



FY 2018



ANNUAL  
REPORT

The Office of Surface Mining Reclamation and Enforcement  
U.S. Department of the Interior  
[www.osmre.gov](http://www.osmre.gov)



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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.

MISSION STATEMENT

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.

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

Photo: Poster design capturing text from the Surface Mining Control and Reclamation Act of 1977.

ABOUT OSMRE

# 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/](http://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](http://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](http://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](http://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.



FY 2018 HIGHLIGHTS

# 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.



Photo: Dry Fork Mine, Wyoming.



Photo: Belle Ayr Mine, Wyoming.



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



Photo: King II Mine, Colorado.



Photo: Active mining facilities at the underground Sufco Mine.

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	CO	88	2.7 million	1.1 million	590
Sufco	Canyon Fuel Company, LLC	UT	450	56 million	6.3 million	6,175
<b>TOTAL</b>			<b>2,518</b>	<b>407 million</b>	<b>78 million</b>	<b>12,098</b>

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.



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

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.

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.



Photo: Construction machinery at work during the Valley 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

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

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.

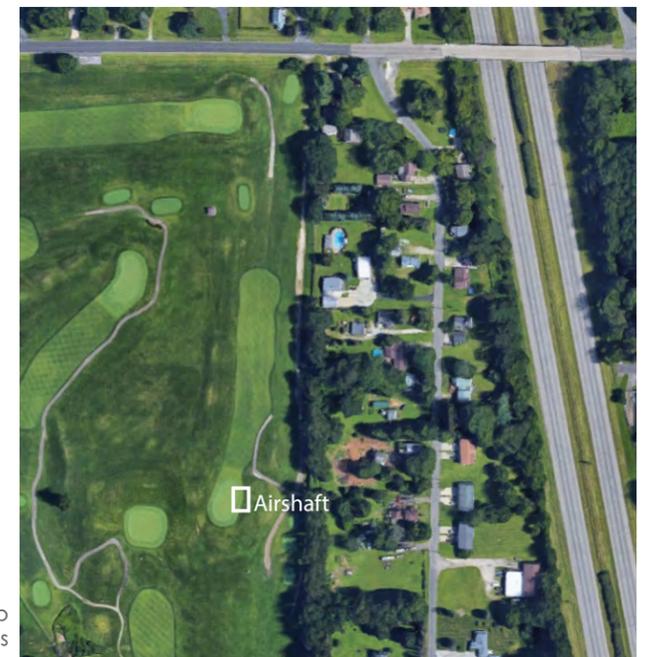


Photo: Workers filling in the hole with concrete near the fourth green at Firestone Country Club.

Photo: Firestone Country Club subsidence event shown on the golf course



## (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.*

Photo: Unmanned Aircraft System image over the Three Forks AML project during clearing operations in Alabama.



# 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 organization 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 drainage (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.



Photo: A crash of rhinoceroses at The Wilds.

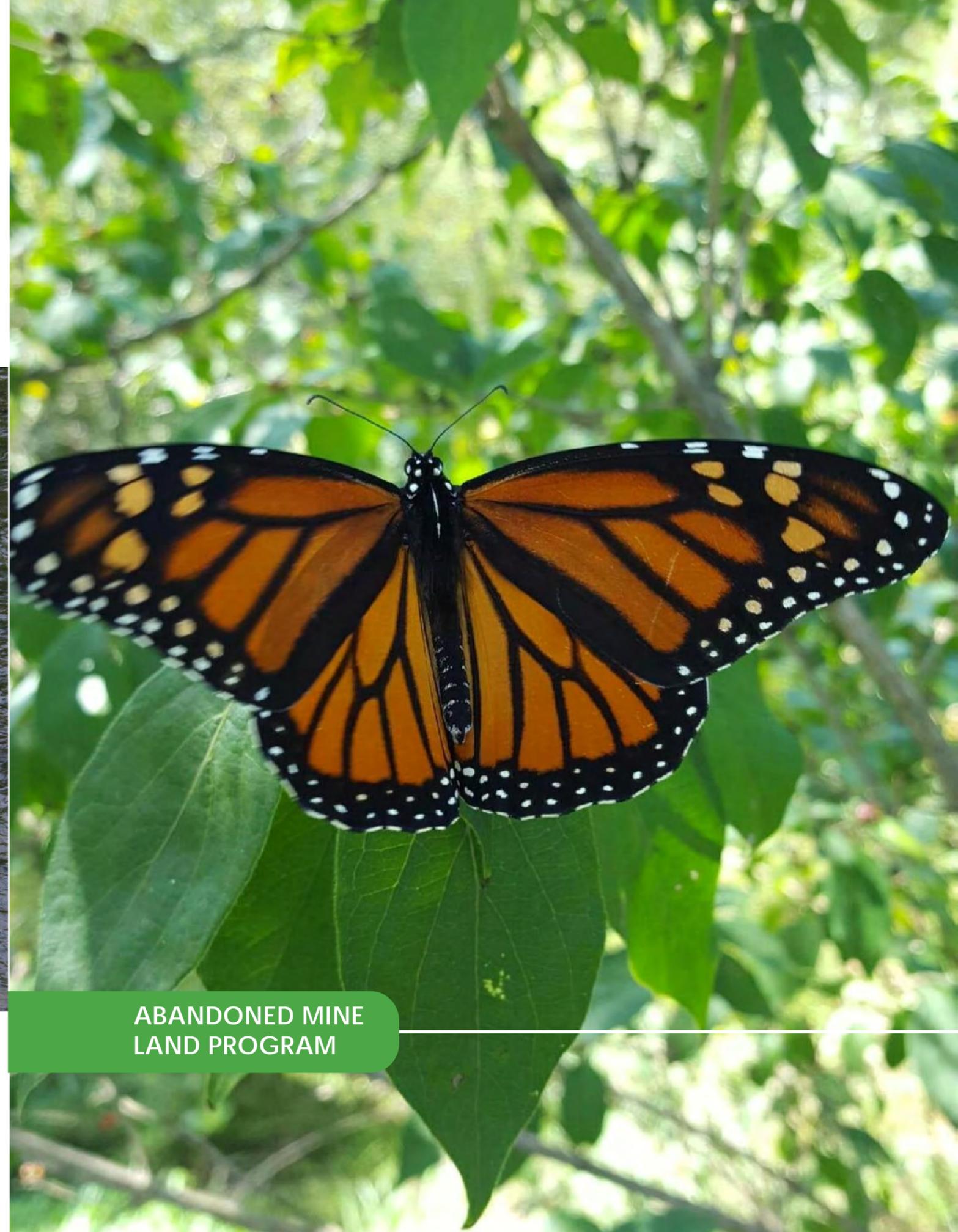
Results obtained from this study will aid in the reclamation efforts at The Wilds and provide valuable comparison data sets to note improvements over time.



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



Photo: Trout angler on the Shavers Fork of the Cheat River in West Virginia.



## ABANDONED MINE LAND PROGRAM

# 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](http://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](http://www.osmre.gov/programs/AML.shtm).

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

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
Iowa	\$ 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



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](http://www.osmre.gov/programs/awards/AMLAwards.shtm).

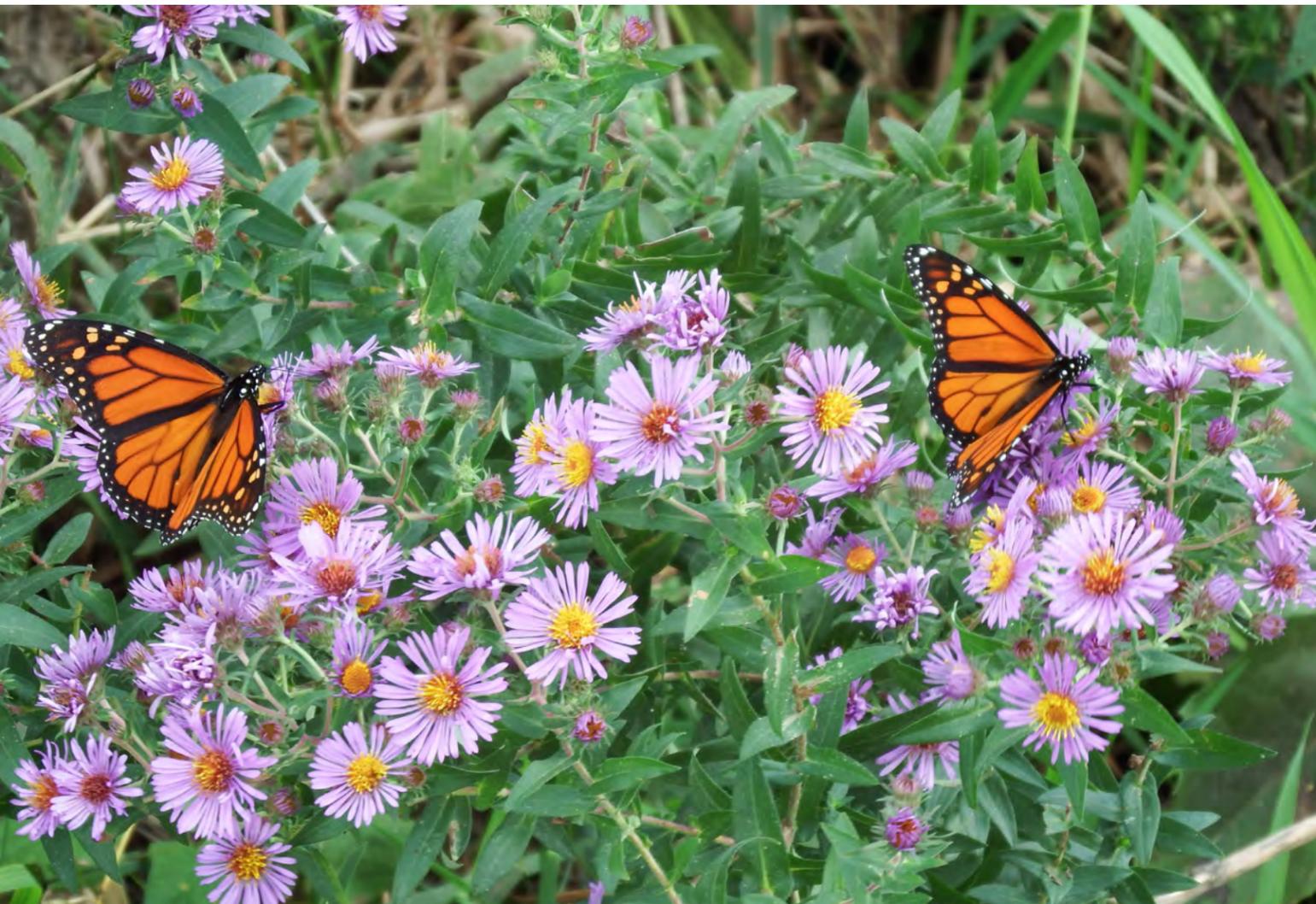


Photo: Monarch butterflies on an AML site. Photo courtesy of the Iowa Department of Agriculture & Land Stewardship

## 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 Harburly, 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 Harburly.

### 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

## 2018'S ABANDONED MINE LAND RECLAMATION AWARDS

### 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.

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.

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](http://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](http://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 like-minded 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 multi-objective 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.

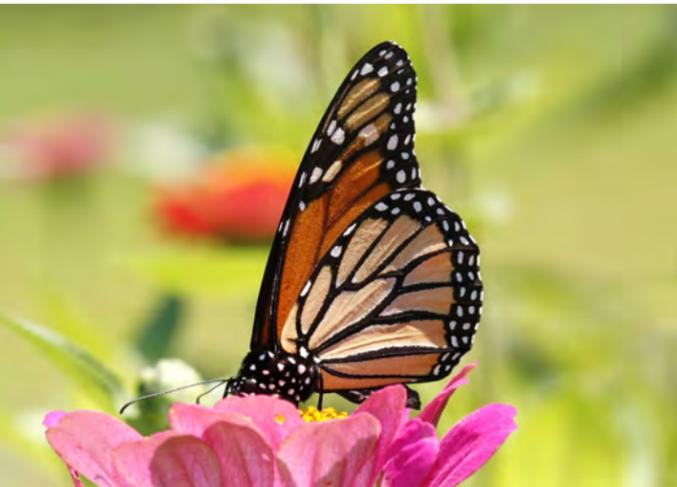


Photo: A Monarch butterfly on an AML site in Iowa.



REGULATORY PROGRAM

## Regulatory PROGRAM

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](http://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
Iowa	\$ 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

### 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

## 2018'S EXCELLENCE IN SURFACE COAL MINING RECLAMATION AWARDS



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](http://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](http://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 Mankamyler, 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 & TRANSFER PROGRAM

## Technology Development and Transfer PROGRAM



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

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](http://www.osmre.gov/programs/tdt/appliedScience.shtm).



Photo: A researcher holding a bat.



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

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

## 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 Pennsylvania.



## 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](http://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/ttd/appliedScience.shtm](http://www.osmre.gov/programs/ttd/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](http://www.osmre.gov/programs/tdt/ugmm.shtm).

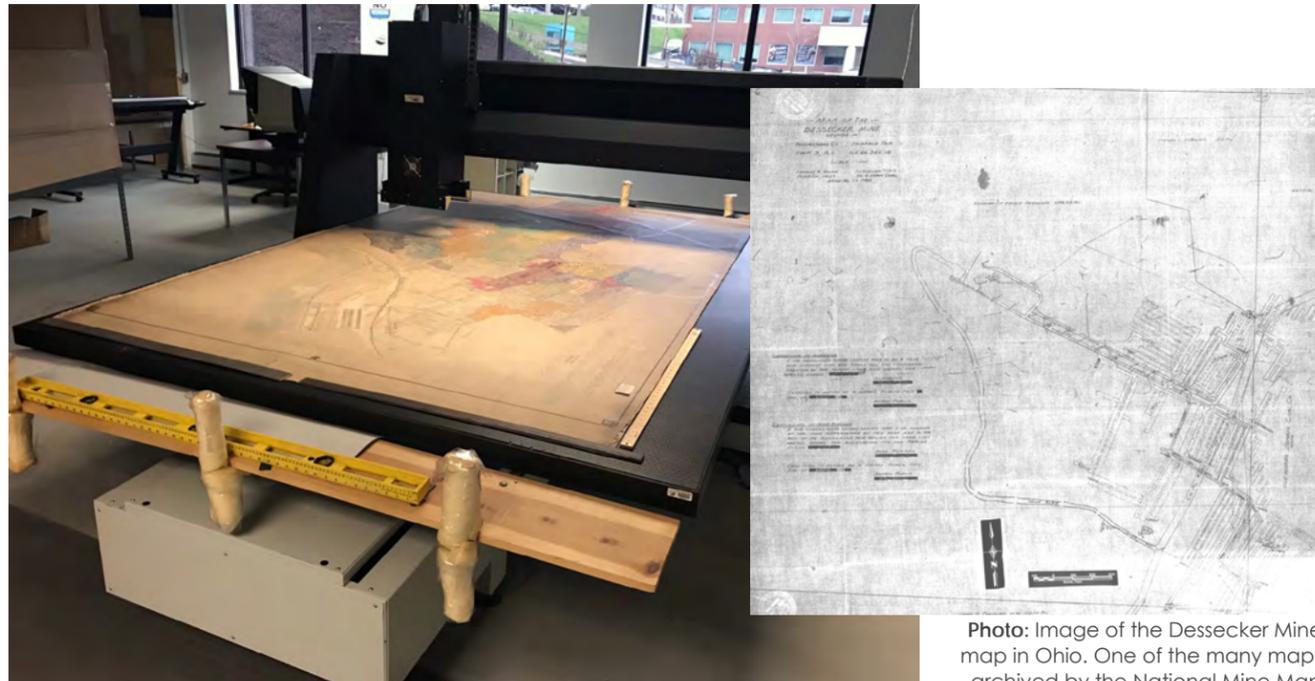


Photo: One of the scanners used by the National Mine Map Repository staff to transform old maps into digital images.

Photo: Image of the Dessecker Mine map in Ohio. One of the many maps archived by the National Mine Map Repository

## 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.



Photo: UAS flight over Monahan AML project in Kansas.

**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 maps, surface models, and fill calculations) were delivered the next week.

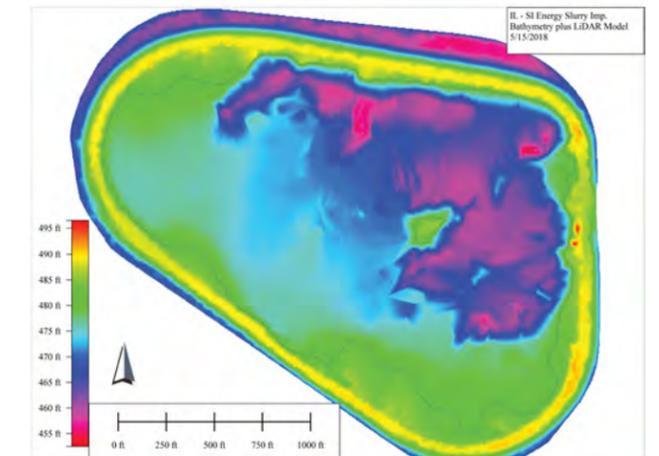


Photo: A graphic showing bathymetric and LiDAR data for Old Ben 25 slurry pit in Illinois.

## 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

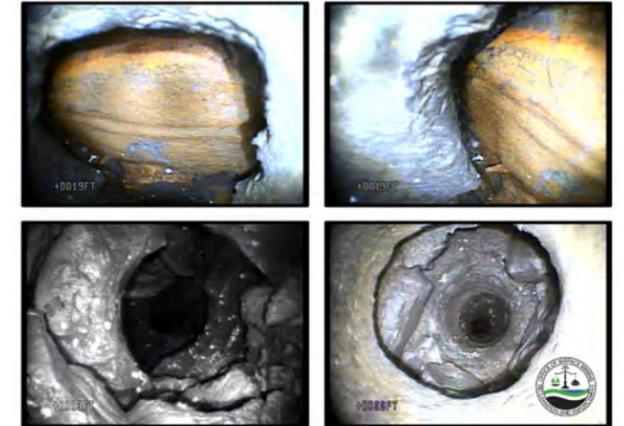


Photo: Images from a borehole camera.

Photo: An OSMRE employee discusses the use of a borehole camera in Birmingham, Alabama.





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



FY 2018 TABLES

## 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 Iowa Department of Agriculture & Land Stewardship.

## FY 2018 Federal Oversight of State Programs<sup>1</sup>

State	Oversight Inspections <sup>2</sup>	Ten-Day Notices for Observed Violations <sup>3</sup>	Ten-Day Notices for Citizen Complaints <sup>4</sup>	Notices of Violations (NOVs) <sup>5</sup>	Failure-To-Abate Cessation Orders (FTACOs) <sup>6</sup>	Imminent Harm Cessation Orders (IHCOs) <sup>7</sup>
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
Iowa	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
<b>TOTAL</b>	<b>1,225</b>	<b>16</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>1</b>

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

2 "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 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.

Data Source: OSMRE Inspection & Enforcement Tracking (INE) System

OSMRE FY 2018 ANNUAL REPORT | U.S. DEPARTMENT OF THE INTERIOR

## FY 2018 Regulatory Program Statistics

State/Tribe	Regulatory Staffing <sup>1</sup>	New Permits	New Acreage Permitted <sup>2</sup>	Total Acreage Permitted	Inspectible 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
Iowa	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
<b>TOTAL</b>	<b>946</b>	<b>70</b>	<b>26,715</b>	<b>4,282,976</b>	<b>6,011</b>	<b>25,025</b>	<b>38,205</b>	<b>3,142</b>	<b>447</b>	<b>38</b>	<b>42</b>	<b>27,364</b>	<b>31,958</b>	<b>36,902</b>

<sup>1</sup> Staffing rounded to nearest whole number.

<sup>2</sup> 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).

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 <sup>1</sup>
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
Iowa	\$ 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
<b>TOTAL</b>	<b>\$ 68,820,116</b>	<b>\$ 68,498,225</b>	<b>\$ 2,018,552,777</b>

Figures shown above have been adjusted for rounding

<sup>1</sup> 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.

Data Source: Financial Business Management System

## FY 2018 Appropriations in Thousands

	2017	2018
<b>Discretionary Appropriations</b>		
Regulation & Technology		
Environmental Restoration <sup>1</sup>	\$ 81	\$ 4
Environmental Protection	\$ 90,168	\$ 88,602
Technology Development & Transfer	\$ 15,205	\$ 12,801
Financial Management	\$ 505	\$ 505
Executive Direction & Administration	\$ 15,169	\$ 13,936
<b>Subtotal</b>	<b>\$ 121,128</b>	<b>\$ 115,848</b>
<b>Abandoned Mine Reclamation</b>		
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
<b>Subtotal</b>	<b>\$ 132,163</b>	<b>\$ 139,672</b>
<b>Total Discretionary Appropriations</b>	<b>\$ 253,291</b>	<b>\$ 255,520</b>
<b>Mandatory Appropriations</b>		
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
<b>Total Mandatory Appropriations</b>	<b>\$ 476,513</b>	<b>\$ 632,189</b>
<b>Total OSMRE</b>	<b>\$ 729,804</b>	<b>\$ 887,709</b>

<sup>1</sup> 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	Ilesboro Road <i>Raccoon Creek Partnership</i>	200,000
Pennsylvania	Kyler Run ALD 1 <i>Headwaters Charitable Trust</i>	89,200
	Kyler Run ALD 2 <i>Headwaters Charitable Trust</i>	82,000
	Hayes Run <i>Headwaters Charitable Trust</i>	100,000
	Howe Bridge Rehabilitation <i>Headwaters Charitable Trust</i>	23,500
	Filson 1 and 2 Rehabilitation <i>Headwaters Charitable Trust</i>	54,755
	Big Run Project Enhancements <i>Blackleggs Creek Watershed Association</i>	100,000
West Virginia	Valley Highwall #3 <i>Friends of Deckers Creek</i>	93,600
	Sandy Run Renovation <i>Friends of Deckers Creek</i>	100,000
	Swamp Run #2 <i>Buckhannon River Watershed Association</i>	99,900
<b>TOTAL</b>		<b>942,955</b>

## 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
Iowa	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
<b>TOTAL</b>	<b>64</b>	<b>20</b>	<b>7</b>	<b>0</b>

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
Historical and Archaeological Resources (HAR-81)	22
Subsidence (SUB-81)	19
Blasting and Inspection Special Session (BLI-SS-85)	16
AML Reclamation Projects (AREC-81)	12
Applied Engineering Principles (AENG-81)	19
Acid-Forming Materials: Fund. & App. (ACF-82)	15
Mine Gas Safety and Investigations (MGSI-81)	17
AML Design Workshop: Dangerous Openings (AMLDO-81)	11
Applied Engineering Principles (AENG-82)	10
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
<b>TOTAL</b>	<b>834</b>

Data Source: National Technical Training Program (NTTP)

# OSMRE OFFICES

## WESTERN REGIONAL OFFICE

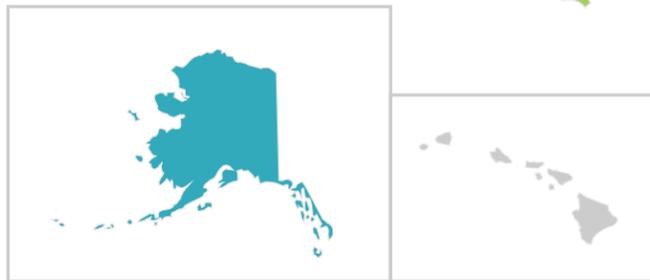
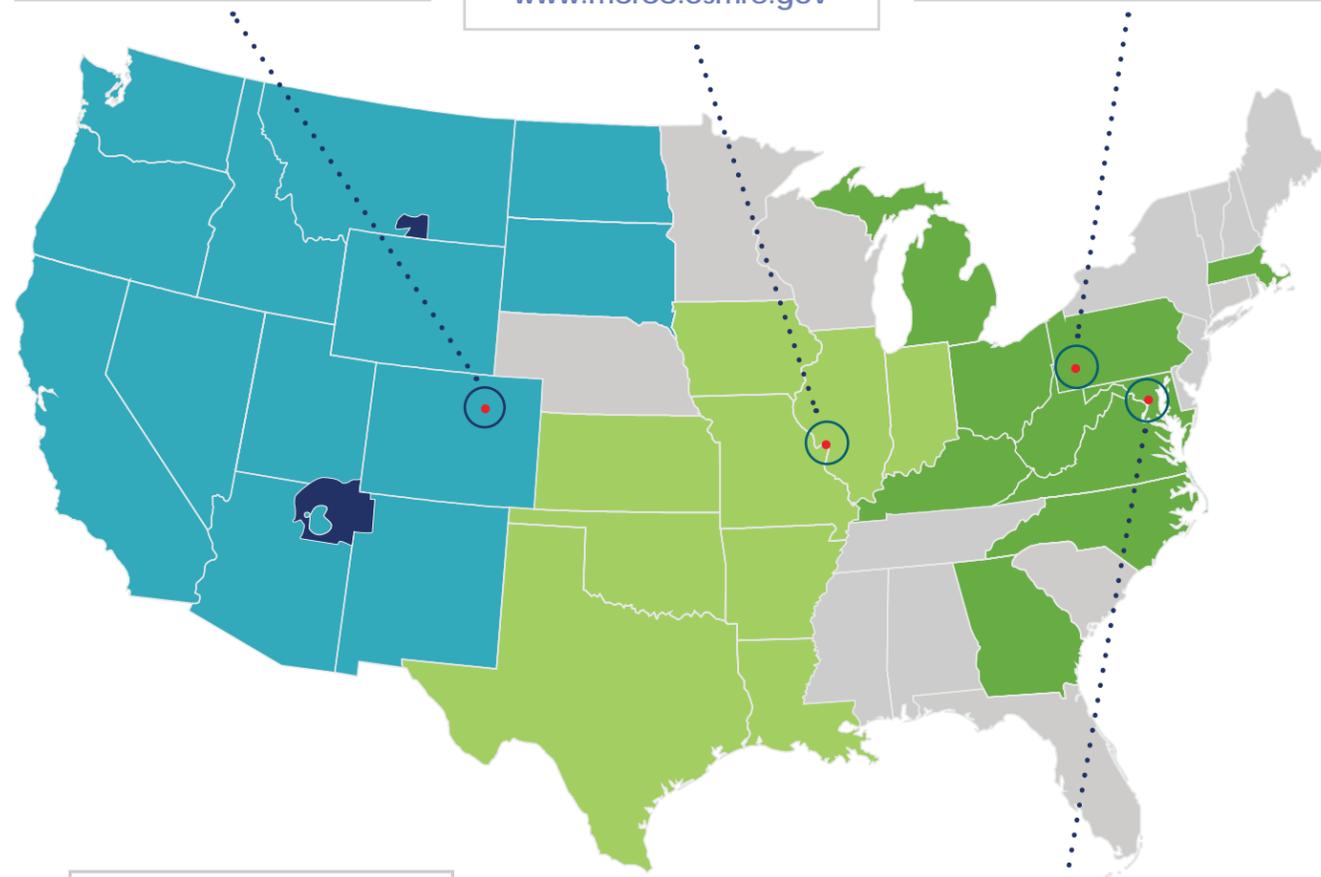
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## MID-CONTINENT REGIONAL OFFICE

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## APPALACHIAN REGIONAL OFFICE

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**OLYMPIA AREA OFFICE**  
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(360) 753-9538

**ALBUQUERQUE AREA OFFICE**  
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Pan American Building  
Ste 330  
Albuquerque, NM 87109  
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**CASPER FIELD OFFICE**  
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150 East B Street, Room 1018  
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## ADDITIONAL APPALACHIAN REGIONAL OFFICES

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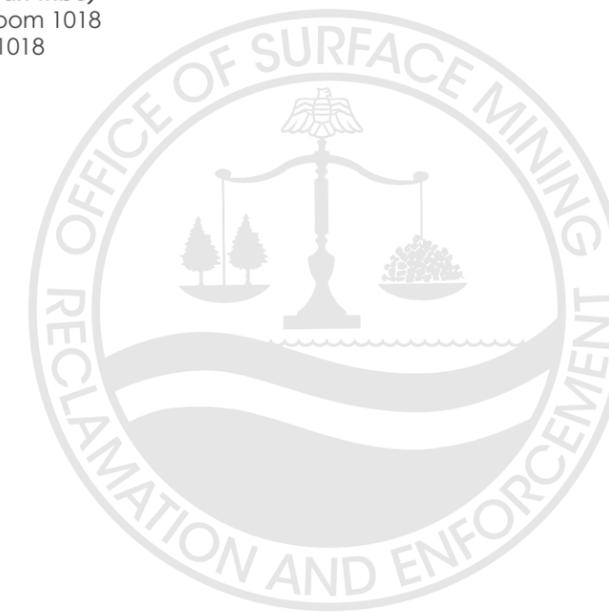
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Back Cover Photo: Pyramid State Park near Pickneyville, Illinois.



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