around the world. Visitors may see the southern white rhinoceros, greater one-horned asian rhinoceros, sichuan takin, sable antelope, Grevy's zebra, Père David's deer, giraffe, Bactrian camel, and many other wildlife species. The Wilds also supports conservation of the endangered eastern hellbender through population surveillance, hand-rearing, and reintroduction.

The Wilds originated as a public-private partnership with the Ohio Departments of Natural Resources and Development, Ohio zoos, and the private sector in the 1970s.



Photo: Body of water impaired by acid mine drainage at The Wilds.

In 1984, The Wilds was incorporated as a 501(c)(3) non-profit organizations under the name The International Center for the Preservation of Wild Animals, Inc. That same year, the Central Ohio Coal Company,

a subsidiary of American Electric Power Company, gifted The Wilds 9,154 acres.

Before 1984, the property was part of a large surface coal mine operation. The land was mined for coal using truck/shovel and dragline methods from the 1940s until the early 1980s. The northern part of The Wilds property was reclaimed before the enactment of SMCRA and includes both reclaimed deciduous and coniferous forests. As a result of the previous coal mining, there are over 100 ponds and a number of tributaries that are potentially impacted by acid mine draingage (AMD). The remaining coal mining waste and mine spoil are the primary sources of AMD on the property.

To continue its mission of conservation and environmental stewardship. The Wilds requested assistance from OSMRE's Appalachian Region Technical Support Division to help determine the extent of AMD issues on the property, prioritize problem areas, and suggest possible treatment options. OSMRE agreed to assist The Wilds and formulated a work plan that outlined the objectives for the project. First, water quality and flow measurements from sampling sites will be used to assess existing conditions, identify potential AMD impacts, and estimate pollutant loads. The second objective of the project is to rank AMD issues at The Wilds in order of priority (i.e., greatest pollution load to lowest) and identify which ponds/seeps can be treated to provide the most beneficial impact with the least cost. The third objective is to evaluate the effect of potential dam decommissioning on AMD impacts within the watershed. The possible treatment properties of existing wetlands and beaver

dams will be assessed as part of this objective. The final goal is to provide The Wilds with suggestions for water quality treatment and water management.

OSMRE is currently conducting weekly field reconnaissance to assess water quality and identify areas impacted by AMD. Initial water quality parameters measured in the field include pH, specific conductivity, temperature, total iron, total aluminum, and total manganese. Future water quality samples will include dissolved metals and lab samples to verify field results. Due to the large area and the remote, rugged terrain, OSMRE will use an unmanned aircraft system, or drone, to map the area and obtain high-quality aerial images. This information will assist the team in an efficient and thorough assessment of potential AMD impacts in the study area.

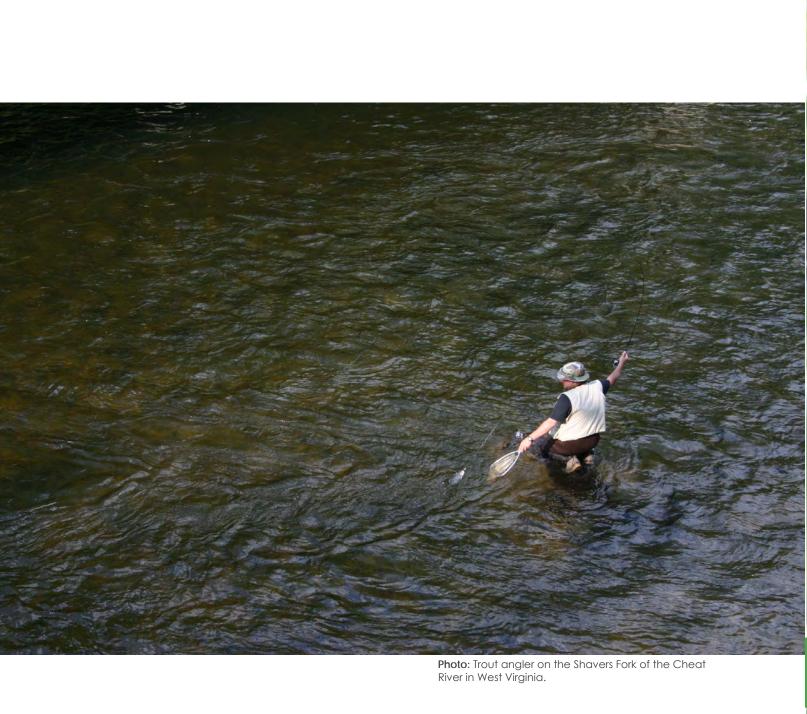
Results obtained from this study will aid in the reclamation efforts at The Wilds and provide valuable comparison data sets to note improvements over time.



Photo: Zebras grazing on reclaimed mine lands at The Wilds.



Photo: A crash of rhinoceroses at The Wilds.





ABANDONED MINE LAND PROGRAM

Abandoned Mine Land PROGRAM

Title IV of the Surface Mining Control and Reclamation Act of 1977 (SMCRA) requires the Office of Surface Mining Reclamation and Enforcement (OSMRE) to address environmental, public health, and safety hazards posed by past coal mining practices, including water pollution, acid mine drainage, unstable or open mining areas, landslides, and subsidence of underground coal mines.

Title IV provides the authority for OSMRE to assess a reclamation fee on coal production. The fee provides most of the funding for the Abandoned Mine Land Reclamation (AML) Program. In general, through SMCRA, Congress created the fee based on the mining method used to produce the coal as well as the mechanism to collect monies. SMCRA also prescribes the formula by which AML grants are distributed. The authority to collect AML reclamation fees is scheduled to expire in 2021.

Over the last four decades, some of the achievements of the SMCRA AML Program include:

- Closure of over 19,000 abandoned underground mine shafts and openings
- Elimination of over 630 miles of dangerous highwalls
- Abatement of over 2,400 dangerous water bodies
- Restoration of over 23,000 acres of clogged streams and land
- Abatement of nearly 13,000 acres of dangerous spoils and embankments
- Treatment of almost 50,000 polluted water supplies
- Improvement of land and water health by reclaiming or mitigating the equivalent of 16,138 acres of land from the effects of natural resource degradation from past mining

Currently, there remains over \$10 billion worth of unfunded coal problems in the Abandoned Mine Land Inventory System's (e-AMLIS) inventory.

Since FY 2016, Congress has authorized the Abandoned Mine Lands Reclamation Economic Development Pilot Program (AML Pilot Program) through Consolidated Appropriations. In FY 2018, the AML Pilot Program made \$115 million in funding available to three Tribal AML Programs (Crow Tribe, Hopi Tribe, and Navajo Nation) and six Appalachian states with the highest amount of unfunded high-priority coal problems (Alabama, Kentucky, Ohio, Pennsylvania, Virginia, and West Virginia).

Additional information on the AML Pilot Program can be found in OSMRE's AML Pilot Program Report. To read the report, please visit www.osmre.gov/programs/AML/2016_2018_Annual_Report_AML_Economic_Development_Pilot_Program.pdf.

OSMRE continues to administer the Federal Reclamation Program to conduct emergency abatement and reclamation of high priority coal projects in ten (10) states and on Indian lands that have had past coal mining but that do not have approved AML programs.

For complete information on the funding provided to states and tribes, the laws, regulations, and policies governing the AML Fund, AML grants, OSMRE's projects and initiatives under the AML Program, and more, please visit www.osmre.gov/programs/AML.shtm.

FY 2018 AML GRANTS TO STATES & TRIBES NATIONAL TOTAL \$300,728,939

| | 1 |
|---------------|------------------|
| State/Tribe | Amount Allocated |
| Alabama | \$ 5,268,273 |
| Alaska | \$ 2,802,000 |
| Arkansas | \$ 2,802,000 |
| Colorado | \$ 3,255,110 |
| Illinois | \$ 19,022,872 |
| Indiana | \$ 8,113,445 |
| lowa | \$ 2,802,000 |
| Kansas | \$ 2,802,000 |
| Kentucky | \$ 19,042,090 |
| Louisiana | \$ 210,633 |
| Maryland | \$ 2,802,000 |
| Mississippi | \$ 118,095 |
| Missouri | \$ 2,802,000 |
| Montana | \$ 7,552,769 |
| New Mexico | \$ 2,802,000 |
| North Dakota | \$ 2,802,000 |
| Ohio | \$ 10,759,651 |
| Oklahoma | \$ 2,802,000 |
| Pennsylvania | \$ 55,657,898 |
| Tennessee | \$ 2,802,000 |
| Texas | \$ 2,787,150 |
| Utah | \$ 2,802,000 |
| Virginia | \$ 5,835,711 |
| West Virginia | \$ 36,274,249 |
| Wyoming | \$ 91,340,088 |
| Crow Tribe | \$ 1,160,946 |
| Hopi Tribe | \$ 551,961 |
| Navajo Nation | \$ 2,955,996 |

All figures are rounded to the nearest dollar.

Photo Previous Page: A Monarch butterfly on a reclaimed site in Iowa. Photo courtesy of Iowa Department of Agriculture & Land Stewardship.

2018's Abandoned Mine Land

RECLAMATION AWARDS



Photo: Monarch butterflies on an AML site. Photo courtesy of the lowa Department of Agriculture & Land Stewardship



OSMRE first recognized outstanding abandoned mine land reclamation and exemplary reclamation techniques in 1992, when it started the annual AML Reclamation Awards Program. The program mirrors one of the objectives of SMCRA to ensure that land mined for coal would be restored to beneficial use as part of the mining process and that lands abandoned without reclamation before the law would be reclaimed.

AWARD ELIGIBILITY

AML projects funded wholly or in part and completed by approved state or tribal programs are eligible for an award, including coal, non-coal, high-priority, and emergency projects. Abandoned mine reclamation completed by citizen groups or other non-state/nontribal organizations are not eligible for these awards. One project may be submitted by each state or tribal program each year.

AWARD WINNERS

Winning projects represent the nation's highest achievements in AML reclamation, demonstrating innovative reclamation techniques and completing reclamation that results in outstanding on-the-ground performance.

OSMRE has traditionally given five awards:

- One national award
- One award for small projects (restricted to projects awarded less than \$1 million in a state or tribe that receives less than \$6 million annually in AML funding)
- One award in each of OSMRE's three regions. Any entry is eligible for the national award.

Any entry is eligible for the national award. A list of eligible voters and organizations able to submit nominations is located at www.osmre.gov/programs/awards/AMLAwards.shtm.

2018'S ABANDONED MINE LAND RECLAMATION AWARDS

NATIONAL AWARD
Logan Abandoned Mine Land
Reclamation Project, Iowa



Before reclamation, the site's barren, eroded spoil piles and pits were concealed by invasive shrubs, stunted trees, and a small plot of pines. The Logan Reclamation Project provided several opportunities to adopt and refine new approaches to overcome technical challenges. The site was seeded with plants that attract pollinators, in particular, monarch butterflies. The effort is already showing results. The vegetation is attracting local wildlife, including a goose nest and a beaver dam.

APPALACHIAN REGION AWARD

Joan Bernat Slide Project, Kentucky



The Joan Bernat Slide High Priority Abandoned Mine Land Reclamation Project was completed at the historic coal camp town of Hardburly, near Hazard, Kentucky. In May 2016, residents reported that a slide had occurred on a hillside above multiple residences and feared that further movement would threaten their homes. Hazard Kentucky Department of Abandoned Mine Lands Emergency Branch personnel hastily worked to reroute the drainage above the slide, controlling drainage and silt from the slide, and improving drainage structures near the homes. The actions of the state and partners brought peace of mind to the residents of Hardburly.

MID-CONTINENT REGION AWARD Snow Hill Abandoned Mine Land Site 882 Project, Indiana



The Snow Hill Abandoned Mine Land project addressed public safety concerns and environmental damage caused by two large, coarse, coal refuse piles, with a total area of 40 acres on each side of North Coal Creek in Vigo County, Indiana. Acid mine drainage and eroding coal refuse from the two refuse piles clogged the

North Coal Creek channel and substantially degraded its water quality. The Division of Reclamation took actions to make the area safe for the community by installing drainage structures, establishing a wetland, and regrading the coal refuse embankments.

WESTERN REGION AWARD

Hydraulic Pit Reclamation Project,
Alaska



Coal mined in the first half of the 20th century by various companies created 3.5 miles of large open pits along the south side of Healy Creek. The highwall extended for 1,600 feet in length and stood as high as 265 feet. The reclamation project eliminated the dangerous high wall, improved safety, conserved and improved water quality, enhanced wildlife habitat, and augmented recreation opportunities.

SMALL PROJECT AWARD Mid-Lothian Mines Park Project, Virginia



The historic Mid-Lothian Mines abandoned mine land features the remains of the first documented mining in Virginia's Richmond Coalfields. Unfortunately, the features were in dire disrepair and disintegration. Open shafts, subsidence areas, and falling structures were huge safety hazards to the surrounding residential areas. After the landowner donated the land to Chester County, the state was able to close two vertical openings, stabilize and close two hazardous equipment and facilities structures, close one subsidence area, and stabilize two pits and three slumps. Today, the Mid-Lothian Historical Mines Park comprises the 42-acre reclamation site and is the most visited park in the county.

Check out the OSMRE website for videos of this year's winning projects and the past winners at www.osmre.gov/programs/awards/AMLwinners.shtm.

Videos of the award winners and additional content is located on OSMRE's YouTube channel at www.youtube.com/OSMRE.

Mid-America Monarch Butterfly Conservation Strategy Seeks to Increase Pollinator Habitat

This Mid-America Monarch Conservation Strategy (Strategy) builds off partner and state planning efforts and identifies conservation targets, programs, and coordinated strategies to provide a blueprint on how to successfully reverse the species decline and achieve a viable monarch population.

OSMRE's Alton Field Division (AFD) worked with Iowa, Illinois, and Missouri to promote enhancement of monarch butterfly habitat on active and abandoned mines. A Monarch Butterfly Habitat public field day was held in Iowa and brought to public attention the importance of using AML projects as foundations for creating enhanced habitat through partnerships with other likeminded organizations. The AFD also worked with the Illinois Land Reclamation Division to encourage planting monarch-friendly seed during reclamation efforts at active and AML sites.

Iowa's and Missouri's AML programs received grant funding from the National Fish and Wildlife Foundation to move forward with pollinator habitat and monarch butterfly conservation initiatives on their respective AML projects:

- The Iowa Department of Agriculture and Land Stewardship/Division of Soil Conservation and Water Quality/Mines and Minerals Bureau/Abandoned Mine Lands Reclamation Program in partnership with Pathfinders RC&D and the Iowa Division of Soil and Water Conservation received portions of a National Fish and Wildlife Foundation grant in 2015. The AML program in Iowa committed to several educational field days and seeded upwards of 150 acres with pollinator friendly plant species. Future plans will incorporate pollinator habitat seed mixes on reclamation projects as it fits with landowner use of the site. The AML program in Iowa is also actively involved with the Iowa Monarch Consortium along with Iowa State University.
- The Missouri Department of Natural Resources/Land Reclamation Program/ Abandoned Mine Lands formulated a new initiative focused on increasing the ecological fitness of pollinator species by improving the quality, quantity, and connectivity of habitat on landscapes affected by historic mining activities. The state AML program pursued a multiobjective approach to re-vegetating mined lands, which included the integration of native milkweed and other nectar-producing forbs into warm season grass mixes. The Missouri program received grant funding from the National Fish and Wildlife Foundation Monarch Butterfly Conservation Fund and planted native warm season grasses and forbs in the spring of 2018 on approximately 100 acres.

Photo: A Monarch butterfly on an AML site in Iowa.



RegulatoryPROGRAM

The Surface Mining Control and Reclamation Act of 1977 (SMCRA) directs the Office of Surface Mining Reclamation and Enforcement (OSMRE) to establish, maintain, and update Federal standards that a state or tribe must meet to administer its coal mining regulatory program. OSMRE also provides states and tribes with advice and consultation needed to assume primary responsibility—or "primacy"—for regulatory activities under SMCRA. When states assume primacy, OSMRE transitions to an oversight role, ensuring that state agencies properly implement their regulatory programs. OSMRE retains the ability to take direct enforcement action when states do not implement their programs appropriately.

OSMRE is the regulatory authority for the Federal Program States as well as on Indian lands. To date, no Indian tribe has assumed primacy. For more information on the array of programs, initiatives, projects, and more under OSMRE's Regulatory Program, please visit www.osmre.gov/ programs/RCM.shtm.

The review of state permitting actions and inspections of mine sites remain among the most effective ways to determine if a state's mining law is properly implemented. In FY 2018, states performed 24,550 complete and 37,591 partial mine inspections. OSMRE completed 614 partial and 475 complete inspections in its Federal and Indian Lands Programs.

Federal regulations require all active inspectable units under the permanent program to have four complete and eight partial inspections per year. Four complete inspections are required annually for all inactive units. Inspections conducted by primacy states in any given year depend, in

Photo Previous Page: (L-R), Jason Taylor, OSMRE, Steve Vance, Regional Manager, Kentucky Division of Mine Reclamation and Enforcement, Jim Holliday, OSMRE, Chet Edwards, OSMRE, explaining how new technology is improving mine inspections.

part, on the number of active and inactive permits in each state. The primacy states conducted 62,141 total inspections in FY 2018.

FY 2018 REGULATORY GRANT AWARDS

NATIONAL TOTAL \$68,590,000

| State/Tribe | Final Allocated |
|---------------|-----------------|
| Alabama | \$ 1,330,276 |
| Alaska | \$ 374,153 |
| Arkansas | \$ 135,352 |
| Colorado | \$ 2,351,315 |
| Crow Tribe | \$ 571,955 |
| Hopi Tribe | \$ 402,285 |
| Illinois | \$ 3,223,305 |
| Indiana | \$ 1,648,573 |
| lowa | \$ 43,733 |
| Kansas | \$ 89,909 |
| Kentucky | \$ 11,663,338 |
| Louisiana | \$ 186,586 |
| Maryland | \$ 903,506 |
| Mississippi | \$ 221,356 |
| Missouri | \$ 204,899 |
| Montana | \$ 2,025,990 |
| Navajo Nation | \$ 1,800,000 |
| New Mexico | \$ 862,150 |
| North Dakota | \$ 994,638 |
| Ohio | \$ 1,684,226 |
| Oklahoma | \$ 1,187,009 |
| Pennsylvania | \$ 13,098,735 |
| Texas | \$ 2,974,815 |
| Utah | \$ 2,532,165 |
| Virginia | \$ 3,661,287 |
| West Virginia | \$ 12,145,099 |
| Wyoming | \$ 2,273,345 |

OSMRE provides matching funding in the form of regulatory grants to primacy states up to 50 percent of the cost of their regulatory programs.

2018's Excellence in Surface Coal Mining RECLAMATION AWARDS



ACTIVE MINE AWARDS

The Excellence in Surface Coal Mining Reclamation Awards are presented to coal mining companies that achieve the most exemplary coal mine reclamation in the nation. Past winners have demonstrated a commitment to sound mining practices and effective reclamation plans that enhanced beneficial post-mining use of the land. OSMRE has honored high-quality coal mine reclamation since 1986.

AWARD ELIGIBILITY

Surface coal mining and reclamation operations conducted under a Title V permit (1978 - present) are eligible for nomination. Also, non-permitted mining and reclamation completed using Government Financial Reclamation Contracts under the Enhanced Abandoned Mine Land (AML) regulations are eligible for nomination. AML reclamation projects carried out exclusive of active mining are not included in this program. AML projects integrated with Title V permitted operations are eligible for an award.

AWARD WINNERS

Award winners are recognized for developing innovative reclamation techniques or have completed reclamation that resulted in outstanding on-the-

ground performance. The awards program is designed to help state and federal regulators transfer exceptional reclamation methods and techniques from award-winning operations to other coal mine operators who work under SMCRA nationwide.

Coal companies, regulatory authorities, state or federal mine inspectors, interest groups, or landowners may submit nominations. Company officials and employees may nominate their own operations.

NATIONAL AWARDS

A coal mining operation may be nominated for achievement in a specific aspect of reclamation or for overall reclamation performance in meeting goals of SMCRA.

GOOD NEIGHBOR AWARDS

Good Neighbor Awards are given to mine operators for successfully working with the surrounding landowners and the community while completing mining and reclamation.

2018'S EXCELLENCE IN SURFACE COAL MINING RECLAMATION AWARDS

2018'S EXCELLENCE IN SURFACE COAL MINING RECLAMATION AWARDS

NATIONAL AWARD

Peabody Energy, Inc. Big Sky Mine Area B Project Rosebud County, Montana

Big Sky Mine Area B was recognized for the creation of postmining water sources in a reclaimed, semi-arid landscape. On-site monitoring between 2006 and 2011 has shown that water levels in the reclaimed area have risen between four and six feet. The site features stream channels and wetlands for use by livestock and wildlife.





NATIONAL AWARD

Peabody Midwest Mining, LLC Wild Boar Mine Barren Fork Pit project Lynnville, Indiana

A majority of the 8,500-acre Wild Boar mining area was surface mined for its upper seams of coal before SMCRA was passed in 1977. The site contained 1.2 miles of dangerous unreclaimed highwall and more than three miles of polluted streams. While mining, the company took responsibility for cleaning up the mine, eliminating the abandoned highwall and properly reclaiming 90 percent of the area mined before the passage of SMCRA. The company created approximately 100 rock brush piles within the forested areas for wildlife habitat and developed 11 shallow water sources for wildlife to reclaim the previously mined site properly. The company also restored eight streams among the reclaimed forest.



GOOD NEIGHBOR AWARD

Trapper Mining Inc. Trapper Mine project Craig, Colorado

The judges selected Trapper Mine for a Good Neighbor Award for a wide range of community-related activities. Activities included building local soccer fields with mine equipment and workers, catering lunch for law enforcement agencies, contributing more than \$700,000 to local communities and projects, creating a hunting and outdoors program for people with disabilities, and funding critical research on the Columbian sharp-tailed grouse. Trapper Mining also set up a trust fund to provide grant money for future community activities after mining is complete.



GOOD NEIGHBOR AWARD

Peabody Energy, Inc. Bear Run Mine project Carlisle, Indiana

Peabody's Bear Run Mine is the largest active surface mine in Indiana. Over the past three years, the mine has taken an



aggressive approach to reclamation, with a 1.3:1 ratio of reclaimed land to mined land. The judges recognized Bear Run for its involvement in various community programs that the company either operates or supports through financial, in-kind, and volunteer donations, including the Coal Miner Christmas, during which the company raised over \$70,000 to help children from local communities. Bear Run also provided a new roof for a local gym, constructed a new parking lot, provided funds for its backup generator, and repaired its electrical and heating systems. The company also improved a local cemetery, hosted farmers during the Indiana Department of Natural Resources Prime Farmland Field Day, provided ecotherapy opportunities to veterans and children with disabilities, and hosted a turkey hunt for veterans who had lost their vision.

Check out the OSMRE website for current and past winners at www.osmre.gov/programs/awards/ActiveWinners.shtm.

Additional videos of the awards and other OSMRE activities, projects, and events are on YouTube at www.youtube.com/OSMRE.

OSMRE TAKES HOME THE 2017 ENVIRONMENTAL ACHIEVEMENT AWARD

OSMRE received a 2017 Department of the Interior Environmental Achievement Award in Environmental Remediation. The winning project is an acid mine drainage (AMD) water treatment system at the Flight 93 National Memorial in Pennsylvania.

In 2012, OSMRE provided grant funding and expertise to the Flight 93 National Memorial to help fix AMD coming from an underground coal mine near the crash site. OSMRE Appalachian Region staff determined aerating the water from an existing pump would help improve the quality of the water. At Flight 93 National Memorial, the water was exposed to pyrite from the old mine, resulting in sulfuric acid and dissolved iron when the water was exposed to air. The dissolved iron precipitated as sediment at the bottom of streams and waterways at the site creating an orange color.

OSMRE also determined the site would benefit from the construction of a wetland area, which includes a wide diversity of water-borne plants. Plants are effective in removing the iron from the water and



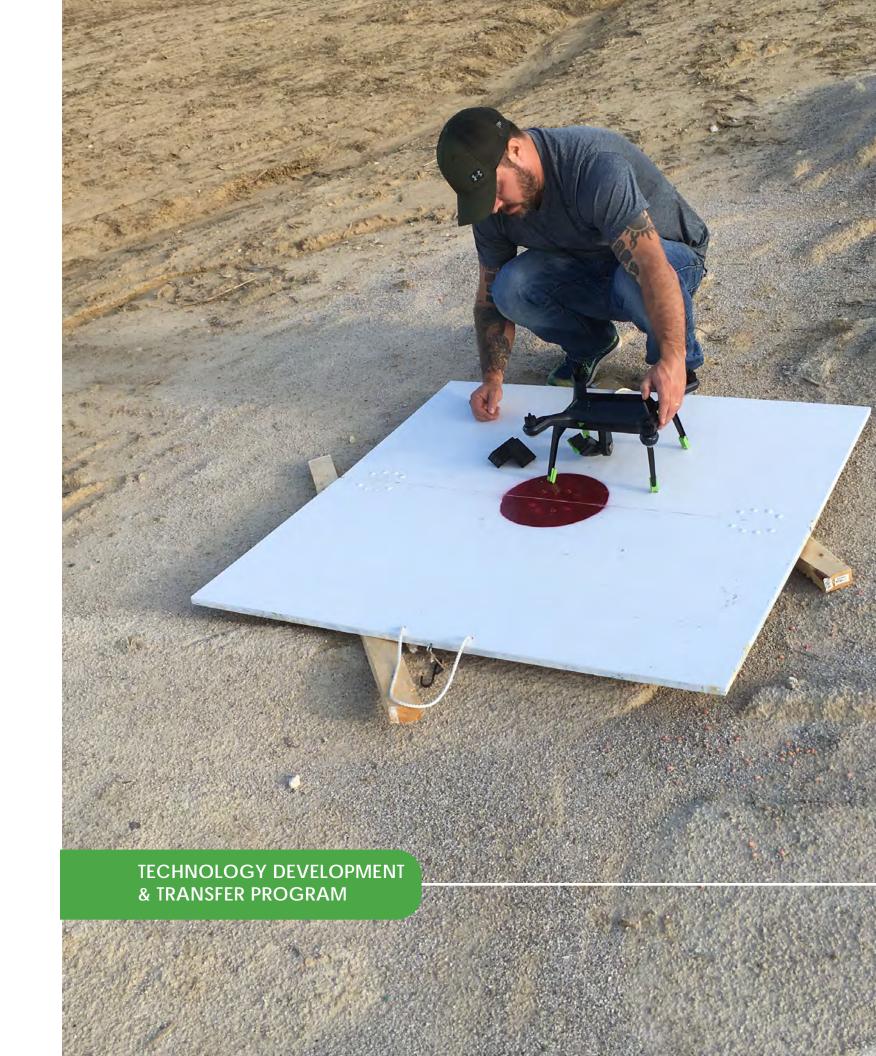
increasing the water quality. Today, the AMD treatment system continues to be effective in removing iron and other minerals from the water.

What started as an initiative to clean up the water at the Flight 93 National Memorial has turned into a long-lasting partnership. OSMRE and National Park Service staff continue to work together to ensure the success of this AMD treatment system to restore the environment.

OSMRE would be remiss if it didn't mention its great partners: Flight 93 National Memorial, the Friends of Flight 93, the Pennsylvania Department of Environmental Protection, the United States Department of Agriculture Natural Resources Conservation Service, and many others. Thank you for all you do!

 OSMRE also received honorable mention in the Department of the Interior's Environmental Achievement Awards for its collaboration with the Pittsburgh Botanic Garden. OSMRE provided a Watershed Cooperative Agreement Program grant and technical assistance to help the Garden remediate AMD from an abandoned underground mine. The work also restored a stream that was considered dead due to the AMD; it has improved to the point that it is now supporting native fish.

Photo: (L-R) Ben Owens, OSMRE; Dave Mankamyer, Somerset County Conservation District; Brent Means, OSMRE, Rich Beam, Pennsylvania Department of Environmental Protection, and David Hamilton, OSMRE, accepting the 2017 Department of the Interior Environmental Achievement Award.



Technology Development and Transfer

PROGRAM



Photo: An OSMRE AmeriCorps member setting up a bat detector at the Flight 93 National Memorial in Pennsylvania.



Photo: A researcher holding a bat.

Photo Previous Page: OSMRE employee preparing an Unmanned Aircraft System for takeoff

As part of OSMRE's mandate under SMCRA, the Bureau provides technical support, assistance, and training to State and Tribal surface coal mining programs. The Technology Development and Transfer Program covers a range of activities that promote and use technological innovations that better protect the environment during mining and in reclaiming active and abandoned mines.

OSMRE also provides training that ensures that States, Tribes, and the Bureau's other partners continue to administer their surface mining programs efficiently and effectively. In FY 2018, the Technology Development and Transfer Program received \$16.3 million.

For more information on OSMRE's Technology Development and Transfer Program, visit www.osmre.gov/programs/ tdt/appliedScience.shtm.



Photo: OSMRE employee placing a bat detector at the Fligh 93 National Memorial.

National Technical Training PROGRAM

OSMRE provides resources for technical assistance and training through the National Technical Training Program (NTTP).

The NTTP provides training related to permit approval, bond release, reclamation, and enforcement within the technical disciplines of engineering, hydrology, blasting, agronomy, and botany and may advance technical solutions developed during benchmarking workshops.

In total, NTTP provided 49 training classes for 834 students during FY 2018.



Photo: OSMRE's course titled Surface and Groundwater Hydrology provides participants with information on the basic effects of surface coal mining operations on surface and groundwater hydrology.

Photo: NTTP students in the Acid-Forming Materials: Fundamentals course visited a site at the Pittsburgh Botanic Gardens in



Technology Innovation and Professional Services

The Technical Innovation and Professional Services (TIPS) is a national service by OSMRE that provides off-the-shelf scientific and engineering modeling software to state, tribal, and federal offices that administer SMCRA. TIPS also delivers comprehensive instructor-led and online training courses in the use of those tools. The training developed in-house by state, tribal, and OSMRE experts is customized to mining and reclamation applications.

The goal of TIPS is to provide state, tribal, and OSMRE personnel with a comprehensive set of analytical tools to aid in technical decision-making related to regulatory and reclamation processes. The services provided are centered around off-the-shelf scientific and engineering computer hardware and software supported by OSMRE in partnership with the states and tribes.

This technical assistance has grown from a few applications available on a single specially designed shared workstation to a software suite available for use on desktop computers.

TIPS also provides commercial software applications to state, tribal, and OSMRE offices at considerable cost savings by sharing the commercial licenses for the software via the Internet and OSMRE Wide Area Network. Thirty commercially available software applications cover a wide range of regulatory and abandoned mine land subjects. The customer base includes over 100 state, tribal, and OSMRE office locations throughout the country—nearly 2,000 users.

The TIPS suite of engineering, scientific, database and mapping core software aids the technical decision-making associated with:

- Conducting reviews of permits
- Performing cumulative hydrologic impact assessments
- Quantifying potential effects of coal mining
- Preventing acid mine drainage
- Quantifying subsidence impacts
- Measuring revegetation success
- Assisting in the design of abandoned mine land projects
- Providing the scientific basis for environmental assessments and environmental impact statements

Demand for TIPS tools and support continues to increase, especially in the demand for geospatial data and mobile computing tools for field use. TIPS also offers training to accommodate the use of mobile computing devices by inspectors. Mobile computing allows inspectors to be more efficient, which, in turn, raises the quality and quantity of inspections. TIPS has also begun an effort to make satellite and aerial imagery available nationwide through a centralized server accessible from any state, tribal, or OSMRE office.

For more information on OSMRE's Technology Innovation and Technical Services, visit www.tips.osmre.gov.

Applied Science

Applied Science projects support studies by universities and other research institutions in the areas of coal mine reclamation, geomorphic reclamation practices, stream protection, AMD, and other topics relevant to environmentally responsible mining and reclamation. The projects are conducted as cooperative agreements between researchers and OSMRE to maintain a secure connection between sound science and the practical applications needed to carry out SMCRA on the ground.

To date, OSMRE has awarded over \$11.5 million in grants to 82 projects. These projects included 19 Technical

Investigations funded for over \$3.4 million since FY 2015. These technical investigations differ from Applied Science projects in that they are supported internally by OSMRE rather than through Applied Science funding. OSMRE has not received funding for the Applied Science program since FY 2012. OSMRE requested \$1.2 million in funding for Applied Sciences during FY 2018.

For more information on completed Applied Science studies and the program, please visit www.osmre.gov/programs/tdt/appliedScience.shtm.



Photo: Scientist takes a water sample from an area impacted by acid mine drainage in eastern Pennsylvania.

Underground Mine Maps

The Underground Mine Mapping Initiative seeks to enhance the capabilities of the states, tribes, and OSMRE to make underground coal mine maps available to the public. The initiative supports the identification, acquisition, preservation, scanning, and digital rendering of historic mine maps. It also supports developing standard practices and, where necessary, acquiring hardware, software, and personnel resources needed to properly archive mine maps.

When maps are scanned and cataloged by each state, copies are sent to OSMRE's National Mine Map Repository (NMMR) in Pittsburgh, Pennsylvania. OSMRE archives maps and reciprocally provide copies to the states for their collections. In this fashion, the NMMR provides map information from a central location to homeowners and other interested parties and serves as a backup location for the states to ensure long-term protection of these valuable historic records.

Since the program began, OSMRE has funded 61 projects for a total expenditure of more than \$3 million. The total state cost share contributed was over \$1.6 million, which is a 53 percent matching fund ratio. As a result of this finding, five states will complete all remaining digital underground mine mapping efforts and will provide this information to the general public via the Internet. In 2018, OSMRE did not distribute a solicitation for Underground Mine Mapping projects due to budget constraints.

For more information about mine maps, visit www.osmre.gov/programs/tdt/ugmm.shtm.

Repository

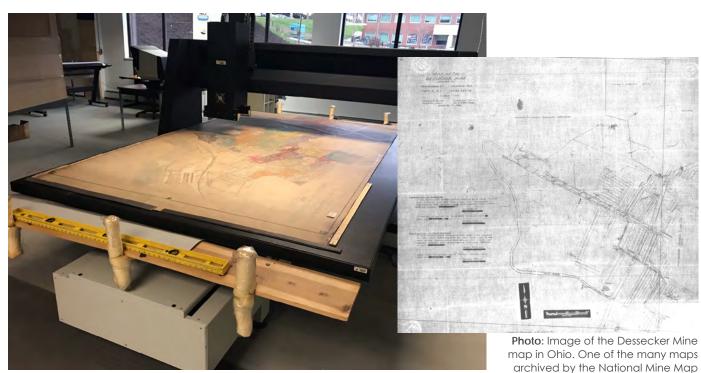


Photo: One of the scanners used by the National Mine Map Repository staff to transform old maps into digital images.

Notes from the Field TECHNICAL ASSISTANCE PROJECTS AND SERVICES

Kansas Monahan AML Passive
Treatment System Design: The Kansas
Department of Health and Environment
(KDHE) made a request for an AMD
treatment option and engineering design of
the finalized treatment option for the
Monahan AML site in Kansas. An OSMRE
Mid-Continent Region (MCR) hydrologist
and mining engineers formulated the best
treatment option and developed a draft
design in CAD format. The final products
were delivered to KDHE in August 2018.

Illinois Old Ben 25 Bathymetry Work:
The Illinois Land Reclamation Division
(LRD) contacted MCR on short notice to
conduct a bathymetric survey at SI Energy
slurry impoundment Old Ben 25 near West
Frankfort, Illinois. The 70+ acre slurry
impoundment is part of a bond forfeiture
project in which the slurry pond volume
had to be determined. MCR staff surveyed
on May 16, 2018. Subsequent data
processing took place immediately after the

survey, and final products (e.g., contour

were delivered the next week.

maps, surface models, and fill calculations)



Photo: UAS flight over Monahan AML project in Kansas.

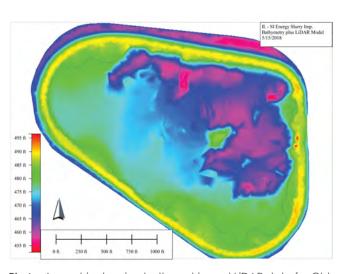


Photo: A graphic showing bathymetric and LiDAR data for Old Ben 25 slurry pit in Illinois.

Notes from the Field CONTINUED

Isabella, PA Bathymetry Work: The Mid-Continent Region (MCR) can conduct bathymetric surveys of water features such as final impoundments, slurry ponds, sediment ponds, and other water bodies on active and AML sites. The work involves collecting water depth measurements using sonar pulses and GPS positions. The data can be used to derive underwater surface models and contours. At the request of the Pennsylvania Department of Environmental Protection, MCR conducted

a bathymetric survey of a large impoundment (approximately 32 acres) on a bond forfeiture site (Isabella, Pennsylvania) during the week of December 18, 2017. The surface models generated from this technical assistance enabled the project team to develop an accurate reclamation cost estimate.

Photo: OSMRE technical staff setting up bathymetric survey equipment in Pennsylvania.



MCR Technical Transfer Roadshow: The MCR Technical Transfer Roadshow is a showcase of technologies and information for stakeholders. Through the Roadshow, stakeholders learn about technical equipment available for use in regulatory and reclamation activities.

The first MCR Roadshow was held July 2018 in Birmingham, Alabama. OSMRE trainers met with staff from the Alabama Department of Labor and the Alabama Surface Mining Commission and demonstrated the latest monitoring equipment and techniques including:

- · A borehole Camera
- Bathymetry
- Light Detection and Ranging (LiDAR)
- Unmanned Aircraft Systems (UAS)
- Global Mapper

Images from borehole cameras





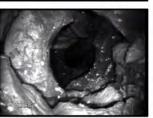




Photo: Images from a borehole camera.







Photo: Surface facilities at the Bull Mountains Underground Mine, Montana.



Significant Court Decisions in FY 2018

| Case Name | Citation | Summary of Decision |
|--|------------------------------------|--|
| M.L. Johnson Family Props., LLC v. Zinke | 298 F. Supp. 3d 1014 (E.D. Ky.) | M.L. Johnson Family Properties, LLC (Johnson Family) initiated this lawsuit in 2016, seeking judicial review of a Department of the Interior Administrative Law Judge's (ALJ's) decision. The ALJ upheld OSMRE's decision to terminate a cessation order it issued to Premier Elkhorn Coal LLC (Premier Elkhorn), which lifted an order to cease mining. Premier Elkhorn, a defendant-intervenor in the case, owns 100 percent of the mineral interests under the subject property. Three of eight cotenants conveyed their surface estates to Premier Elkhorn's land management arm. Johnson Family, the other cotenant, owns a five-eighths interest in the surface estate and has not consented to mining. On March 21, 2018, the U.S. District Court for the Eastern District of Kentucky issued a decision affirming the ALJ's decision. Among other things, the court held that both the applicable section of SMCRA, 30 U.S.C. § 1260(b)(6)(C), and the analogous Kentucky regulation, 405 KAR 8:030 Sec. 4(2)(c), permit consideration of all applicable state law, including Kentucky cotenancy law, when the regulatory authority determines whether a permit applicant has met the right of entry requirements. The court explained that, under Kentucky cotenancy law, Johnson Family "has no right as a cotenant to be free from surface mining operations where another cotenant has consented to surface mining." The court also rejected all other arguments that plaintiff raised in seeking to reverse the ALJ's decision. |

Data Source: U.S. Department of the Interior, Office of the Solicitor

Photo Previous Page: A bumblebee harvesting pollen and nectar from a flower on an AML site. Photo courtesy of the lowa Department of Agriculture & Land Stewardship.

FY 2018 Federal Oversight of State Programs¹

| State | Oversight Inspections ² | Ten-Day Notices for Observed Violations ³ | Ten-Day Notices for Citizen Complaints⁴ | Notices of Violations (NOVs) ⁵ | Failure- To-Abate Cessation Orders (FTACOs) ⁶ | Imminent Harm Cessation Orders (IHCOs) ⁷ |
|---------------|---------------------------------------|---|--|---|--|---|
| Alabama | 48 | 0 | 0 | 0 | 0 | 0 |
| Alaska | 5 | 0 | 0 | 0 | 0 | 0 |
| Arkansas | 2 | 0 | 0 | 0 | 0 | 0 |
| Colorado | 11 | 0 | 1 | 0 | 0 | 0 |
| Illinois | 23 | 0 | 0 | 0 | 0 | 0 |
| Indiana | 19 | 0 | 0 | 0 | 0 | 0 |
| lowa | 0 | 0 | 0 | 0 | 0 | 0 |
| Kansas | 4 | 0 | 0 | 0 | 0 | 0 |
| Kentucky | 355 | 6 | 0 | 0 | 0 | 0 |
| Louisiana | 13 | 0 | 0 | 0 | 0 | 0 |
| Maryland | 7 | 0 | 0 | 0 | 0 | 0 |
| Mississippi | 4 | 0 | 0 | 0 | 0 | 0 |
| Missouri | 4 | 0 | 0 | 0 | 0 | 0 |
| Montana | 3 | 0 | 3 | 0 | 0 | 0 |
| New Mexico | 2 | 0 | 0 | 0 | 0 | 0 |
| North Dakota | 13 | 0 | 0 | 0 | 0 | 0 |
| Ohio | 40 | 0 | 2 | 0 | 0 | 0 |
| Oklahoma | 15 | 0 | 0 | 0 | 0 | 0 |
| Pennsylvania | 322 | 10 | 0 | 0 | 0 | 0 |
| Texas | 8 | 0 | 0 | 0 | 0 | 0 |
| Utah | 11 | 0 | 0 | 0 | 0 | 0 |
| Virginia | 65 | 0 | 0 | 0 | 0 | 1 |
| West Virginia | 241 | 0 | 2 | 0 | 0 | 0 |
| Wyoming | 10 | 0 | 0 | 0 | 0 | 0 |
| TOTAL | 1,225 | 16 | 8 | 0 | 0 | 1 |

¹ Table displays inspection and enforcement actions taken and cited by OSMRE in states with approved regulatory programs during FY 2018.

^{2 &}quot;Oversight Inspections" are those conducted solely by OSMRE and reported in the Inspection and Enforcement Tracking (INE) system using "Table 3-Field Office Visits and Inspections." Assisted inspections and field visits performed jointly with states are not included

³ OSMRE issues a "Ten-Day Notice for an Observed Violation" to the state regulatory authority when OSMRE observes a violation. The state has ten days to take enforcement action to cause the violation to be corrected or to demonstrate good cause for not taking such an action.

⁴ OSMRE issues a "Ten-Day Notice for a Citizen Complaint" to the state regulatory authority when a citizen complaint gives OSMRE reason to believe a violation exists. The state has ten days to take enforcement or other action to cause the violation to be corrected or to demonstrate good cause for not taking such an action.

⁵ OSMRE issues a Federal "Notice of Violation" to a coal mine operator when performance standards or permit conditions are not being met, and the state regulatory authority has not resolved an issue raised by OSMRE in a Ten-Day Notice.

⁶ OSMRE issues a "Failure to Abate Cessation Order" when a violation has not been abated within the established abatement period.
7 OSMRE issues an "Imminent Harm Cessation Order" requiring cessation of surface coal mining and reclamation operations if an

⁷ OSMRE issues an "Imminent Harm Cessation Order" requiring cessation of surface coal mining and reclamation operations if an OSMRE inspector finds, on the basis of any Federal inspection, that there is an imminent danger to the health or safety of the public or the threat of significant, imminent environmental harm to land, air, or water resources.

FY 2018 Regulatory Program Statistics

| State/Tribe | Regulatory Staffing ¹ | New Permits | New Acreage Permitted ² | Total Acreage Permitted | Inspectable Units | Complete Inspections | Partial Inspections | Notices of Violation | Failure-To-Abate CO's | Imminent Harm CO's | Bond Forfeitures | Acreage of Phase I Bond Released | Acreage of Phase II Bond Released | Acreage of Phase III Bond Released |
|---------------|----------------------------------|-------------|------------------------------------|-------------------------|-------------------|----------------------|---------------------|----------------------|-----------------------|--------------------|------------------|-------------------------------------|--------------------------------------|---------------------------------------|
| Alaska | 5 | 0 | 0 | 11,651 | 11 | 23 | 46 | 0 | 0 | 0 | 0 | 78 | 0 | 0 |
| Alabama | 23 | 1 | 535 | 77,452 | 167 | 2,000 | 8 | 109 | 9 | 0 | 1 | 827 | 1,453 | 3,994 |
| Arkansas | 2 | 0 | 0 | 1,688 | 6 | 24 | 56 | 17 | 3 | 0 | 0 | 57 | 0 | 0 |
| Colorado | 20 | 0 | 0 | 167,079 | 30 | 120 | 206 | 0 | 3 | 0 | 0 | 208 | 59 | 736 |
| Crow Tribe | 5 | 0 | 0 | 9,787 | 2 | 8 | 16 | 0 | 0 | 0 | 0 | 0 | 39 | 0 |
| Georgia | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hopi Tribe | 4 | 0 | 0 | 6,237 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| lowa | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Illinois | 38 | 4 | 1,000 | 80,727 | 168 | 304 | 614 | 36 | 0 | 0 | 0 | 633 | 453 | 248 |
| Indiana | 28 | 0 | 0 | 168,846 | 78 | 304 | 568 | 21 | 2 | 0 | 1 | 1,688 | 4,770 | 5,596 |
| Kansas | 3 | 0 | 0 | 2,841 | 7 | 28 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Kentucky | 169 | 23 | 9,524 | 1,719,961 | 1,471 | 6,315 | 10,488 | 1,341 | 270 | 10 | 8 | 8,195 | 7,192 | 9,430 |
| Louisiana | 3 | 0 | 0 | 44,286 | 3 | 12 | 30 | 2 | 0 | 0 | 0 | 0 | 0 | 54 |
| Maryland | 12 | 0 | 0 | 4,916 | 53 | 256 | 542 | 4 | 0 | 0 | 0 | 80 | 219 | 249 |
| Missouri | 4 | 0 | 0 | 2,916 | 11 | 32 | 64 | 0 | 0 | 0 | 0 | 1,142 | 1,142 | 1,069 |
| Mississippi | 3 | 0 | 0 | 11,899 | 2 | 8 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Montana | 18 | 0 | 0 | 75,219 | 13 | 77 | 88 | 0 | 0 | 0 | 0 | 86 | 83 | 904 |
| North Dakota | 10 | 0 | 0 | 132,174 | 25 | 102 | 514 | 0 | 0 | 0 | 0 | 0 | 0 | 813 |
| New Mexico | 9 | 0 | 0 | 79,782 | 6 | 28 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 491 |
| Navajo Nation | 8 | 0 | 0 | 87,031 | 10 | 27 | 29 | 0 | 0 | 0 | 0 | 2,391 | 1,179 | 0 |
| Ohio | 21 | 3 | 6,287 | 69,792 | 181 | 709 | 1,280 | 7 | 0 | 1 | 0 | 895 | 1,164 | 2,219 |
| Oklahoma | 19 | 3 | 1,294 | 20,465 | 55 | 232 | 241 | 26 | 0 | 2 | 0 | 0 | 149 | 393 |
| Pennsylvania | 179 | 15 | 1,196 | 297,629 | 1,192 | 4,660 | 6,540 | 548 | 7 | 8 | 4 | 1,770 | 2,646 | 3,058 |
| Tennessee | 23 | 0 | 0 | 21,864 | 106 | 426 | 545 | 46 | 29 | 0 | 0 | 402 | 167 | 0 |
| Texas | 38 | 1 | 2,707 | 320,167 | 30 | 132 | 264 | 6 | 0 | 0 | 0 | 2,400 | 1,443 | 3,184 |
| Ute Tribe | 3 | 0 | 0 | 182 | 2 | 4 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Utah | 13 | 0 | 0 | 2,850 | 32 | 102 | 161 | 4 | 0 | 4 | 1 | 56 | 77 | 11 |
| Virginia | 54 | 4 | 267 | 73,761 | 305 | 1,312 | 2,003 | 169 | 45 | 3 | 1 | 1,236 | 2,875 | 1,197 |
| Washington | 5 | 0 | 0 | 14,821 | 2 | 8 | 16 | 0 | 0 | 0 | 0 | 486 | 194 | 0 |
| West Virginia | 212 | 16 | 3,905 | 342,430 | 2,011 | 7,649 | 13,594 | 806 | 79 | 10 | 26 | 2,898 | 3,933 | 3,244 |
| Wyoming | 17 | 0 | 0 | 434,523 | 30 | 121 | 188 | 0 | 0 | 0 | 0 | 1,836 | 2,721 | 12 |
| TOTAL | 946 | 70 | 26,715 | 4,282,976 | 6,011 | 25,025 | 38,205 | 3,142 | 447 | 38 | 42 | 27,364 | 31,958 | 36,902 |

¹ Staffing rounded to nearest whole number.

Data Source: 2018 Data for States and Tribes (DST)

Regulatory Grant Funding FY 2018 Obligations

| State/Tribe | FY 2018 Federal Funding | Total FY 2017 Federal Funding | Cumulative Through FY 2018 Federal Funding ¹ |
|-------------------|----------------------------|----------------------------------|---|
| Alabama | \$ 1,290,153 | \$ 1,290,153 | \$ 44,096,961 |
| Alaska | \$ 372,448 | \$ 376,633 | \$ 9,749,928 |
| Arkansas | \$ 111,384 | \$ 158,492 | \$ 5,631,637 |
| Colorado | \$ 2,324,635 | \$ 2,351,315 | \$ 64,372,673 |
| Illinois | \$ 3,223,305 | \$ 3,686,090 | \$ 96,024,047 |
| Indiana | \$ 1,648,573 | \$ 1,708,000 | \$ 59,913,021 |
| lowa | \$ 43,733 | \$ 41,001 | \$ 3,781,966 |
| Kansas | \$ 73,850 | \$ 120,480 | \$ 4,230,608 |
| Kentucky | \$ 13,400,000 | \$ 12,238,470 | \$ 443,230,934 |
| Louisiana | \$ 186,586 | \$ 153,257 | \$ 5,748,723 |
| Maryland | \$ 899,525 | \$ 831,640 | \$ 22,545,571 |
| Michigan | \$ 0 | \$ 0 | \$ 135,458 |
| Mississippi | \$ 183,002 | \$ 183,002 | \$ 3,281,689 |
| Missouri | \$ 204,899 | \$ 201,946 | \$ 11,084,900 |
| Montana | \$ 2,025,990 | \$ 2,050,356 | \$ 39,380,156 |
| New Mexico | \$ 862,150 | \$ 880,731 | \$ 25,166,091 |
| North Dakota | \$ 994,638 | \$ 994,638 | \$ 22,653,695 |
| Ohio | \$ 1,635,010 | \$ 1,743,607 | \$ 93,477,840 |
| Oklahoma | \$ 1,187,009 | \$ 1,166,020 | \$ 34,420,535 |
| Pennsylvania | \$ 12,959,156 | \$ 12,539,088 | \$ 401,222,664 |
| Rhode Island | \$ 0 | \$ 0 | \$ 158,453 |
| Tennessee | \$ 0 | \$ 0 | \$ 5,340,085 |
| Texas | \$ 2,632,728 | \$ 2,592,728 | \$ 50,496,235 |
| Utah | \$ 2,532,165 | \$ 2,532,165 | \$ 57,528,143 |
| Virginia | \$ 3,661,287 | \$ 3,914,382 | \$ 119,963,244 |
| Washington | \$ 0 | \$ 0 | \$ 4,893 |
| West Virginia | \$ 11,320,305 | \$ 11,696,446 | \$ 299,328,901 |
| Wyoming | \$ 2,273,345 | \$ 2,273,345 | \$ 65,822,508 |
| Crow Tribe | \$ 571,955 | \$ 571,955 | \$ 5,559,155 |
| Hopi Tribe | \$ 402,285 | \$ 402,285 | \$ 6,662,008 |
| Navajo Tribe | \$ 1,800,000 | \$ 1,800,000 | \$ 17,453,166 |
| N. Cheyenne Tribe | \$ 0 | \$ 0 | \$ 86,888 |
| TOTAL | \$ 68,820,116 | \$ 68,498,225 | \$ 2,018,552,777 |

Figures shown above have been adjusted for rounding

Data Source: Financial Business Management System

² New acreage includes acreage for new permits, incidental boundary revisions, and any other permit revisions that add acreage. State statistics based on 2018 State Program evaluation year (July 1, 2017 to June 30, 2018); Federal statistics, for Federal Program States and Indian Tribes, based on 2018 Federal fiscal year (October 1, 2017 to September 30, 2018).

¹ Regulatory grants are used to fund OSMRE regulatory activities. This may include the Applicant/Violator System, Technical Innovation and Professional Services, and other Title V cooperative agreements. Cumulative figures are net of all prior-year adjustments.

FY 2018 Appropriations in Thousands

| | 2017 | 2018 |
|---|------------|------------|
| Discretionary Appropriations | | |
| Regulation & Technology | | |
| Environmental Restoration ¹ | \$ 81 | \$ 4 |
| Environmental Protection | \$ 90,168 | \$ 88,602 |
| Technology Development & Transfer | \$ 15,205 | \$ 12,801 |
| Financial Management | \$ 505 | \$ 505 |
| Executive Direction & Adminstration | \$ 15,169 | \$ 13,936 |
| Subtotal | \$ 121,128 | \$ 115,848 |
| Abandoned Mine Reclamation | | |
| Environmental Restoration | \$ 9,480 | \$ 9,480 |
| Technology Development & Transfer | \$ 3,544 | \$ 3,544 |
| Financial Management | \$ 6,396 | \$ 5,182 |
| Executive Direction & Administration | \$ 7,743 | \$ 6,466 |
| AML Economic Development Pilot Program | \$ 105,000 | \$ 115,000 |
| Subtotal | \$ 132,163 | \$ 139,672 |
| Total Discretionary Appropriations | \$ 253,291 | \$ 255,520 |
| Mandatory Appropriations | | |
| Payments to States in Lieu of Coal Fee Receipts (Treasury Funds) | \$ 46,239 | \$ 106,678 |
| Grants to States and Tribes (AML Fund) | \$ 134,725 | \$ 194,052 |
| Transfer to United Mine Workers Fund | \$ 295,549 | \$ 331,459 |
| Total Mandatory Appropriations | \$ 476,513 | \$ 632,189 |
| Total OSMRE | \$ 729,804 | \$ 887,709 |

¹ Amounts include Civil Penalty collections of \$71 thousand and Permit Fees of \$10 thousand for FY2017, and Civil Penalty collections of \$4 thousand for FY2018 (figures rounded).

Data Source: Fiscal Year 2018 Congressional appropriations

FY 2018 Watershed Cooperative Agreements

| State | Project Name Sponsor Organization | Grant Amount (dollars) |
|---------------|---|------------------------|
| Ohio | llesboro Road Raccoon Creek Partnership | 200,000 |
| | Kyler Run ALD 1 Headwaters Charitable Trust | 89,200 |
| | Kyler Run ALD 2 Headwaters Charitable Trust | 82,000 |
| Donneyhyania | Hayes Run Headwaters Charitable Trust | 100,000 |
| Pennsylvania | Howe Bridge Rehabilitation Headwaters Charitable Trust | 23,500 |
| | Filson 1 and 2 Rehabilitation Headwaters Charitable Trust | 54,755 |
| | Big Run Project Enhancements Blackleggs Creek Watershed Association | 100,000 |
| | Valley Highwall #3 Friends of Deckers Creek | 93,600 |
| West Virginia | Sandy Run Renovation Friends of Deckers Creek | 100,000 |
| | Swamp Run #2 Buckhannon River Watershed Association | 99,900 |
| | TOTAL | 942,955 |

FY 2018 Watershed Assistance: OSMRE/VISTAs and Interns

| State | Year-Long Positions (OSMRE/VISTA) | Year-Long Positions (OSMRE/Ameri- Corps) | Short-Term Positions (Interns) | Short-Term Positions (OSMRE/VISTA) |
|----------------|--------------------------------------|--|-----------------------------------|---------------------------------------|
| Alabama | 1 | 0 | 0 | 0 |
| Alaska | 0 | 0 | 0 | 0 |
| Arizona | 1 | 0 | 0 | 0 |
| California | 0 | 0 | 0 | 0 |
| Colorado | 22 | 5 | 0 | 0 |
| D.C. | 0 | 4 | 5 | 0 |
| Florida | 0 | 0 | 0 | 0 |
| Georgia | 2 | 0 | 0 | 0 |
| Illinois | 0 | 1 | 0 | 0 |
| Indiana | 0 | 0 | 0 | 0 |
| lowa | 0 | 0 | 0 | 0 |
| Kentucky | 0 | 3 | 1 | 0 |
| Maryland | 1 | 0 | 0 | 0 |
| Missouri | 0 | 0 | 0 | 0 |
| Montana | 0 | 0 | 0 | 0 |
| New Mexico | 5 | 0 | 0 | 0 |
| New York | 0 | 0 | 0 | 0 |
| North Carolina | 0 | 0 | 0 | 0 |
| Ohio | 2 | 0 | 0 | 0 |
| Oklahoma | 0 | 1 | 0 | 0 |
| Pennsylvania | 8 | 0 | 1 | 0 |
| South Carolina | 0 | 0 | 0 | 0 |
| Tennessee | 6 | 3 | 0 | 0 |
| Texas | 0 | 0 | 0 | 0 |
| Virginia | 5 | 1 | 0 | 0 |
| West Virginia | 11 | 2 | 0 | 0 |
| Wyoming | 0 | 0 | 0 | 0 |
| TOTAL | 64 | 20 | 7 | 0 |

OSMRE routinely employs AmeriCorps VISTAs (Volunteers in Service to America)

NTTP FY 2018 Courses and Enrollment

| Course Name | Students |
|--|----------|
| Blasting and Inspection Special Session BLI-SS-81 | 30 |
| Forensic Hydrologic Investigations FHI-81 | 25 |
| Enforcement Procedures ENF-81 | 28 |
| Evidence Preparation and Testimony EVI-81 | 24 |
| Blasting and Inspection Special Session BLI-SS-82 | 20 |
| AML Design Workshop: Landslides (AMLL-81) | 10 |
| AML Drilling and Grouting (AMLDG-81) | 18 |
| Blasting and Inspection Special Session (BLI-SS-State Parks) | 25 |
| AML Design Workshop: Subsidence (AMLS-81) | 10 |
| Erosion and Sediment Control (ERS-81) | 26 |
| Blasting and Inspection (BLI-81) | 17 |
| Blasting and Inspection Special Session (BLI-SS-83) | 24 |
| AML Design Workshop: Dangerous Highwalls (AMLDH-81) | 15 |
| Blasting and Inspection Special Session (BLI-SS-State Parks-1) | 30 |
| Acid-Forming Materials: Fund. & App. (ACF-81) | 17 |
| Passive Treatment (PAS-81) | 16 |
| Coalfield Communications Special Session (CCOM-SS-83) | 22 |
| Forensic Hydrologic Investigations (FHI-82) | 19 |
| Introduction to SMCRA Inspections (SMCRA-81) | 19 |
| Blasting and Inspection Special Session (BLI-SS-84) | 12 |
| Excess Spoil Handling and Disposal (ESHD-81) | 13 |
| NEPA Procedures (NEPA-81) | 22 |
| Soils and Re-vegetation (SOI-81) | 14 |
| Wetlands Awareness (WET-81) | 14 |
| Mine Gas Safety and Investigations Spec. Sess. (MGSI-SS-81) | 15 |
| Erosion and Sediment Control (ERS-82) | 17 |
| AML Realty (AMLR-81) | 15 |
| Surface and Groundwater Hydrology (SGW-81) | 12 |
| Coalfield Communications (CCOM-81) | 12 |
| Geology and Geochemistry of AFM (GGCA-81) | 11 |
| Instructor Training Course (ITC-81) | 15 |
| Passive Treatment (PAS-82) | 14 |
| Soils and Re-vegetation (SOI-82) | 17 |
| Surface and Groundwater Hydrology (SGW-82) | 10 |
| AML Design Workshop: Fires (AMLF-81) | 11 |
| Underground Mining Technology (UMT-81) | 13 |
| | 22 |
| Historical and Archaeological Resources (HAR-81) | 19 |
| Subsidence (SUB-81) Blasting and Inspection Special Session (BLI-SS-85) | 16 |
| | 12 |
| AML Reclamation Projects (AREC-81) | |
| Applied Engineering Principles (AENG-81) | 19 |
| Acid-Forming Materials: Fund. & App. (ACF-82) | |
| Mine Gas Safety and Investigations (MGSI-81) | |
| AML Design Workshop: Dangerous Openings (AMLDO-81) | 11 10 |
| Applied Engineering Principles (AENG-82) | |
| Permitting Hydrology (PHY-81) | 21 |
| Introduction to SMCRA Inspections (SMCRA-82) | 15 |
| Geology and Geochemistry of AFM (GGCA-82) | 15 |
| Underground Mining Technology (UMT-82) | 10 |
| TOTAL | 834 |

Data Source: National Technical Training Program (NTTP)

OSMRE OFFICES

WESTERN REGIONAL OFFICE

1999 Broadway, Suite 3320 Denver, CO 80202 (303) 293-5000

www.wrcc.osmre.gov

MID-CONTINENT REGIONAL OFFICE

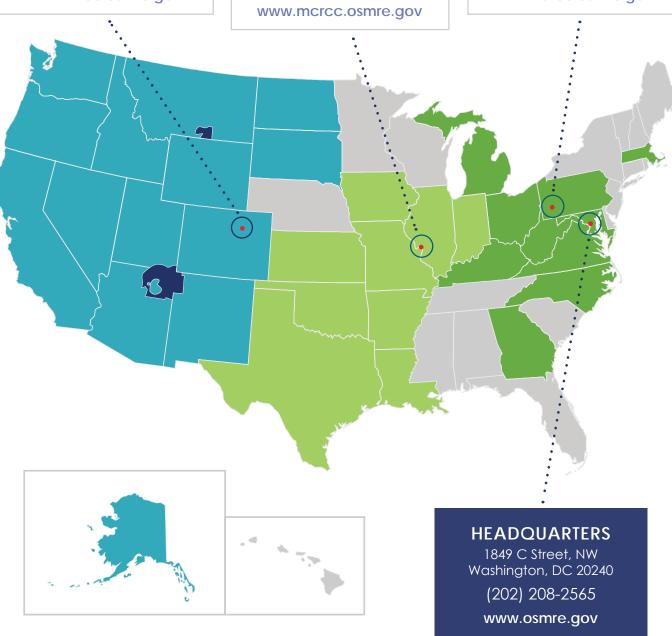
William L. Beatty Federal Bldg. 501 Belle Street, Room 216 Alton, IL 62002

(618) 463-6460

APPALACHIAN REGIONAL OFFICE

Three Parkway Center Pittsburgh, PA 15220 (412) 937-2828

www.arcc.osmre.gov



ADDITIONAL WESTERN REGIONAL OFFICES

DENVER FIELD DIVISION

(Alaska, Colorado, Utah) 1999 Broadway Suite 3320 Denver, CO 80202 (303) 293-5026

OLYMPIA AREA OFFICE

(Washington)

Evergreen Plaza Bldg. 711 South Capitol Way, Suite 703 Olympia, WA 98501 (360) 753-9538

ALBUQUERQUE AREA OFFICE

(Arizona, California, New Mexico, Navajo Tribe, Hopi Tribe, Ute Tribe) 100 Sun Avenue, NE Pan American Building Ste 330 Albuquerque, NM 87109 (303) 293-5035

CASPER FIELD OFFICE

(Idaho, Montana, North Dakota, South Dakota, Wyoming, Crow Tribe, Northern Cheyenne Tribe, Cheyenne River Sioux Tribe) 150 East B Street, Room 1018 Casper, WY 82601-1018 (301) 261-6550

ADDITIONAL MID-CONTINENT REGIONAL OFFICES

ALTON FIELD DIVISION

(Illinois, Indiana, Iowa, Missouri)
William L. Beatty Federal Bldg.
501 Belle Street, Room 216
Alton, IL 62002
(618) 463-6460

Birmingham Field Office

(Alabama, Louisiana, Mississippi) Barber Business Park 135 Gemini Circle, Suite 215 Homewood, AL 35209 (205) 290-7282

Tulsa Field Office

(Arkansas, Kansas, Oklahoma, Texas) 1645 South 101st East Avenue Suite 145 Tulsa, OK 74135-6548 (918) 581-6430

ADDITIONAL **APPALACHIAN** REGIONAL OFFICES

PITTSBURGH FIELD DIVISION (Maryland, Massachusetts, Michigan, Ohio, Pennsylvania, Rhode Island) Three Parkway Center Pittsburgh, PA 15220 (412) 937-2828

HARRISBURG AREA OFFICE 215 Limekiln Rd. New Cumberland, PA 17070 (717) 730-6985

CHARLESTON FIELD OFFICE (West Virginia)

1027 Virginia Street, East Charleston, WV 25301 (304) 347-7158

BECKLEY AREA OFFICE 313 Harper Park Dr. Beckley, WV 25801 (304) 255-5265

MORGANTOWN AREA OFFICE 604 Cheat Road, Suite 150 Morgantown, WV 26508 (304) 291-4004

LEXINGTON FIELD OFFICE

(Kentucky)

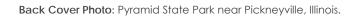
2675 Regency Road Lexington, KY 40503-2922 (859) 260-3902

LONDON AREA OFFICE 421 West Highway 80 P.O. Box 1048 London, KY 40741 (606) 878-6440

KNOXVILLE FIELD OFFICE (Georgia, North Carolina, Tennessee, Virginia) 710 Locust Street, 2nd Floor

710 Locust Street, 2nd Flo Knoxville, TN 37902 (865) 545-4103 Fax: (865) 545-4111

FIELD OVERSIGHT BRANCH 1947 Neeley Road, Suite 201 Compartment 116 Big Stone Gap, VA 24219 (276) 523-4303





Office of Surface Mining Reclamation and Enforcement 1849 C Street NW, Washington, DC 20240 | www.osmre.gov



