



# 2020

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## West Virginia Department of Environmental Protection Annual Evaluation Report

Prepared By:

Charleston Field Office  
Office of Surface Mining  
Reclamation and Enforcement  
Charleston, West Virginia

OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT

Annual Evaluation Report for the  
Regulatory and Abandoned Mine Lands Reclamation Programs  
Administered by the West Virginia Department of Environmental Protection of  
WEST VIRGINIA  
for

Evaluation Year 2020

July 1, 2019 to June 30, 2020

Prepared by Charleston Field Office

## Executive Summary

The Surface Mining Control and Reclamation Act of 1977 (SMCRA) provides authority to the Office of Surface Mining Reclamation and Enforcement (OSM) Charleston West Virginia Field Office (CHFO) to oversee the administration of the West Virginia Department of Environmental Protection (WVDEP) approved regulatory program as well as, the WVDEP Abandoned Mine Land Programs. OSM's Evaluation Year (EY) 2020 Annual Evaluation Report covers the period July 1, 2019 to June 30, 2020. On May 30, 2019, the OSM Deputy Director signed Directive REG-8 establishing revised policies, procedures, and responsibility for conducting oversight of the State regulator program. The revised directive provides the outline for this Annual Evaluation Report.

A biannual Performance Agreement is jointly developed by CHFO and WVDEP. CHFO solicits input into the draft Agreement by providing notices to interested citizens, industry, and environmental groups requesting suggestions for potential oversight evaluation topics. OSM monitors activities such as coal company bankruptcy filings and litigation for trends that might have an impact on the program. The EY 2020/2021 biannual Performance Agreement can be accessed online at OSM: <http://odocs.OSMRE.gov/>.

Highlights of WVDEP's program activities and accomplishments during EY 2020 include the following from both the Regulatory and AML Programs.

### Regulatory Program Summary

#### A.1. State Accomplishments and Successes

- Developed and implemented a procedure for I&E staff to annually sample WV SMCRA surface water monitoring sites. The lab analysis from this sampling are being reported on MR-6 Mine Inspection Reports.
- Developed and implemented a procedure to remotely conduct informal conferences for Notices of Violation and Cessation Orders.
- Developed and implemented a procedure to remotely conduct public hearings for permit applications.
- Conducted 2 industry training sessions with the topics of threatened/ endangered species and NPDES permitting for coal mining operations.
- Participated and supported the QA/QC panel. WVDEP has implemented their recommendations such as reducing the backlog of e-Certs; conducted 2 industry training sessions; continue to encourage industry to submit timely bond release applications when a permit meets reclamation requirements; and encourage industry, at the appropriate time in the reclamation process, to pursue post-mining effluent limits, removal of water retention structures, and deletion of NPDES outfalls;

- Due to the COVID-19 pandemic, WVDEP transitioned office staff to work remotely. SMCRA permitting staff have been able to maintain a positive efficiency rating for final action of permitting applications while working remotely.
- WVDEP and OSM entered a Cooperative Assistance Work Plan to gather measurements, with the use of instream continuous data loggers, of turbidity, temperature, specific conductance, and total suspended solids in streams located within watersheds of known threatened and endangered crayfish presence.
- Prior to the NTTP and TIPS training classes being disrupted in March 2020 due to the COVID-19 pandemic and resulting state travel restrictions, WVDEP had 37 employees attend 14 NTTP training classes and 6 employees attend 3 TIPS training classes. WVDEP is currently working with OSMRE's Technical Support Division to develop webinars for WV specific training needs.

## A.2. National Measurement Elements

- **Off-Site Impacts:** The evaluation revealed that 95 percent of the State's 1,676 permitted sites were off-site impact free and 95 percent of the State's 329 bond forfeiture sites were off-site impact free. As part of the evaluation of off-site impacts, OSM used the State's enforcement records to determine that the primary cause is operator negligence. (See Section V.A)
- **Reclamation Success:** OSM inspections indicate that State bond release data can be a valid measurement of reclamation success. Actual bond release acres increased from the previous year: 2,612.23 acres reclaimed in EY 2019 to 4,715.02 acres reclaimed in EY 2020. (See Section V.B)

## A.3. Other State Specific Oversight/Topic Reviews

**Evaluation Summary of Oversight Inspections:** During EY 2020, the CHFO completed 319 oversight inspections and two citizen complaint inspections of West Virginia's Program. This included four oversight inspections conducted in response to rain events exceeding a one-year/24-hour storm event. CHFO also conducted a review of WV's bond release activities, continued the review of slurry impoundments, and conducted oversight inspections on bond forfeiture sites reclaimed by WVDEP Office of Special Reclamation.

**Impoundment Oversight Inspections:** During EY 2020, OSM continued the review of slurry impoundments and refuse compaction. As part of OSM's regular random oversight selection process, fifteen violations were found during five impoundment inspections. Ten of the fifteen violations were deferred to WVDEP for issuance of non-compliance, while one violation was a repeat previously reported by WVDEP. Four were abated before or during an OSM inspection.

### **30 CFR Part 733 Evaluation – Substituting Federal Enforcement and Withdrawing Approval of a State Program:**

#### **A.4. Program Amendment Status/Maintenance**

At the beginning of the EY, West Virginia had ten program amendments in review with OSM. During the EY one regulatory program amendment was submitted. However, two program amendments were approved by OSM resulting in final rules being published. Additionally, three proposed rules were published in the federal register during the EY soliciting public comments.

#### **A.5. Litigation**

In EY 2020, several environmental groups sued WVDEP for inadequacy of the bond forfeiture fund. OSM is monitoring these and other cases involving litigation between environmental groups and various permittees involving SMCRA or the Clean Water Act (CWA). Additionally, OSM is monitoring four bankruptcy filings of coal companies operating in West Virginia.

### **Regulatory Program Problems and Issues**

#### **A.6. Action Plans**

In January 2011, OSM issued a national Directive (REG-23), formalizing a procedure for resolving issues found during oversight, that take longer than six months to resolve, and which could indicate a failure of a State to properly administer all, or part, of its program. As of this time, there are no active action plans in West Virginia.

#### **A.7. Other Issues**

The annual report also lists areas where OSM finds the State could improve its program, but the issues do not yet rise to the level of a program deficiency, or the expectation for the issues to be resolved within 180 days. These include:

- **Acid Mine Drainage Inventory of Active Permits:** (See Section VII.B)
- **State Regulatory Staffing/Program Funding:** (See Section VII.C)
- **Adequacy of the Special Reclamation Fund:** (See Section VII.G.)

### **Abandoned Mine Reclamation Program**

#### **B.1. Abandoned Mine Land Grant Funding**

The Fiscal Year (FY) 2019 Abandoned Mine Land Grant performance period extends from January 1, 2019 to December 31, 2021. The Office of Abandoned Mine Lands and Reclamation (OAMLRL) received \$35,754,311 in 2019. Because grants are awarded for a three-year period, some funding was also provided in previous Abandoned Mine Land Grants and used to accomplish work this evaluation year.

## **B.2. Accomplishments**

**Major accomplishments reported for EY 2020 include:**

- **Acid Mine Drainage (AMD) Set-Aside Projects:** OAMLRL did not dedicate any of its 2020 AML grant funding to the set aside subaccount through its initial grant request due to a decrease in grant funding available, and the number of proposed AML construction projects planned for reclamation. According to OAMLRL, they plan to transfer a portion of its unobligated funding from previous grants to the set aside fund.

## **B.3. Results of Evaluation Year Reviews**

- **Regular AML Construction Program:** The number of completed designs and construction contracts issued was less than EY 2019: 2 completed designs and 12 construction contracts issued. (See Section IX.E.1)
- **Emergency Program:** During EY 2020, the AML Emergency Program investigated 534 complaints, resulting in the declaration of 30 emergencies. (See Section IX.E.2)
- **AML Project Oversight:** During EY 2020, CHFO conducted oversight inspections of OAMLRL reclamation projects (including Enhancement and Pilot Projects) in various stages of construction, including 78 site visits on 26 abandoned mine land reclamation projects. Refer to Section IX.E.3 for further information on CHFO's EY 2020 oversight of the OAMLRL reclamation program.

## **B.4. Staffing**

A complete description of AML Program administration is in Section IX.A.2 of this report.

## **B.5. AML Program Problems and Issues**

Because of the completion of the AML Enhancement and Refuse Removal (3.14) Oversight Study last EY, CHFO identified several problems and issues with the overall administration of this state program. WVDEP identified some corrective actions needed, these are being implemented; progress is outlined in Section IX.F.1.

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## I. Introduction

The Surface Mining Control and Reclamation Act of 1977 (SMCRA) created the Office of Surface Mining Reclamation and Enforcement (OSM) within the Department of the Interior (DOI). The SMCRA provides authority to OSM to oversee the implementation of, and provide Federal funding for, State and Tribal Regulatory and Abandoned Mine Land Programs approved by the Secretary of the Interior as meeting the minimum standards specified by SMCRA. This report contains summary information regarding the West Virginia Program and its effectiveness in meeting the applicable purposes of SMCRA as specified in Section 102. This report covers EY 2020, which includes the period of July 1, 2019, to June 30, 2020. Detailed background information and comprehensive reports for the program elements evaluated during the period are available for review and copying at OSM's Charleston Field Office, 1027 Virginia Street East, Charleston, West Virginia 25301, (304) 347-7158, or by email at [OSM-CHFO@OSMRE.gov](mailto:OSM-CHFO@OSMRE.gov). The OSM's REG-8 Oversight Database (ODOcs) contains all oversight documents: <http://odocs.OSMRE.gov/>.

The OSM web address is <http://www.arcc.OSMRE.gov/about/offices/chfo.shtm>. The following link contains information on West Virginia's Oversight Program: <http://www.arcc.OSMRE.gov/about/states/wv.shtm>, a link to the Odocs database is here, as well.

This report uses the following acronyms:

A&E	Administration and Enforcement
ABS	Alternative Bonding System
AER	Annual Evaluation Report
ALSX	Acid Leaching/Solvent Extraction
AMD	Acid Mine Drainage
AML	Abandoned Mine Land
AMLIS	Abandoned Mine Land Inventory System
AOC	Approximate Original Contour
ARRI	Appalachian Regional Reforestation Initiative
AVS	Applicant Violator System
BCR	Biological Chemical Reactor
CCR	Citizen Complaint Referral
CHFO	Charleston Field Office
CHIA	Cumulative Hydrologic Impact Assessment
CRMW	Coal River Mountain Watch
CSR	Code of State Regulations
CWA	Clean Water Act
DMR	Division of Mining and Reclamation
DOI	United States Department of the Interior

EPA	United States Environmental Protection Agency
ERIS	Environmental Resources Information System
ERIS/EQuIS	Environmental Resources Information System/Environmental Quality Information System
EY	Evaluation Year
FAM	Federal Assistance Manual
FBR	Fluidized Bed Reactor
FIMS	Financial Information Management System
FR	Federal Register
FRA	Forestry Reclamation Approach
FTACO	Failure to Abate Cessation Order
FTE	Full Time Equivalent
FWS	United States Fish and Wildlife Service
FY	Fiscal Year
IBR	Incidental Boundary Revisions
IMB	Investment Management Board
IU	Inspectable Unit
NLEB	Northern Long-Eared Bat
NOI	Notice of Intent to Sue
NOV	Notice of Violation
NPDES	National Pollutant Discharge Elimination System
NTTP	National Technical Training Program
OAMLRL	Office of Abandoned Mine Land Reclamation
OASIS	Our Advanced Solution with Integrated Systems
OSM	Office of Surface Mining Reclamation and Enforcement
OSR	(WVDEP) Office of Special Reclamation
OVEC	Ohio Valley Environmental Coalition
PAD	Problem Area Description
QAQC	Quality Assessment Quality Control
REE	Rare Earth Elements
SEV	Single Event Violation (NPDES)
SLOC	Standby Letter of Credit
SMA	Surface Mining Application
SMCRA	Surface Mining Control and Reclamation Act of 1977
SRF	Special Reclamation Fund
SRWTF	Special Reclamation Water Trust Fund
SWROA	Storm Water Runoff Analysis
TDN	Ten-Day Notice
TIPS	Technical Innovation and Professional Services
USACE	United States Army Corps of Engineers

USGS	United States Geological Survey
WVDEP	West Virginia Department of Environmental Protection
WVHC	West Virginia Highlands Conservancy
WVSCMRA	West Virginia Surface Coal Mining and Reclamation Act

## Regulatory Program

### II. Overview of the Coal Mining Industry in the State of West Virginia

Coal has been mined in West Virginia using underground methods since the early 1700s. Underground mining increased throughout the 1800s and into the 1950s. Surface mining began around 1916, but significant production from surface mining did not occur until World War II.

Mining activities occurring before passage of SMCRA in 1977 resulted in many unreclaimed or under reclaimed areas within the State, given some reclamation standards were less stringent than SMCRA. Currently, there are 4,873 problem sites listed in the Abandoned Mine Land Inventory System (AMLIS) for West Virginia. One percent are funded, 56 percent are unfunded, and 43 percent have been completed through the State's Office of Abandoned Mine Land Reclamation (OAMLRL) Program. The OAMLRL estimates it will cost approximately \$1.65 billion to reclaim the 2776 unfunded problem sites within the State, but that estimate does not include reclamation costs for a number of AML sites with coal seam fires or sources of polluted mine drainage that have yet to be added to AMLIS.

West Virginia's demonstrated coal reserve base totals 30.2 billion tons, and the estimated recoverable reserves total 16.4 billion tons. Producing mines attributed 1.7 billion tons to the State's estimated recoverable coal reserves in 2018. West Virginia currently ranks fourth in the country in demonstrated coal reserves and third in recoverable coal reserves at producing mines. Coal occurs in 53 of WV 55 counties. Mineable seams occur in 43 WV counties. There are 117 identified coal seams in the State, 65 of those are mineable using current technology.

West Virginia's coal production accounts for about 12.6 percent of the nation's total coal production. In 2019, West Virginia produced 100.3 million tons of coal, allowing it to retain its ranking as the second-largest coal producing State in the nation (see Table 1, Appendix A for coal production based on sales). Coal was produced in 15 counties and 39 different seams in 2019. Of the 15 counties producing coal that year, the top ten counties were Marshall, Ohio, Marion, Logan, Raleigh, Kanawha, Mingo, Monongalia, Boone, and Fayette. Eighty two percent of the State's total coal production was from those counties. The State historically has a recovery rate of 66 percent at producing mines. The average market price for West Virginia coal increased by about seven percent in 2018 to \$72.51 per ton with surface mining seeing the largest increase per ton. The nationwide average market price per ton of coal increased to \$35.99 in 2018.

West Virginia leads the Nation in underground coal production, supplying 26 percent of the nation's demand. Eighty one percent of the State's coal production is from underground mining, longwall mining being the predominate method of production, however underground coal production has decreased by seven percent.

Methods of surface mining used in WV includes contour, area, auger, mountaintop, and highwall



operations. These surface methods account for 21 percent of WV coal mined in the State; which contributes 13 percent of the Nation's surface mined coal. West Virginia surface coal production decreased in 2019 by about 4.4 percent. Of the surface mining methods used to mine coal in the State, contour mining produces the most at 23 percent of surface production. Mountaintop mining methods continue to decrease annually which was 22 percent of State's surface mined coal production in 2019.

Excluding coal exploration operations, West Virginia has 1,965 inspectable units including 994 active mines, 679 inactive mines, and 279 bond forfeiture sites, with an additional 13 inspectable units (all forfeited) on Federal lands. Inspectable units average 174 acres, while surface mining averages 356 acres and underground mines average 29 acres due to surface area disturbance. The surface area above underground works are not bonded. Approximately 51 percent of the State's permits are active and require monthly inspections by the West Virginia Department of Environmental Protection (WVDEP). Of those active permits, underground mines account for 35 percent and surface mines 40 percent. Twenty-five percent consists of preparation plants, coal refuse piles, loading facilities, haul roads, and other facilities.

Seventy-eight percent of coal produced in West Virginia ships to 19 states for electricity generation. The largest consumers of West Virginia coal are Ohio, Pennsylvania, North Carolina, Kentucky, Virginia, and South Carolina, and West Virginia. WV transports about 22 percent of its domestic coal production by water, 40 percent by railroad, and the remaining 38 percent being stockpiled or transported by truck or conveyor. Historically, railroad is the primary means to ship WV coal.

In 2018, the price of all coal produced in WV averaged about \$72 per ton, \$73 per ton for underground mined coal and \$71 per ton for surface mined coal. The average price of WV coal increased by about seven percent in 2018, over what was paid in 2017. Nationwide, the price of underground mined coal was about \$60 per ton and surface mined coal was about \$22 per ton, the average for both being about \$36 in 2018.

West Virginia exported approximately 41 percent of coal produced in 2018, leading the nation with about 33 percent of the country's foreign coal exports. In 2018, India, Ukraine, Netherlands, Brazil, Canada, Italy, Turkey, Morocco, France, United Kingdom, and South Korea were the leading importers of West Virginia coal based on value. Historically, metallurgical coal comprised about 85 percent of West Virginia's coal exports to foreign countries, and steam coal the other 15 percent. About half of the Nation's metallurgical coal exports come from West Virginia. West Virginia's coal exports were valued at about \$4.4 billion in 2018.

The United States coal exports in 2018 were about 115.6 million short tons or about 16 percent of U.S. coal production, on average about \$104 per short ton. Steam coal exports averaged \$59 per short ton, and metallurgical coal exports averaged \$138 per short ton in 2018. Overall, U.S. coal imports declined 23 percent in 2018.

Approximately 221 companies produce coal in West Virginia. In 2018, coal employment within the State decreased by about two percent, due to a decline in employment at surface mines and a slight increase in employment at underground mines. West Virginia lost about 295 mining jobs in 2018, Monongalia, Upshur, Raleigh, McDowell, Kanawha and Wyoming Counties losing the most mining jobs. Boone, Randolph, Marion, Logan, Mingo, Marshall, Barbour, and Fayette counties gained the most mining jobs. Underground coal mining jobs increased by 69 (or about 1 percent), and surface mining jobs declined by 183 (or 5 percent) in 2018.

During 2018, the State's coal mining industry directly employed 13,464 people with a payroll of more than \$1.0 billion. Total employment, including independent contractors, was about 54,009 employees with a payroll of about \$3.1 billion in 2018. Seventy-six percent of the miners within the State work in underground mines. In 2018, coal mining operations in Logan, Raleigh,

Marshall, Marion, McDowell, Kanawha, Wyoming, Boone, Mingo, and Fayette Counties employed 81 percent of the miners within the State. About half the mines within the State produce metallurgical coal, employing about 54 percent of the State's coal miners. Steep slope mining operations employ 17 percent of miners working at the State's surface mines. Surface mines employ about 24 percent of the miners within the State. Estimates are the State's coal industry generates approximately 80,000 additional coal-related jobs.

West Virginia's Gross State Product, a measure of the total value of all goods and services produced in the State, totaled \$72.1 billion in 2019. Coal mining accounts for nearly 15 percent of the State's Gross State Product valued at \$4.4 billion in 2018. The average coal miner earned about \$75,045 in 2018. The State's severance tax rate is 5 percent of the gross value of coal production, which the state retains 93 percent of. The remaining seven percent is apportioned among the State's counties and municipalities. Seventy-five percent is distributed to coal-producing counties, and the remaining 25 percent is distributed to all counties and municipalities, based on population, without regard to coal having been produced there. The coal industry accounts for nearly 27 percent of the State's business tax and approximately 10 percent of the statewide property tax collections. Overall, it is estimated that every \$1 billion worth of coal production generates \$3.5 billion throughout the State's economy.

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Data Sources: West Virginia Office of Miners' Health, Safety and Training; West Virginia Department of Environmental Protection; West Virginia State Tax Department, West Virginia Department of Revenue; U.S. Bureau of Economic Analysis; U.S. Bureau of Labor Statistics; U.S. Census Bureau and Office of Trade and Economic Analysis, U.S. Department of Commerce; U.S. Department of Energy, Energy Information Administration; National Institute for Occupational Safety and Health; States in Profile, Indiana Business Research Center at Indiana University; West Virginia University, Bureau of Business and Economic Research; West Virginia Coal Association; and Office of Surface Mining Reclamation and Enforcement, U.S. Department of the Interior.

### III. Overview of the Public Participation Opportunities in the Oversight Process

During the EY, CHFO took the following steps to facilitate public participation in the SMCRA program:

- Sent letters and e-mails to citizens and groups advising them the annual report was available and offering to meet with groups at any time, even after business hours, to discuss SMCRA issues;
- Requested public participation in the State program amendment process through **Federal Register** announcements and Federal and State agency notification letters;
- Posted AML National Environmental Policy Act decisions for Reclamation Projects, Annual Reports, work plans, and the complete text of detailed oversight reports on the CHFO website as these documents were completed. The CHFO web site includes a State-specific page that contains relevant information about the oversight of West Virginia's Program. The site is accessible on OSM's home page at:  
<http://www.arcc.OSMRE.gov/about/states/wv.shtm>
- Participated and presented at several conferences open to the public and other symposia;
- Conducted telephone calls with individuals from special interest groups to discuss oversight topics and other issues of concern;
- Participated in numerous meetings with non-profit organizations working on watershed restoration projects;
- Responded to Congressional inquiries and/or Freedom of Information Act requests;
- Routinely participated in discussions with the Special Reclamation Fund Advisory Council that represents multiple interests;
- Routinely interacted with the State's Permitting Quality Assurance Quality Control Panel that represents multiple interests; and,
- Routinely interacted with citizens who call or write seeking information about abandoned mine lands, surface coal mining, and reclamation activities or requirements.

To measure the State's success in meeting the environmental protection goals and health and safety provisions of SMCRA, OSM and WVDEP have cooperatively developed Regulatory and AML Performance Agreements. The agreements focus on measuring the on-the-ground success of the approved program and identifying the need for financial, technical, and other program assistance during the evaluation year. The agreements contain the basic framework for oversight activities for a two-year period. The current agreements cover the period starting July 1, 2019, and ending on June 30, 2021, and are available to the public at the web address provided above. When developing a new Performance Agreement, OSM solicits input from the public and other State and Federal agencies to identify program areas to review.

West Virginia's approved Regulatory and AML Programs provide additional opportunities for public participation:

- The WVDEP AML Program provides the public an opportunity at least once per year to submit comments on projects selected for reclamation during the upcoming years.
- Filing written citizen complaints concerning specific issues (both for the Regulatory and AML programs) gives citizens the opportunity to participate in the inspection and enforcement process at particular mine sites, and/or to have mining conditions evaluated to determine eligibility for reclamation through the AML Program.
- Through its rulemaking process, WVDEP routinely notifies and solicits comments from the public on all proposed revisions to its rules (either AML or Regulatory).
- Under the Regulatory Program permitting process, the State requires the applicant to advertise each new or revised permit application and provide interested citizens the opportunity to comment. Citizens may request WVDEP conduct an informal conference to discuss a permit application before deciding to issue or deny the permit. A similar process also applies to completed surface mining and reclamation operations at the time of bond release. They may also seek administrative review of WVDEP decisions by the West Virginia Surface Mine Board and judicial review through the State and Federal court systems.

#### **IV. Accomplishments and Innovations**

- Developed and implemented a procedure for I&E staff to annually sample WV SMCRA surface water monitoring sites. The lab analysis from this sampling are being reported on MR-6 Mine Inspection Reports.
- Developed and implemented a procedure to remotely conduct informal conferences for Notices of Violation and Cessation Orders.

- Developed and implemented a procedure to remotely conduct public hearings for permit applications.
- Conducted 2 industry training sessions with the topics of threatened/ endangered species and NPDES permitting for coal mining operations.
- Participated and supported the QA/QC panel. WVDEP has implemented its recommendations such as reducing the backlog of e-Certs; conducted 2 industry training sessions; continue to encourage industry to submit timely bond release applications when a permit meets reclamation requirements; and encourage industry, at the appropriate time in the reclamation process, to pursue post-mining effluent limits, removal of water retention structures, and deletion of NPDES outfalls;
- Due to the COVID-19 pandemic, WVDEP transitioned office staff to work remotely. SMCRA permitting staff have been able to maintain a positive efficiency rating for final action of permitting applications while working remotely.
- WVDEP and OSM entered a Cooperative Assistance Work Plan to gather measurements, with the use of instream continuous data loggers, of turbidity, temperature, specific conductance, and total suspended solids in streams located within watersheds of known threatened and endangered crayfish presence.
- Prior to the NTTP and TIPS training classes being disrupted in March 2020 due to the COVID-19 pandemic and resulting state travel restrictions, WVDEP had 37 employees attend 14 NTTP training classes and 6 employees attend 3 TIPS training classes. WVDEP is currently working with OSMRE's Technical Support Division to develop webinars for WV specific training needs.

## V. Measured Success in Achieving the Purposes of SMCRA

### A. Off-Site Impacts

**Introduction:** The OSM REG-8 Directive requires the evaluation of off-site impacts found on non-forfeited and forfeited sites. This study evaluated the effectiveness of the West Virginia regulatory program in protecting the environment and public from off-site impacts resulting from surface coal mining and reclamation operations. Summary tables of off-site impacts are shown in Table 5.

**Methodology:** OSM reviewed the State inspection reports, inspector enforcement statements, and enforcement actions on the 1,676 non-forfeited permits during the review period of July 1, 2019, through June 30, 2020, for off-site impacts. The State's Office of Special Reclamation (OSR)

evaluated all 350 of the forfeited sites for off-site impacts.

## **Findings:**

### **A.1. Bonded Sites**

The State's 1,676 non-forfeited permits were evaluated for off-site impacts by reviewing the inspection and enforcement data contained in the State's Environmental Resources Information System (ERIS). During this review period, all 1,544 enforcement actions and 17,435 inspections were evaluated for off-site impacts. Off-site impacts were found on 87 permits or 5% of the State's permitted population. Therefore, the majority (95%) of the permitted sites were free of off-site impacts.

The violations identified on these 87 permits contributed to the 143 off-site impacts, indicating the average number of impacts would be one for every 105 inspections. As part of the evaluation of off-site impacts and based on the State data, OSM determined that the primary cause is operator negligence. These impacts were categorized as to type of impact, resources affected, and degree of impact as required by Table 5 in REG-8.

<b>Type of Impact</b>	<b>Number of Impacts</b>	<b>% of Impacts</b>
Hydrology	92	64
Encroachment	31	22
Land Stability	16	11
Blasting	04	03
<b>Total</b>	<b>143</b>	<b>100</b>

**CHART 1. —Summary of Off-site Impacts.**

Hydrology represents 64% of the type of impacts affected this year and remains the most common type of impact affected by the mining operations. This category increased from last year's 47%. The hydrology category includes violations such as exceeding effluent limits, black water spills, and breached diversion ditches.

Encroachment is the second most frequently cited impact, representing 31% of the type of impact affected, which is slightly less than last year. Land Stability represents 11% of the type of impact affected this year, slightly less than last year. Blasting represents 3% of the type of impact affected this year, which is less than last year.

Resources Affected	Impacts	% of Impacts
People	23	16
Land	40	28
Water	72	50
Structure	08	9
<b>Total</b>	<b>143</b>	<b>100</b>

**CHART 2. —Resources affected by various impacts.**

As shown in Table 5, the degree of impact on People was 3 minor, 20 moderate and no major. Most of these impacts were from coal trucks tracking mud onto county highways or creating fugitive dust causing unsafe driving conditions and blasting operations.

Land had 13 minor, 24 moderate, and 3 major impacts. Most of these impacts were related to mining off the permit, landslides caused by down slope spoil placement, and breached perimeter diversions causing erosion and sedimentation.

Water had 9 minor, 62 moderate, and 1 major impacts. Most of these impacts were related to violations of effluent limitations or State water quality standards, black water spills due to slurry line ruptures or other breaches, and other mine discharges that resulted in water quality problems.

Structures had 3 minor, 5 moderate, and 0 major impacts.

Overall, Minor impacts were 20% of the total, Moderate 78%, and Major 3%. There were 143 impacts found during the EY, which decreased by 11% over last year's 161 offsite impacts. The number of permits with off-site impacts decreased by 24% from last year's 115 to 87 this year.

## **A.2. Forfeited Sites**

The State's OSR conducted an off-site impact evaluation of forfeited sites for this review period. During this review period 5 new bond forfeitures were added to the inventory. However, no new off-site impacts were added.

The OSR completed land reclamation on 5 bond forfeiture permits and installed active or passive water treatment on 8 permits during the review period. Treatment is currently making improvements to the water quality but has not eliminated the off-site impacts due to the poor water quality.

The OSR maintains an inventory of the State's forfeited permits and is responsible for the reclamation of those permits. The number of off-site impacts associated with those permits totaled 13 during the review period. Of these 13 impacts, 7 off-site impacts are related to water quality, and six related to land (three Land Stability, two Encroachment, and one Other). The State's un-

reclaimed bond forfeiture sites free of off-site impacts during EY 2020 was 95 percent.

The State's bond forfeiture permits inventory now stands at 329 and is categorized as follows:

<b><i>Category</i></b>	<b><i># Permits</i></b>
Water treatment ongoing	157
To be contracted – Water Only	28
To be contracted – Land Only	37
To be contracted – Land and Water	07
Water treatment “yet to be determined”	11
Under contract “ <i>warranty</i> ” – Land	13
<b><i>Under contract</i></b>	
Land	02
Water	02
Water/retro-fits	10
Land & Water	01
Need sediment structure(s) removed	02
Land status to be determined	02
Re-opened (landslide or other repair needed)	03
Others responsibility (surety reclaiming)	19
To be retrofitted	35

**CHART 3. —OSM Categorization of West Virginia Bond Forfeiture Permits Inventory**



**B. Reclamation Success****Hayland - Upshur County, WV**

**Introduction:** The success of the State program in ensuring reclamation success is based on the number of acres that meet State bond release standards, including postmining land use, and have had their performance bond appropriately released by the WVDEP. State reclamation bonds are released in three phases. Phase I bond release indicates that backfilling has been completed and the land contour has been returned to its approximate original contour unless there is an approved variance. The Phase II release verifies that the vegetative cover or other erosion control measures have adequately stabilized the surface from erosion and the soil resources are adequate to support that cover. In addition, the site is not contributing suspended solids to stream flow or runoff outside the permit area. Finally, Phase III, or final bond release, confirms that the mine site is fully reclaimed, meeting the required maintenance period, and the approved post mining land use has been achieved. Complete restoration of land and water resources affected by mining is demonstrated by this release.

**Methodology:** OSM conducted 39 oversight bond release inspections on permits where the permittee had requested bond release during the evaluation year. Field conditions were compared to the reclamation plan contained in the permit. Twenty-five inspections were on Phase III releases, five on Phase II releases, seven on Phase I releases, two on incremental or multiple release. OSM applied the information from WVDEP's "*Completed Applications Report for Phase Releases Approved*" for completing Table 6.

**Findings:** OSM oversight inspections for bond release resulted in no violations being issued, but reclamation did not meet the required standards in all cases, at the time of the inspection. Thirty-two of the 39 release applications inspected by OSM were approved by the end of the evaluation year. Six of the remaining operator requests for release were withdrawn by the permittee and one was denied.

During the evaluation year, WVDEP approved 92 Phase III bond releases, 57 were incremental releases, totaling 4715.02 acres, as reported in Table 6. There were 43 Phase I bond releases, of which 36 were incremental releases, totaling 2812.77 acres, and 33 Phase II bond releases, of which 26 were incremental bond releases, totaling 2803.6 acres.

Here is a breakdown of the Phase III bond releases by post mining land use:

<u>Releases</u>	<u>Post Mining Land Use</u> <u>Acres</u>	<u>Reclaimed</u>
29	Forestland	2553.48
13	Fish and Wildlife Habitat	1736.99
8	Hayland or Pasture	313.15
2	Light Industry and Commercial	83.80
5	Public Services	24.61
1	Residential	2.99
18	Overbonded	0.00
<u>16</u>	Permit Not Started (no disturbance)	<u>0.00</u>
<b>92</b>		<b>4715.02</b>

**CHART 4 – Phase III bond releases by post mining land use.**

The State’s Office of Special Reclamation (OSR) completed land reclamation on five bond forfeiture permits and installed active or passive water treatment systems on three forfeiture permits. The OSR continues to maintain an inventory of the State’s bond forfeiture permits and oversees the reclamation of these sites.

## **VI. General Oversight Topic Reviews**

### **A. Oversight Inspections**

#### **A.1. General Oversight Inspections**

During EY 2020, the OSM/CHFO completed 319 inspections, just short of the targeted 325 due to the Coronavirus Pandemic. The pandemic resulted in OSM restrictions on in-person inspections. The inspections completed included two citizen complaint reviews under West Virginia’s program and four oversight inspections conducted in response to rain events exceeding a one year/24hour

storm event. Also, as part of the oversight inspection process, CHFO conducted a review of West Virginia's bond release activities, continued our review of slurry impoundments, and conducted oversight inspections on bond forfeiture sites reclaimed by the WVDEP Office of Special Reclamation Office. OSM's evaluation activity is detailed in Appendix 1, Table 13.<sup>1</sup>

The following is a breakdown of inspections by type.

Type	Count
Document Review	173
Bond Release Review	39
Sample Selection – Complete	37
Sample Selection – Partial	20
Follow-up on State Action	21
Other- Special studies	29
<b>Total</b>	<b>319</b>

**CHART 5.—Inspections by type for EY 2020.**

There was a total of 292 violations of the State program identified during the oversight inspections. Forty-three violations were deferred to state action, 18 violations are still active of which one is from a TDN issued in EY 2019, 21 violations resulted in two Ten-Day-Notices being issued this EY, 198 were previously cited by the State and 12 were abated during or before the completion of OSM's oversight.

#### **A.1.a. Bond Release**

This review consisted of on-the-ground inspections of bond released sites. The on-the-ground review consisted of sites which were in varying stages of release. In addition to randomly selecting sites for review, OSM conducts an inspection on any site for which a release is requested, if the site is listed on the acid mine drainage inventory. OSM conducted an on-the-ground review of 39 sites that requested any bond release. An on-the-ground review was conducted on 25 sites which requested a Phase III release, 5 sites requesting Phase II release and 7 sites requesting Phase I bond release and 2 additional inspections with multiple increments or phases of release. Two violations of West Virginia's approved program were observed on two permits during these evaluations. Two violation were deferred to the State for action.

#### **A.1.b. Citizen Complaints**

The CHFO received two citizen complaints alleging two violations during the evaluation year.

<sup>1</sup> OSM notes a software reporting anomaly prevents the numbers displayed in Table 13 from aligning with the numbers reported here which are compliant with the requirements of the current REG-8 directive dated May 2019. Pursuant to this Directive, OSM counts various inspection types as oversight inspections. The reporting software is still counting numbers as per the previous version of REG-8 where only inspection type codes beginning with "O" were counted. Therefore, the additional 75 violations identified are in relation to document review inspection reports (inspection type "DR"). OSM is in the process of recoding the reporting software needed to generate Table 13.

Under the new INE-35 directive, OSM investigated all readily available documents and after discussions with the WVDEP determined that WVDEP took appropriate action and no TDN was issued.

## A.2. Impoundment Oversight Inspections

During EY 2020, OSM continued the review of slurry impoundments and compaction of refuse material used in the construction of the impoundment dams. Five impoundment inspections were conducted as part of OSM's random oversight selection. Fifteen violations were observed; 10 were deferred to WVDEP for issuance of non-compliance, one was previously cited by the WVDEP, and four were abated before or during OSM inspection. Twelve of the violations were administrative in nature and three were on the ground drainage control violations.

## A.3. State Inspection Frequency Activity

During EY 2020, WVDEP had 1,964 permanent program Inspectable Units (IU). Inspections are a requirement on these units (permits) with a frequency set by WVDEP's Program. This requires inspections of active, inactive, and abandoned (forfeited) permits on a set frequency. The data demonstrates WVDEP is conducting a sufficient number of inspections overall.

	<b>Complete Inspections Required</b>	<b>Partial Inspections Required</b>	<b>Conducted Complete Inspections</b>	<b>Conducted Partial Inspections</b>
Active	4,568	9,136	4,579	9,329
Inactive	2,136	0	2,065	1,462
Abandoned (forfeited)	288	0	1,091	3,532
<b>Totals</b>	<b>6,992</b>	<b>9,136</b>	<b>7,735</b>	<b>14,323</b>

**CHART 6.—Frequency for EY 2020 IUs.**

- Active sites require one complete inspection and two partial inspections quarterly.
- Inactive sites require one complete inspection every quarter.
- Forfeited abandoned sites require one complete inspection per year.
- Not Started sites require one complete inspection per quarter per the State's policy.

While the above chart shows WVDEP completes more inspections than required, OSM also examined each permit individually to determine if completed inspections were conducted each month during the quarter as required by *inspection frequency*. In other words, if WVDEP performed two inspections for a permit, but were within the same month during that quarter they will be credited as 1/3 successful in inspections. This is to ensure that permits are frequented every

month if active or once a quarter if inactive. OSM found that WVDEP completed the correct number of inspections 98 percent of the time, which is an increase from the previous year of 91 percent.

When considering all inspections conducted during the EY irrespective of the monthly requirement, data shows WVDEP conducted 10 percent (743) more complete inspections than required, along with 57 percent (5,187) more partial inspections than required by the program.

## **B. Program Amendment Status/Program Maintenance**

### **B.1. Program Amendment Status**

#### **B.1.a. Statutory/Regulatory Amendments (WV-113/WV-114)**

By letter dated April 8, 2008, and received electronically by OSM on April 17, 2008, (Administrative Record Number WV-1503), WVDEP submitted an amendment to its program under the Federal Surface Mining Control and Reclamation Act (30 U.S.C. 1201 et seq.).

The revisions related to a variety of topics such as: new language for technical completeness of permit applications, incidental boundary revisions, permit issuance findings, inspection of impoundments, reclamation of natural drain-ways subsequent to sediment pond removal, storm water runoff analysis, contemporaneous reclamation standards regarding excess spoil fills and bonding of certain types of excess spoil fills, and effluent limits and bond releases on remining operations. The State's Surface Mining Blasting Rule contains most of the blasting provisions that were removed from the Surface Mining Reclamation Regulations.

On Thursday, May 7, 2020, the **Federal Register** published a final decision approving (without condition) WV-113 (85 FR 27139). The **Federal Register** posting of this amendment can be found on [www.federalregister.gov](http://www.federalregister.gov) and searching (85 FR 27139).

#### **B.1.b. Alternative Bonding System Revisions (WV-115)**

On May 28, 2009, WVDEP submitted a proposed statutory amendment to its alternative bonding system (Administrative Record No. WV-1521). The amendment consists of Committee Substitute for SB 600 which amends §22-3-11(h) of the West Virginia Code concerning the State's alternative bonding system, commonly referred to as the Special Reclamation Fund. This bill passed the West Virginia Legislature on April 10, 2009, and the Governor signed on May 4, 2009, with an effective date of July 1, 2009. In its letter, WVDEP acknowledged that Committee Substitute for SB 600 amends §22-3-11 of the Code of West Virginia to implement actuarial recommendations relating to the continued fiscal sustainability of the Special Reclamation Fund. The legislation consolidates what has been known as the "7-and- 7.4 tax" (the 7.4 portion of which is currently subject to annual renewal) into a 14.4 cents tax per ton of clean coal mined, reviewable



every two years by the Legislature.

OSM will combine WV-115 and WV-116 and publish its final decision in the **Federal Register**.

#### **B.1.c. Statutory/Regulatory Revisions (WV-116)**

By letter dated May 11, 2009, WVDEP submitted an amendment to its regulatory program, which included Committee Substitute for SB 153. This bill modified the State's Surface Mining Reclamation Regulations concerning the continued oversight of "approved" persons who prepare, sign, or certify mining permit applications and related materials. The bill also proposes to modify incidental boundary revisions (IBRs) to existing permits, clarify certain types of collateral activities, delete the bonding matrix forms, change the term "bio-oil" to biofuel, and clarify standards for hayland and pasture use (Administrative Record Number WV-1522).

On May 22, 2009, WVDEP submitted copies of SB 436. The SB 436 amends West Virginia Code 22-3-8 by changing references to "the commissioner of the Bureau of Employment Programs" to "executive director of Workforce West Virginia" and "the executive director of the workers' compensation commission" to "Insurance Commissioner" (Administrative Record Number WV-1521).

On July 6, 2009, WVDEP also submitted a copy of SB 1011. The SB 1011 amends West Virginia Code by requiring surface mine reclamation plans to comport with approved master land use plans and authorizing surface mine reclamation plans to contain alternative post-mining land uses (Administrative Record Number WV-1523).

As mentioned above, OSM will combine WV-115 and WV-116 and publish its final decision in the **Federal Register**.

#### **B.1.d. Statutory/Regulatory Revisions (WV-117)**

On May 2, 2011, WVDEP submitted revisions to its permanent surface coal mining regulatory program (Administrative Record Number WV-1557). The amendment consists of statutory revisions to the State's Surface Coal Mining and Reclamation Act as authorized by Enrolled Committee Substitute for House Bill (HB) 2955 and regulatory revisions to the State's Surface Mining Reclamation Regulations as authorized by Enrolled Committee Substitute for SB 121.

The West Virginia Legislature adopted HB 2955 on March 18, 2011, and the Governor approved it on April 5, 2011. The HB 2955 increased the filing fee for the State's surface mining permit to \$3,500, the permit renewal fee to \$3,000, established a notice of intent to prospect fee of \$2,000, a significant permit revision fee of \$2,000, a permit amendment fee of \$550, a permit transfer fee of \$1,500, a permit assignment fee of \$1,500, and an inactive status approval fee of \$2,000. The SB 121 passed the West Virginia Legislature on March 18, 2011, and the Governor signed on

March 30, 2011. The SB 121 authorized WVDEP to publicize several revisions to its Surface Mining Reclamation Regulations. The SB 121 authorizes regulatory revisions, which, among other things, provide for a minimum incremental bonding rate of \$10,000 per increment at CSR 38-2-11.4. a.2. Section 22-3-11(a) of WVSCMRA currently requires mining operators to furnish a minimum bond of \$10,000, regardless of acreage. Under the revised provision, an operator will have to post a minimum bond of \$10,000 for each increment mined.

The OSM intends to combine its decision on the State's modification relating to incremental bonding with WV-118. As discussed below, the **Federal Register** will publish the combination of the permanently increased fees with WV-121 and the final rules.

#### **B.1.e. Regulatory Revisions (WV-118)**

On May 2, 2011, WVDEP submitted regulatory revisions to the State's Surface Mining Reclamation Regulations as authorized by Enrolled Committee Substitute for Senate Bill No. 121 (SB 121) (Administrative Record Number WV-1561).

In addition to the minimum incremental bonding rate of \$10,000 per increment as discussed above, SB 121 authorized WVDEP to modify its Surface Mining Reclamation Regulations by codifying an emergency rule filed on December 2009 relating to the establishment of trust funds and annuities. It clarifies the format and information necessary for a complete permit application submittal and for the renewal process to consider WVDEP's electronic filing process. It provides that an approved person must maintain the capability of submitting maps, plans and all other technical data in an electronic format proscribed by the Secretary. In addition, it provides that pre-subsidence surveys will be confidential and only used for evaluating damage relating to subsidence and clarifying that bonding for a permit in inactive status shall remain in effect for the life of the operation. It also provides the Secretary shall issue e-mail notice of a Show-cause Order to members of the public who have subscribed to the Secretary's e-mail notification service and otherwise provide notice to any person whose citizen complaint has resulted in the issuance of any enforcement action that led to the issuance of a Show-cause Order.

As mentioned above, OSM intends to combine WV-117 regarding incremental bonding with WV-118 and publish a final rule on both amendments in the **Federal Register**.

#### **B.1.f. Special Reclamation Tax Revisions (WV-119)**

By letter dated April 27, 2012, WVDEP submitted a proposed statutory amendment to its alternative bonding system (Administrative Record No. WV-1577). The amendment consists of Enrolled SB 579, which amends §22-3-11(h) of the West Virginia Code concerning the State's alternative bonding system, commonly referred to as the Special Reclamation Fund. The bill passed the West Virginia Legislature on March 9, 2012, and the Governor signed it on March 30,

2012, with an effective date of July 1, 2012. As detailed in WVDEP's transmittal letter, "Senate Bill 579 amends § 22-3-11 of the Code of West Virginia to implement actuarial recommendations relating to the continuing fiscal viability of the Special Reclamation Fund." A substantial amendment made to Subsection 22-3-11(h) (1) of the WVSCMRA it increases the amount of the special reclamation tax to twenty-seven and nine-tenths cents per ton of clean coal mined. The former special reclamation tax, effective as of July 1, 2009, required remittance of fourteen and four-tenths cents per ton of clean coal mined. Additionally, the amended language requires fifteen cents per ton of the collected twenty-seven and nine-tenths cents per ton be deposited in the Special Reclamation Water Trust Fund (SRWTF).

The OSM has prepared a final decision on the State's bonding requirements. The OSM plans to combine WV-119 with WV-121, as discussed below, and publish a final rule on both in the **Federal Register**.

#### **B.1.g. State-Federal Cooperative Agreement (WV-120)**

In 2009, WVDEP expressed an interest in revising its State-Federal Cooperative Agreement. West Virginia entered a cooperative agreement with OSM in 1983 to regulate coal mining on Federal lands within the State. However, the initial agreement does not allow the State to regulate all mining activities on Federal lands, especially those involving federally leased coal.

The OSM will publish a **Federal Register** notice announcing receipt of the revised State-Federal Cooperative Agreement and provide an opportunity for a public hearing and comment on the proposed amendment. Once published, the proposed agreement will be subject to the rulemaking provisions at 30 CFR Part 745. If the amendment is consistent with the Federal requirements, the Secretary (or his designee) and the Governor will sign the agreement or a revision. The **Federal Register** will publish a copy of the final decision with a copy of the executed agreement.

#### **B.1.h. Award of Attorney Fees and Costs (WV-121)**

On September 11, 2013, WVDEP submitted revisions to its permanent surface coal mining regulatory program (Administrative Record Number WV-1584). The amendment consists of statutory revisions to West Virginia's Surface Coal Mining and Reclamation Act, as authorized by Enrolled Senate Bill No. 497 (SB 497) relating to the award of attorney fees and costs by the State's Surface Mine Board and circuit courts under West Virginia's approved regulatory program.

The West Virginia Legislature adopted SB 497 on March 10, 2012, and the Governor signed it on March 30, 2012. The purpose of SB 497 is to authorize the Surface Mine Board or the reviewing Circuit Court to award attorney fees and costs in administrative proceedings arising under the WVSCMRA.

As discussed above, once a final decision is made on the State amendments relating to permit fee



increases (WV-117), special reclamation tax increases (WV-119), and the award of costs and attorney fees (WV-121), a **Federal Register** notice will be published on all of these program amendments.

#### **B.1.i. Bond Forfeiture Tax Incentive and Informal Conference Procedures (WV-122)**

On August 14, 2013, WVDEP submitted revisions to its permanent surface coal mining regulatory program (Administrative Record Number WV-1587). The amendments consist of Enrolled SB 462 and Enrolled Committee Substitute for HB 2352.

The West Virginia Legislature adopted SB 462 on April 11, 2013, and it was approved by the Governor on April 29, 2013. The SB 462 amends West Virginia Code §§22-3-20 and 21 to conform to the State's requirements for informal conferences and decisions on surface mining permit applications with parallel provisions of Federal law.

The West Virginia Legislature adopted Committee Substitute for HB 2352 on April 13, 2013, and the Governor signed it on April 29, 2013. Committee Substitute for HB 2352 amends West Virginia Code §22-3-11 to provide tax incentives for mine operators who reclaim bond forfeiture sites within the State.

On Wednesday, March 4, 2020 the **Federal Register** published the final decision approving (without condition) WV-122 (85 FR 12739). The Federal Register posting of this amendment can be found on [www.federalregister.gov](http://www.federalregister.gov) and searching (85 FR 12739).

#### **B.1.j. Office of Explosives and Blasting, Blasting Rule, Hydrologic Protection and Stormwater Runoff Analysis (WV-123)**

On April 4, 2016, WVDEP notified OSM of the adoption of HB 4726, which passed the West Virginia Legislature on March 11, 2016, and was approved by the Governor on April 1, 2016,

with an effective date of June 9, 2016. The HB 4726 terminated the Office of Explosives and Blasting (OEB) with the passage of Section 22-3-34 of the West Virginia Code and transferred the duties and responsibilities relating to blasting to the Division of Mining and Reclamation (DMR). The HB 4726 also provides that DMR would continue to enforce OEB's Blasting Rule at Code of State Regulations (CSR) 199-1 until DMR could promulgate its own blasting rules for legislative approval.

Furthermore, HB 4726, at Section 22-3-13(g) of the West Virginia Code, authorizes WVDEP to revise its rules regarding hydrologic protection and storm water runoff analyses for mining operations and to promulgate rules that conform with Federal requirements to minimize disturbances to the prevailing hydrologic balance at a mine site and in associated off-site areas. The bill also provides that WVDEP may conduct a cumulative hydrologic impact assessment and

requires a statement of probable hydrologic consequences and to prevent flooding. WVDEP is to conform these rules to the Federal regulations at 30 CFR 816.41 and 816.45 through 816.47 when proposing the State rule, and it cannot propose rules that are more stringent than the Federal requirements.

The OSM was in the process of preparing a proposed rule announcing receipt of the proposed State program amendment when WVDEP requested that OSM temporarily delay action on WV-123. The WVDEP advised OSM that it planned to make additional revisions to its blasting statute beyond those in WV-123. In addition, there are delays to its revisions of the proposed blasting rules. As mentioned above, the West Virginia Legislature authorized WVDEP to implement OEB's Blasting Rule until it could promulgate its own blasting rules for legislative approval. In the past, OSM has encouraged WVDEP to submit both its statutory and regulatory revisions together to ensure an accurate and complete review of all program requirements. As discussed below under WV-125, WVDEP submitted proposed revisions to its pre-blast survey statutory provisions. To avoid confusion and to keep West Virginia's pre-blast survey requirements together, OSM has combined those statutory provisions in WV-125 with WV- 123, given that the pre-blast survey requirements in WV-125 modify the provisions mentioned herein.

In addition, as discussed below under WV-126, on May 2, 2018, WVDEP submitted Senate Bill 163 (SB 163) to OSM. The SB 163 authorized WVDEP to consolidate all its blasting regulations under its Surface Mining Reclamation Regulations. SB 163 modified section 6 relating to blasting in general and created new sections 25 through 27 relating to certification of blasters, blasting damage claim and arbitration for blasting damage claims and explosive material fee, respectively. WVDEP plans to incorporate these revised regulations into WV-123. By combining these amendments, the public will have an opportunity to evaluate and comment on WV's blasting laws and regulations in WV-123, WV-125, and WV-126.

The **Federal Register** published the proposed rule of the combined amendments on Monday, February 10, 2020 (85 FR 7475) and closed comments on March 11, 2020. OSM is currently working on drafting the final notice and addressing comments received.

#### **B.1.k. Inactive Status, Bonding, Topsoil, and Contemporaneous Reclamation (WV-124)**

By letter dated June 14, 2016, and received by OSM on June 21, 2016, WVDEP submitted an amendment to its permanent regulatory program under SMCRA (Administrative Record No. WV-1606). The proposed amendment consists of regulatory revisions to West Virginia's Surface Mining Reclamation Regulations.

As mentioned previously, the West Virginia Legislature adopted SB 357 on March 3, 2015, and the Governor approved it on March 12, 2015. On March 25, 2015, WVDEP notified OSM of the passage of SB 357 (Administrative Record No. WV-1604). The SB 357 authorized WVDEP to

promulgate several revisions to its Surface Mining Reclamation Regulations. The SB 357 amended West Virginia Code Sections 22-3-13 and 19, and authorized WVDEP to promulgate revisions to its contemporaneous reclamation and inactive status regulations.

On July 10, 2015, OSM notified WVDEP that the statutory revisions regarding contemporaneous reclamation and inactive status, also known as temporary cessation, did not need submission, because they only authorized WVDEP to promulgate revision to its regulatory requirements (Administrative Record No. WV-1605). However, OSM advised WVDEP that any revisions to its inactive status or contemporaneous reclamation regulations required submission to OSM as a program amendment.

The West Virginia Legislature passed Committee Substitute for HB 117 on June 2, 2016, effective immediately. According to State officials, HB 117 provides that the legislative rule filed by WVDEP in the State Register on July 27, 2015, that includes revisions regarding contemporaneous reclamation, inactive status, and topsoil, received authorization by the West Virginia Legislature. In addition, amendments regarding bonding requirements for permit renewals and incremental bonding for permit renewals also received authorization by the Legislature. In accordance with HB 117, WVDEP filed revised regulations with the Secretary of State that had an effective date of July 1, 2016.

On April 3, 2019, OSM published a notice in the **Federal Register** announcing the receipt of proposed revisions to WVDEP's bonding, inactive status, topsoil and contemporaneous reclamation requirements (64 FR 12984-12987). The proposed rule also provides for a public comment period and opportunity for hearing on the State's proposed regulatory revisions. The public comment period closed on May 3, 2019.

On April 5, 2019, various Federal and State agencies received notification and invitation to comment on the proposed State amendment. The **Federal Register** will publish OSM's final decision.

#### **B.1.1. Pre-Blast Surveys, Bond Release and Other Bonding Requirements, and Payments from the Special Reclamation Water Trust Fund (WV-125)**

On May 3, 2017, WVDEP submitted Enrolled SB 687 to OSM for approval. The proposed amendment consists of statutory revisions relating to pre-blast survey requirements, bond release and bonding requirements, and Special Reclamation Water Trust Fund payments (Administrative Record Number WV-1608).

The West Virginia Legislature adopted SB 687 on April 8, 2017, and the Governor approved it on April 9, 2017. These provisions took effect from the date of passage on April 8, 2017.

Enrolled Senate Bill 687 amends West Virginia Code §§22-3-11(g) (1) and (2), 22-3-13a (a) and

(b), 22-3-13a (f) and (h), and 22-3-23 (c) and (i) providing that money be paid from the Special Reclamation Water Trust Fund to assure a reliable source of capital and operating expenses for the treatment of discharges from bond forfeited sites; modifying notification requirements for pre-blast surveys for surface mining operations and certain other blasting activities; and removing minimum bond requirements related to certain reclamation work.

As mentioned above, the revisions relating to blasting have been incorporated into a proposed rule that will include WV-123, 125 126. On April 8, 2019, OSM published a proposed rule in the **Federal Register** that announced the receipt of the proposed State program amendments and provided for a public comment period, and the opportunity for a hearing on the remaining State program revisions (67 FR 13853-13855). The public comment period closed on May 8, 2019.

On April 10, 2019, OSM invited various Federal and State agencies to comment on the proposed State revisions. Once OSM completes its review of the proposed amendments relating to bond release, bonding requirements, and disbursement of funds from the State's Special Reclamation Water Trust Fund, the **Federal Register** will publish a final notice.

**B.1.m. Advertisement, Informal Conference, Blasting, Certification of Blasters, Blasting Damage Claim and Arbitration for Blasting Damage Claims, Explosives Material Fee, Complete Reclamation, Environmental Security Account for Water Quality, Water Quality Enhancement, Incremental Bonding, Requirement to Release Bonds, Forfeiture of Bond and Effluent Limitations (WV-126).**

On May 2, 2018, WVDEP submitted two separate amendments to its permanent surface coal mining regulatory program (Administrative Record Number WV-1613). The first amendment consists of statutory revisions to the WVSCMRA as authorized by Enrolled SB 626 and the second amendment consists of regulatory revisions to the State's Surface Mining Reclamation Regulations as authorized by Enrolled SB 163.

The SB 626 includes proposed statutory revisions that amend §§22-3-9 and 22-3-20 of the West Virginia Code. The SB 626 includes new public notice requirements regarding permit applications. The revisions at §22-3-9 provide an applicant's advertisement for public notice be published on a form and in a manner prescribed by the Secretary of WVDEP, which may be electronic. Additional revisions to §22-3-20 provide similar public notice requirements for the informal conference.

The West Virginia Legislature adopted SB 626 on March 8, 2018, and the Governor approved it on March 20, 2018. These provisions took effect 90 days from the date of passage on June 6, 2018.

The West Virginia Legislature passed SB 163 on February 16, 2018, and the Governor signed it on February 27, 2018, with an effective date of February 16, 2018. The SB 163 authorized

WVDEP to promulgate the legislative rule filed by WVDEP in the State Register on July 27, 2017. The SB 163 consolidates all State blasting requirements under its Surface Mining Reclamation Regulations, deletes certain sections of those rules that have no Federal counterparts, and modifies certain sections to make them analogous to their Federal counterparts. The amendment modifies section 6 relating to blasting and creates new sections 25 through 27 relating to certification of blasters, blasting damage claim and arbitration for blasting damage claims, and explosive material fee, respectively. It also modifies the notification requirements for pre-blast surveys to be consistent with changes made in §22-3-13a, as discussed above under WV-123 and WV-125. The amendment also deletes subsection 2.37 relating to the definition of complete reclamation, entire section 11.6 relating to the Environmental Security Account for Water Quality, and section 12.5 relating to Water Quality Enhancement in its entirety. According to WVDEP, none of these requirements have Federal counterparts. Furthermore, SB 163 modified the State's incremental bonding requirements at section 11.4, its bond release requirements at subsections 12.2.a.3 and a.4, its bond forfeiture requirements at section 12.4, and its effluent limitation requirements at subsection 14.5.b to make them analogous to their Federal counterparts. In accordance with SB 163, WVDEP filed its revised regulations with the Secretary of State with an effective date of July 1, 2018.

As discussed above under WV-123, OSM intends to combine and announce in a proposed rule all State statutory and regulatory blasting requirements WVDEP submitted under WV-125 and WV-126. The OSM will announce those State provisions unrelated to blasting separately.

The **Federal Register** published on Friday, February 14, 2020, the proposed rule WV-126-FOR (85 FR 8497) announcing a public comment period which closed on March 2, 2020. OSM is drafting the final rule and addressing comments published in this proposed notice.

**B.1.n. Community impact review, securing developable land and infrastructure, General environmental protection performance standards for the surface effects of underground mining (WV-127).**

On April 11, 2019, WVDEP submitted Enrolled SB 635 to OSM for approval. The West Virginia Legislature passed the proposed amendment on March 9, 2019, and the Governor signed it into law on March 27, 2019 (Administrative Record Number WV-1628).

The proposed amendment consists of statutory revisions relating to the Office of Coalfield Community Development and authorizes WVDEP to promulgate legislative rules for review and consideration by the Legislature during the 2020 regular legislative session pertaining to surface owner protection from material damage due to subsidence.

The OSM intends to seek further clarification from WVDEP regarding this proposed amendment soon.

## **B.2. Program Maintenance**

### **B.2.a. Required Program Amendments**

West Virginia has no outstanding required program amendments. With the approval of an amendment on March 2, 2006, the State resolved all outstanding required amendments on its permanent regulatory program (FR 10764-10790).

### **B.2.b. 30 CFR Part 732 Notifications**

As reported earlier, the State also resolved all program issues resulting from issuance of 30 CFR Part 732 notifications by OSM. The OSM issued Part 732 notifications to the State because of changes in Federal law or regulations.

As previously reported, OSM agreed in 2003 that, given ongoing litigation, the State did not have to take any action regarding the Part 732 notifications concerning ownership and control, subsidence, and valid existing rights. The **Federal Register** published a formal announcement of that decision on April 29, 2004 (69 FR 23474).

On December 3, 2007, OSM published final ownership and control regulations in the **Federal Register** (72 FR 68000-68031). In July 2008, the National Mining Association filed a writ of certiorari with the U.S. Supreme Court questioning a January 2008 U.S. Court of Appeals decision which found that OSM's definition of valid existing rights does not violate the Constitution's takings and due process clauses. In December 2008, the U.S. Supreme Court declined to hear that appeal.

All litigation concerning the Federal requirements mentioned above has been resolved. The OSM is to notify the State when it will revise its approved program in response to the Federal regulations in litigation. During the EY, OSM did not provide any formal notification to WVDEP, pursuant to 30 CFR Part 732, of which State Program requirements need revised in order to be consistent with the Federal changes noted above.

## **C. Notices of Intent to Sue (NOIs) Filed Against OSM**

### **C.1. Notice of Intent to Sue (NOI), 30 CFR Part 732 Request Regarding the State's Bonding Program**

On February 24, 2016, the West Virginia Highlands Conservancy, Ohio Valley Environmental Coalition, and the Sierra Club (WVHC et al.) notified the DOI and OSM that they intend to file a lawsuit pursuant to §520(a) (2) of SMCRA for failing to enforce violations of non-discretionary duties under 30 CFR Part 732 concerning West Virginia's alternative bonding system. In addition, WVHC et al. requested that OSM conduct an evaluation of the State's bonding program pursuant



to 30 CFR 733.12(a) (2).

The WVHC et al. state that SMCRA provides that an alternative bonding system must assure that the regulatory authority will have enough funds available to complete the reclamation plan for any areas possibly in default at any time. The NOI then lists several “facts” which WVHC et al. contend demonstrate the State program has been changed sufficiently to cause OSM to require a program amendment under OSM’s non-discretionary duties established under 30 CFR Part 732 and/or initiate a program evaluation under 30 CFR Part 733. To date, a lawsuit has not been filed against OSM for the allegations presented in the NOI.

## **C.2. Notice of Intent to Sue (NOI), Violations of the Endangered Species Act regarding continued reliance on the 1996 Biological Opinion and Conference Report on Surface Coal Mining and Reclamation Operations under SMCRA**

On May 10, 2019, the Center for Biological Diversity, the Sierra Club, the West Virginia Highlands Conservancy, and the Ohio Valley Environmental Coalition (Center for Biological Diversity, et al.) filed a 60-day NOI against OSM, U.S. Fish and Wildlife Service (FWS) and WVDEP for violations of the Endangered Species Act (ESA), concerning those agencies continued reliance on the 1996 Biological Opinion and Conference Report on Surface Coal Mining Operations under SMCRA and accompanying incidental take statement (ITS) to comply with the agencies’ ESA duties regarding the impact to listed species from activities regulated pursuant to the SMCRA Regulatory Program.

## **D. 30 CFR Part 733 Allegation Validation**

### **D.1. Original Petition and Findings**

On June 24, 2013, 18 environmental, civic and religious groups filed a petition with OSM demanding the Federal Government takeover regulation of surface coal mining and reclamation activities in West Virginia because of alleged chronic failures by WVDEP in properly administering its approved regulatory program in 19 specific areas. The parties filed the petition in accordance with the Federal regulations at 30 CFR Part 733. On December 30, 2013, OSM found 14 of the allegations did not rise to the level of reason to believe there were program failures, but OSM agreed to continue the validation process on five other program areas. The five program areas which OSM agreed required further evaluation resulted in the development of four work plans that included the evaluation of the State’s storm water runoff analysis procedures; its topsoil protection, removal and redistribution procedures, including topsoil substitutes; its operational and permit changes to correct water quality issues as identified by exceedances of National Pollutant Discharge Elimination System (NPDES) effluent limitations, including selenium discharges; and its cumulative hydrologic impact assessment (CHIA) procedures, with an emphasis on the cumulative impact area and the identification and prevention of selenium discharges. The NPDES and CHIA teams reached an agreement that both teams would evaluate the selenium.

While all the 30 CFR Part 733 evaluations identified some issues with West Virginia's implementation of its approved regulatory program, none of the issues identified rose to the level of program failures. In addition, when considering the nature of the actions WVDEP had already taken or had promised to take in the future, OSM concluded the issues identified as a result of the 30 CFR Part 733 evaluations did not represent program failures justifying further steps toward OSM withdrawing approval of part or all of West Virginia's approved regulatory program. The OSM's formal decision regarding this 30 CFR Part 733 evaluation may be found at <https://www.odocs.osmre.gov/> (ID 3313 and 3314) in 2017 evaluation documents for West Virginia. Because actions planned by WVDEP required further details and schedules, OSM agreed to oversee and provide technical assistance to WVDEP in developing and implementing those plans, and as a commitment to the citizens who filed the original petition.

As discussed in our EY 2018 annual report, WVDEP took appropriate action to achieve all the objectives and complete all the tasks related to the State's procedures on storm water runoff analysis and topsoil removal, protection, and redistribution. Therefore, no further action is required for those Part 733 topics. However, WVDEP's plans and schedules to make further improvements in its remaining Part 733 topics are set forth below in subsections VI.D.2.a and b below.

## **D.2. Follow-Up State Improvement Commitments**

### **D.2.a. CHIA**

In response to OSM's Part 733 CHIA evaluation, the WVDEP proposed changes to its CHIA process. The WVDEP proposed eight program objectives to improve its CHIA permitting process and has reported to OSM the following: (OSM will perform oversight on changes to the CHIA process in the near future.)

1. Update its existing draft CHIA policy/guidance document with assistance from the State's QA/QC panel and existing DMR permit review CHIA writers. The QA/ QC panel provided comments in 2017. The draft CHIA policy has been fully updated and distributed to all review geologist. An official CHIA checklist has also been developed and distributed to all geologist to help insure CHIA constancy across regions and time. Training on these documents occurred October 2019 at DMR's annual training conference during a permit review geologist breakout session. OSM considers this item complete.
2. Delineation of Cumulative Impact Areas (CIA) for surface and groundwater. This task involves training DMR staff to ensure all potential impacts from all mining operations on surface and groundwater within the permit CIA are addressed and all anticipated mining operations are identified and incorporated in the CIA and discussed in the CHIA narratives. As previously reported, DMR has completed this item.



3. Review the development of material handling plans for acid/toxic overburden material for proper placement of these materials and topsoil substitutes. This task involves training DMR staff to ensure the identification of acid/toxic strata in the overburden and to validate the applicant's permit special handling plan that may contain problematic overburden. This task involves the utilization of acid-base accounting and other analytical tests to determine the adequacy of material handling plans for overburden placement and proper nutrient analyses to characterize the permit's topsoil so suitable substitutes can be used. As previously reported, DMR has completed this item.
4. Perform trend analysis for monitored CIA watersheds utilizing TMDL reports and recognizing stream use designations. This task would involve training DMR staff in accessing and utilizing gathered WVDEP trend station data from the past decade. The new CHIA Trend Analysis toolbar is operational and can be used by all interested parties, the public included. The web address is: <https://tagis.dep.wv.gov/mining/>. The lead geologist in each region has received training on this toolbar. As previously reported, DMR has completed this item.
5. Perform trends and update analysis on CHIAs every year. This task would involve the selection of six active permits that are selected at renewal or midterm review. The conclusions of the CHIA, the PHC and the HRP (Hydrologic Reclamation Plan) for the selected permits will be assessed by senior reviewers to determine if the predicted results are being attained. As previously reported, this task has been implemented. OSM will continue to monitor this over time;
6. Perform quality control assessments on completed CHIAs. This task would involve the review of newly drafted CHIAs for surface mine applications and amendments by senior reviewers using the proposed developed CHIA policy to ensure consistency in writing CHIA narratives. As previously reported, this task has been implemented. In EY 2022 OSM will analyze the State's findings during the past three years regarding the consistency of staff CHIA narratives, and the results will be reported in the 2022 AER;
7. Performed assessments to ensure overburden testing for selenium in an applicant's permit is occurring, and special handling plans are adequate to isolate the problematic overburden strata occurring in certain permits. This involved task training for WVDEP geologists to review proper procedures identifying and validating an applicant's material handling plan when selenium occurs in the permit overburden. DMR has completed this item, including training which was held in October 2019. In EY 2022 OSM will analyze the State's findings, and the results will be reported in the 2022 AER;
8. Update the State's selenium policy once new fish tissue-based selenium limits upon finalization and implementation by WVDEP. This task would involve training of DMR staff in the final selenium policy/guidance that reflects the outcomes of the new fish

tissue-based selenium limits. As previously reported, DMR has completed this item. WVDEP will coordinate with OSM staff in 2022 to provide similar training that State personnel received.

#### **D.2.b. SMCRA Actions Relative to Exceedances of NPDES Effluent Limitations**

Based on the findings from the Part 733 evaluation relative to NPDES violations, the WVDEP initiated a series of actions to improve its SMCRA inspection and enforcement procedures regarding exceedances of NPDES effluent limitations. The WVDEP provided an update to the dashboard for the completed action items. OSM has not verified the submitted updates, but oversight review of the State's implementation actions is ongoing.

### **E. Acid Mine Drainage (AMD) Inventory of Active Permits**

The WVDEP continues to develop and maintain its AMD inventory of active permits. The WVDEP and OSM executed a work plan in 2006 to assist the State in the development of an ongoing inventory of active mining operations requiring AMD treatment and to implement procedures allowing for the collection of raw water data at those sites on a regular basis. The team identified approximately 370 active permits in the State with appreciable water treatment costs. This project had some success, but inadequate data regarding pump discharge rates at underground mines and inadequate flow and chemistry data to estimate water treatment costs proved insurmountable and the project was never completed. Estimating project cost for both land and water treatment is critical to assessing the solvency of the SRF.

As in past years, WVDEP continues to provide OSM an updated list of all permits within the State with AMD and/or required water treatment during the prior year. The OSM inspectors use and modify the listing based on any water quality data OSM provides WVDEP.

The State does have water treatment cost data at most bond forfeiture sites, but it lacks complete data for active sites. The OSM continues to be concerned that some of the costs of existing forfeitures entail smaller mines and may not be representative of many of the larger mines or newer mines with different water quality standards. When evaluating the State's SRF, OSM suggests WVDEP consider impacts these differences might have on future risks and costs.

During 2019, WVDEP took steps to improve its water treatment inventory of active permits. As it did last year, WVDEP tasked its inspection staff with validating the number of sites likely to be treating water after active mining operations have ceased. The WVDEP began assessing water treatment cost data for its AMD Inventory on an outlet basis. Once finalized, actuaries will have access to this information to better assess State bond forfeiture liabilities in the future.

### **F. Reforestation Activities**

During EY 2020, the WVDEP issued 23 surface mine permits and 8 surface mine permit

amendments covering 4,371 acres. Twenty-six of the 31 permits issued propose forestland as the post mine land use, and 3 more are to be returned to fish and wildlife habitat. Two additional permits are combining forestland with fish and wildlife or other land uses. 93 percent of all permits issued, covering 4800 acres, contain reclamation plans that require the implementation of the Forestry Reclamation Approach (FRA).

In the spring of 2020, 1.1 million trees were planted on approximately 1,617 acres of West Virginia mine sites. These trees were planted on sites where the FRA is required by the permit. However, over compaction of the growth medium and heavy ground cover is still commonly observed. OSM reclamation specialists continue to work with WVDEP inspectors and coal operators to ensure that the proper growth medium is being placed, loose grading is performed to prevent over compaction, and native non-competitive ground covers are seeded. There were 4715.02 acres approved for Phase III bond release in EY 2020. Of that, 4290.47 acres (91 percent) were planted in trees for either forestland (2553.48 acres) or fish and wildlife habitat (1736.99 acres) post mining land uses.



**FORESTRY POSTMINING LAND USE**

**OSM AND WVDEP PRESENTED THE ARRI *EXCELLENCE IN REFORESTATION* AWARD FOR 2019 TO COAL-MAC LLC'S LOGGY BRANCH SURFACE MINE, LOCATED IN MINGO COUNTY.**

The Office of Special Reclamation did not contract for any tree planting on bond forfeited permits in 2020.

The Office of Abandoned Mine Lands and Reclamation did not include tree planting on any of its projects in EY 2020.

OSM and WVDEP presented the ARRI *Excellence in Reforestation Award* for 2019 to Coal-Mac LLC's Loggy Branch Surface Mine, located in Mingo county.

The 14<sup>th</sup> annual ARRI Reforestation Conference was scheduled to be held in Elkins, WV in July of 2020, but was cancelled due to the Covid-19 pandemic. To view further information concerning the Appalachian Regional Reforestation Initiative (ARRI) refer to: <http://www.arri.osmre.gov>.

### **G. State Regulatory Staffing/Program Funding**

During EY 2020, the State had an approved regulatory program staff of 226.51 Full-Time Equivalent (FTE) positions, but there are 33.9 vacant positions, resulting in only 192.61 FTE filled positions as shown in Table 8. Ninety-eight percent of the vacancies are in the critical mission areas of permitting and inspection and enforcement.

During EY 2020, the State also submitted its proposed three-month budget estimate for FY 2021. The WVDEP projects that its regulatory staff will decline to 226.51 FTE positions in FY 2021. The proposed Regulatory Staff is the same as what it currently has in FY 2019. In addition, WVDEP expects to have 33.9 vacant positions in FY 2021; they expect vacancies to decline by only 22 percent. Unlike prior years, the State is not having much success in filling vacant positions. With approximately 30 percent of the existing regulatory staff eligible to retire, State officials are anticipating its vacancy problem will continue with more positions to fill in the future.

As discussed in Subsection VI.B.1.d above, the State amended WVSCMRA to increase the filing fee for surface mining permits and to increase or establish new fees for other permitting actions. The State uses revenue from these fees to administer the State's Regulatory Program. However, State officials agree that revenue from those fees is insufficient to offset the revenue lost due to the repeal of the synfuels tax in December 2007. The WVDEP, in cooperation with OSM, is continuing to evaluate other potential sources of revenue for permanent funding of the State's administration of its approved Regulatory Program.

The WVDEP was able to meet its matching requirements under its regulatory grant in FY 2020. State officials have acknowledged that WVDEP should be able to cover its 50 percent matching requirement under its Administration and Enforcement (A&E) Grant through FY 2023. As mentioned, higher than expected permit fees and coal tax revenue estimates caused them to increase prior projections. However, OSM is concerned that this source of funding is only a



temporary fix, and WVDEP will have to identify other sources of revenue if it is to meet its future funding obligations under its grant. The WVDEP recently acknowledged needing additional program funding prior to FY 2022.

Although recent revenues were above projections, most coal models project that State coal production will continue to decline well into the future. Informal assessments show that the continued decline in State coal production will result in a revenue loss of about \$4 million annually for the Regulatory Program and associated costs.

The OSM is somewhat encouraged that State revenue estimates now show that WVDEP should be able to meet its funding obligations under its A&E Grant through 2021. However, given that any State proposal to increase revenue requires legislative approval, WVDEP must act during 2021 to find a permanent source of revenue for its Regulatory Program to resolve this ongoing problem.

## **H. State Bond Forfeiture Administration Grant Reimbursement Rate**

The WVDEP reclaims bond forfeiture sites through its Office of Special Reclamation. Section 3-01-20 of the Federal Assistance Manual (FAM) provides only those bond forfeiture costs that are not directly associated with site-specific activities that are allowable under the State's A&E Grant. The OSM and WVDEP agreed on temporarily funding 45 percent of the field staff for the OSR under the A&E Grant, but this funding rate still requires OSM grants validation.

## **I. Litigation**

This section includes a discussion of existing cases in four categories of litigation:

- Litigation against OSM;
- Litigation involving WVDEP;
- Litigation involving various coal companies; and
- Bankruptcy filings of coal companies operating in West Virginia.

Although only two of the cases discussed herein named OSM as a litigant, we find it useful to monitor these cases to assist our oversight of the West Virginia program. Outcomes of some lawsuits may influence future rulings. We monitor citizen suits against coal companies involving both the CWA and SMCRA. The OSM also monitors NOIs filed by SMCRA or the CWA ahead of a citizen suit, but do not address the NOIs. For a discussion of NOIs filed against OSM, please refer to Section VI.C above.

### **I.1. Litigation Involving OSM**

#### **I.1.a. Ongoing Litigation Regarding the State's Bonding Program**

West Virginia Highlands Conservancy v. Secretary Ken Salazar and West Virginia Coal Association, DOI, Civil Action No. 2:00-cv-1062 (S.D. W.Va.).

On March 15, 2011, the West Virginia Highlands Conservancy (WVHC) moved to reopen a case involving the solvency of West Virginia's ABS, a bond pool made up of forfeited bonds and taxes on coal production. This was the third time WVHC had contested OSM's 2002 approval of changes to the State's bonding program, with the initial complaint filed in November 2000. Although the U.S. District Court neither reversed nor remanded OSM's approval in the previous two rulings, the Court had not dismissed this case altogether. Therefore, WVHC filed a motion to reopen the case, rather than issuing an NOI.

In the subject complaint, WVHC alleged that WVDEP had undermined the Special Reclamation Fund Advisory Council's annual report recommendation that West Virginia increase revenue in its ABS to meet anticipated shortfalls in funding the treatment of water pollution discharges by increasing the tax on coal from 14.4 cents to 25.49 cents per ton. In addition, WVHC maintained that the State had not included in its projections the cost to obtain NPDES permits for long-term water discharges at bond forfeiture sites.

**I.1.b. Litigation Concerning a West Virginia Operation that had Not Started Mining within Three Years of Permit Issuance**

Coal River Mountain Watch, et al., v. United States Department of the Interior, et al., Civil Action No. 1:13-cv-01606-KBJ (D.D.C). and Civil Action No. 2:13-cv-26251 (S.D. W.Va.).

On October 21, 2013, Coal River Mountain Watch (CRMW) filed a lawsuit against DOI and OSM over an August decision that OSM rendered concerning a West Virginia coal company that had not commenced mining operations within three years of the mine's permit issuance. The lawsuit was filed in U.S. District Court for the District of Columbia (Civil Action No. 1:13-cv-01606-KBJ) and a parallel complaint (Civil Action No. 2:13-cv-26251) was filed in the U.S. District Court for the Southern District of West Virginia.

On August 20, 2013, OSM's Deputy Director reversed an OSM CHFO decision that found the WVDEP response to a TDN was inappropriate, arbitrary, capricious, and an abuse of discretion on a permit issued to Marfork Coal Company, which expired by operation of law under Section 506(c) of SMCRA because mining had not started within three years of permit issuance. Among other things, the Deputy Director's decision concluded that the language of Section 506(c) does not require automatic termination or forfeiture if a mining operation does not commence within three years; rather, the permit is subject to termination by the regulatory authority, which, under WVDEP's policy, was required to give notice to the permittee. The CRMW alleges in its complaint that OSM's August 20, 2013, decision constitutes a "national rule" in violation of the Administrative Procedure Act and SMCRA. The Defendants filed answers to both complaints on

January 31, 2014.

There was a Motion to Dismiss or Stay the related case pending before the U.S. District Court for the District of Columbia (D.C. Court) filed by the Federal Defendants on April 15, 2014. The Federal Defendants maintain that the D.C. Court should dismiss the case before it because the Southern District of West Virginia is the appropriate forum for the Plaintiff's claims. The parties submitted a Joint Motion to Stay the case pending resolution of the Federal Defendants' motion by the D.C. Court. On April 2, 2014, the Court granted the Motion and stayed the case.

On December 26, 2016, the U.S. District Judge ordered that OSM's decision of August 20, 2013, vacated, finding WVDEP did not act arbitrarily or capriciously in failing to terminate Marfork Coal Company's permit. The matter was remanded to OSM for reconsideration in light of the District of Alaska's decision in *Castle Mountain Coalition v. OSM*, No. 3:15-cv-00043-SLG, 2016 WL 3688424 (D. Alaska July 7, 2016). The Court closed the case but retained jurisdiction over it for the limited purpose of ensuring that OSM issues a new informal review decision expeditiously.

On January 27, 2017, CHFO provided WVDEP the District Court's order granting the Government's motion for vacating and voluntary remand in this case. In addition, CHFO requested WVDEP to provide OSM any supplemental information that the agency may have concerning this matter.

On June 16, 2017, The Plaintiff's attorney submitted to the Court, a motion for a stipulated settlement agreement regarding the Plaintiff's request for attorney fees and costs. On August 4, 2017, the District Court ordered the stipulated settlement agreement approved, and that the terms and conditions of the agreement incorporated into the order.

On July 26, 2018, OSM advised WVDEP that it was reversing CHFO's determination again regarding WVDEP extending the time for Marfork Coal Company to commence operations in 2012. In addition, OSM instructed CHFO to issue a new TDN with respect to two permit extensions that WVDEP had granted Republic Energy, formerly Marfork Coal Company, on March 19, 2013, and March 21, 2016.

On September 18, 2018, CHFO issued a TDN to Republic Energy alleging that the company had failed to obtain permit extensions from WVDEP in March 2013 and March 21, 2016, for Permit No. S-3028-05. On November 15, 2018, WVDEP provided the State and Republic Energy's responses to OSM's TDN.

On February 15, 2019, CHFO found that WVDEP's response to OSM's TDN regarding Republic Energy Permit No. S-3028-05 constituted appropriate action for both potential violations set forth in OSM's TDN dated September 18, 2018.

## **I.2. Litigation Involving the WVDEP**

**I.2.a. Litigation Concerning WVDEP's Failure to Enforce Bond Forfeiture NPDES Permits**

West Virginia Highlands Conservancy, et al. v. Austin Caperton, Secretary, West Virginia Department of Environmental Protection, Civil Action No. 1:16-cv-70, (N.D. W. Va.) and Civil Action No. 2:16-cv-03769, (S.D. W. Va.).

On April 20, 2016, the West Virginia Highlands Conservancy, West Virginia Rivers Coalition, and Sierra Club sued WVDEP's Special Reclamation Program alleging it was in violation of seven NPDES bond forfeiture permits. Four of the sites were located within the jurisdiction of the United States District Court for the Northern District of West Virginia and three in the Southern District. The lawsuits allege that WVDEP had discharged and continued to discharge quantities of aluminum, iron, nitrogen ammonia, and suspended solids in excess of the effluent limitations set forth in those permits. The lawsuits further allege discharges of effluent with pH outside of the permit range. On December 12, 2016, the parties met at WVDEP's headquarters in Charleston. The WVDEP explained to the Plaintiffs that a timetable for achieving compliance was established and included in a corrective action plan required under the enforcement actions carried out by WVDEP's DMR.

On July 10, 2017, the parties filed a Consent Decree with compliance requirements in the Northern District Court. The WVDEP based the compliance requirements on the schedule prepared for inclusion in the corrective action plan. No addition of new or different requirements due to litigation. On April 25, 2018, the Southern District Court of West Virginia issued an Order granting a Joint Motion to enter the proposed Consent Decree.

On July 24, 2017, the Plaintiffs filed a Motion for attorney fees and costs in the Northern District Court. On October 10, 2017, the Court issued an Order granting the Plaintiffs' request for \$31,290 in attorney fees and \$1,261 for expenses. On October 24, 2017, WVDEP filed objections to the Order on the Motion for attorney fees and expenses in the Northern District Court.

On May 9, 2018, the Plaintiffs filed another Motion in the Southern District Court for an award of attorney fees and expenses. On May 23, 2018, WVDEP filed a Memorandum in opposition to the Motion by the Plaintiffs for an award of attorney fees and expenses in the Southern District Court.

On February 22, 2019, the Southern District Court issued a Memorandum Opinion and Order granting the Plaintiffs' motion for attorney fees and awarded \$16,783 in attorney fees and expenses to the Plaintiffs. Given the issues and parties in these cases are essentially the same, on February 25, 2019, the Plaintiffs provided the Northern District Court a copy of the Southern District Court's Opinion and Order regarding attorney fees.

**I.2.b. Litigation notice of intent to sue WVDEP v. Ohio Valley Environmental Coalition, West Virginia Highlands Conservancy, and Sierra Club for inadequacy of the bond forfeiture fund.**



On May 8, 2020 a notice of intent to sue WVDEP and the bond forfeiture fund for inadequacy for the outstanding bond liability of Earth Restoration Project Environmental Fund, Inc.

On March 27, 2020, WVDEP filed a temporary restraining order against ERP obtaining receivership of the company and its assets and having a special receiver temporarily appointed to manage reclamation of the permits. The NOI was filed and alleged “From its inception, however, ERP operated on a shoe-string budget and with an under-experienced and under-manned staff that left it unable to comply, fully, with its obligations under the Reclamation Agreement and in almost continuous and ongoing violation of its permits. Many of these sites have large water reclamation liabilities.”

Within the order for temporary receivership DEP states, “Of particular concern to DEP is the Defendant's Tygart River Mine complex in Marion County commonly referred to as the "Martinka" mine. The Martinka underground mine has been shuttered for years. But water naturally builds up in the mine. To avoid "artesianing" the topping of water above the mine's natural "pool" that would result in uncontrolled, untreated and contaminated discharge of polluted water from the mine. The Martinka mine must be constantly pumped with the removed water treated for contaminants. The costs associated with the pumping and discharge has amounted to nearly \$900,000 annually.”

OSM is currently monitoring this situation and plans to work closely with WVDEP on this matter during EY 2021.

### **I.3. Litigation Filed Against Various Coal Companies**

#### **I.3.a. Citizen Suit Filed in West Virginia Against Fola Coal Company**

Ohio Valley Environmental Coalition, Inc., et al. v. Fola Coal Company, Civil Action Nos. 2:13-cv-21588, 2:15-cv-1371 (S.D. W.Va.).

On August 8, 2013, the Ohio Valley Environmental Coalition, the West Virginia Highlands Conservancy and the Sierra Club (collectively OVEC et al.) filed a complaint for declaratory and injunctive relief and civil penalties against Fola Coal Company, LLC, a subsidiary of Consol Energy, Inc. According to the complaint, since September 2007, Fola's Surface Mine #4A has discharged, and continues to discharge pollutants, which cause acute and chronic toxicity, ionic stress, and biological impairment, into Leatherwood Creek and its Tributaries, including Right and Rocklick Forks, (Clay County, West Virginia) in violation of West Virginia's narrative water quality standards for biological integrity and aquatic life protection. The client alleges high levels of conductivity and sulfates are the primary causes of the water quality impairments. By violating State water quality standards, they allege that Fola has also violated, and is continuing to violate, the performance standards incorporated as conditions in its West Virginia SMCRA permit. The

Plaintiffs ask the Court to cease such activity; construct treatment systems that will effectively treat its effluent to levels that comply with all water quality standards; and, order Fola to pay appropriate civil penalties up to \$37,500 per day for each CWA violation. This case was combined with Civil Action No. 2:13-cv-16044, and it has been designated as the lead case.

On June 26, 2019, the District Court granted the parties joint motion to enter the proposed consent decree, and Judge Chambers signed the consent decree making it the final judgment of the Court. Under the Consent Decree, the Defendant agreed that its obligations under the decree are not dischargeable through bankruptcy. In addition, the District Court agreed to retain jurisdiction over these cases until termination of the Consent Decree.

#### **I.4. Bankruptcy Filings of Coal Companies Operating in West Virginia**

##### **I.4.a. Murray Energy Corporation - Case No. 2:19-bk-56885**

On October 29, 2019, Murray Energy Holdings Co. and 98 affiliated debtors each filed a voluntary petition for relief under Chapter 11 of the United States Bankruptcy Code in the United States Bankruptcy Court for the Southern District of Ohio, Western Division. The cases are pending before the Honorable John E. Hoffman Jr and are jointly administered under Case No. 19-56885. As part of the reorganization, the group of creditors, who hold about 60 percent of \$1.7 billion in claims against the company, will also provide \$350 million to allow Murray Energy to continue operating in bankruptcy, subject to Court approval. Robert Murray is expected to remain as Chairman of the Board. However, Robert Moore is to assume the role of Chief Operating Officer and President. Under the restructuring agreement, the creditor group will form a new entity called Murray New Co. that will seek to acquire the company's assets through a stalking horse bid. Murray Energy currently has 93 active permits operating within seven states. Eighty-eight percent of Murray Energy's active permits are in Kentucky, Illinois, Pennsylvania and West Virginia.

On January 9, 2020, the Bankruptcy Court entered an order approving the bidding procedures in connection with the sale of all or substantially all of the Debtors' assets.

On April 25, 2020, the Debtors filed the solicitation versions of the Debtors' First Amended Joint Plan Pursuant to Chapter 11 of the Bankruptcy Code at which time the Debtors commenced solicitation of acceptances and rejections of the Plan.

##### **I.4.b Mission Coal Wind Down Co, LLC, et al. - Case No. 18-04177**

On October 14, 2018 (the "Petition Date"), Mission Coal Wind Down Co, LLC (aka Mission Coal Company, LLC) and ten of its subsidiaries filed voluntary petitions in the United States Bankruptcy Court for the Northern District of Alabama seeking relief under the provisions of Chapter 11 of the United States Bankruptcy Code. The Debtors continue to operate their business and manage their properties as debtors-in-possession.

#### **I.4.c. Revelation Energy Holdings, LLC – Case No. 3:2019-bk-30291 and Blackjewel, L.L.C. et al. – Case No. 3: 19-bk-30289 (the Lead Case).**

On July 1, 2019, Revelation Energy Holdings, LLC filed a voluntary petition for Chapter 11 Bankruptcy with the U.S. Bankruptcy Court for the Southern District of West Virginia. The deadline for filing claims is November 4, 2019, and the deadline for objecting to discharge is October 7, 2019.

On July 3, 2019, U.S. District Bankruptcy Judge Volk issued an operating order to Revelation Energy Holdings, LLC. It prescribed the format and procedures for future filings in this bankruptcy case.

On July 3, 2019, the U.S. Bankruptcy Court for the Southern District of West Virginia entered an Order directing the procedural consolidation and joint administration of the Chapter 11 cases of Blackjewel, L.L.C. (0823); Blackjewel Holdings L.L.C. (4745); Revelation Energy Holdings, LLC (8795); Revelation Management Corporation (8908) and Revelation Energy, LLC (4605). Parties must file all further pleadings, other papers, and make all further docket entries in the Chapter 11 case of Blackjewel, L.L.C. – Case No. 3:19-bk-30289, which was designated the lead case by the Bankruptcy Court.

As of June 30, 2019, Revelation Energy, LLC had seven (7) surface mining and six (6) underground mining operations in West Virginia. The State granted one of the underground mining operations a Phase I bond release and granted two other underground mines inactive status. Other mining operations associated with Revelation Energy are in Virginia and Kentucky. Its affiliate, Blackjewel, has mining operations in the State of Wyoming.

On July 1, 2019, Blackjewel, L.L.C. and four affiliated debtors each filed a voluntary petition for relief under Chapter 11 of the United States Bankruptcy Code in the United States Bankruptcy Court for the Southern District of West Virginia. The cases are pending before the Honorable Frank W. Volk and are jointly administered under Case No. 19-30289.

On July 24, 2019, six additional debtors each filed a voluntary petition for relief under Chapter 11 of the United States Bankruptcy Court for the Southern District of West Virginia.

#### **I.5. Impact of Bankruptcies on West Virginia**

OSM is currently monitoring coal-mining companies in chapter 11 bankruptcy and their impact on the West Virginia program. Currently, a small number of permits have been forfeited with one large company being moved into receivership of the State. OSM will provide updated analysis of bankruptcies in the 2021 annual report.

## **J. Monitoring and Improvements to West Virginia's Alternative Bonding System (ABS)**

### **J.1. Alternative Bonding System**

During EY 2020, the Special Reclamation Fund Advisory Council (Advisory Council), in cooperation with WVDEP and OSM, continued monitoring the State's ABS, commonly known as the Special Reclamation Fund (SRF). Several noteworthy events occurred during the year and are discussed below.

During the reporting period, the Advisory Council, through the WVDEP, contracted with Taylor & Mulder, Inc. of Potomac, Maryland to complete an actuarial study of the ABS. The actuarial review was completed by late 2019, and the study was provided to the Legislature in early 2020. By law, an actuarial study is to be conducted on the State's ABS every two years, and informal reviews are to be done annually.

State law authorizes the Advisory Council to make recommendations to the Legislature regarding the financial adequacy of the State's SRF. In its 2018 SRF Annual Report, the Advisory Council recommended that the current reclamation tax of 27.9 cents remain in force. The Advisory Council recommended the Legislature form a panel to examine elements of the State code that result in uncontrolled liabilities, how other states deal with such issues, and finally to propose a State legislative initiative to rationalize water quality regulations to meet the conditions of the Federal Clean Water Act (CWA), while adding rationality and certainty to the process. The Advisory Council is concerned about the default transfer of water treatment liability to the SRF when opportunities exist to pursue responsible parties under the CWA.

During this EY, the Advisory Council commissioned the completion of a Consensus Coal Production Forecast for West Virginia by the Center for Business and Economic Research at Marshall University. Taylor & Mulder used the forecast completed in 2019, a consensus of four other forecasts, in its actuarial study which was produced in late 2019. The study shows no expectation for improvement in the long-term trend in State coal production.

### **J.2. Actuarial Analysis**

In 2008, the West Virginia Legislature established a separate Special Reclamation Water Trust Fund (SRWTF). Beginning in 2012, coal tax revenue based on a coal tax rate of 15.0 cents per ton was paid into the SRWTF. The WVDEP decided to allow this fund to increase in value and not use revenue from it for water treatment purposes until after 2019. In addition, coal tax revenue based on a 12.9 cents per ton tax rate was paid into the SRF, which is currently being used by the State for both land and water reclamation. As mentioned above, the State contracted Taylor and Mulder, Inc. to conduct an actuarial study of the State's ABS in 2019. Pinnacle Actuarial Resources, Inc. (Pinnacle) conducted an actuarial review of the State's SRF and SRWTF in February 2017. Pinnacle's review showed that the SRF would develop a negative cash balance in

2021. However, because the actuary projected both funds combined to maintain a positive cash balance through 2052, they recommend the transfer of \$38 million in assets from the SRWTF to the SRF. The SRF would be able to maintain a positive balance position throughout the projected period without causing the SRWTF to move into a negative balance position. In lieu of transferring the funds, WVDEP decided to monitor both funds and transfer funds from the SRWTF to the SRF as it became necessary.

During the reporting period, the Advisory Council, through the WVDEP, contracted with Taylor & Mulder, Inc. of Potomac, Maryland to complete an actuarial study of the ABS. The actuarial review was completed by late 2019, and the study was provided to the Legislature in early 2020.

### **J.3. Special Reclamation/Water Trust Funds**

Through the State Investment Management Board (IMB), the Advisory Council continued to invest the Special Reclamation Water Trust Fund (SRWTF) revenue in long-term bond investments. The SRF revenue, used to fund land reclamation and water treatment activities, is currently invested in short-term financial instruments. The adoption of this investment strategy has resulted in increased rates of return for the SRWTF and to a lesser extent for the SRF. As of June 30, 2020, the SRF had a balance of \$44.3 million a reduction of 30% from last year due to no transfers from the SRWTF and additional expenditures for land and water reclamation performed during the year. The SRWTF had a balance totaling \$125 million a 13.25% increase from last year from coal tax and interest gains.

Long-term investments, like the SRWTF, are invested at 40 percent in stock, 40 percent in fixed income and 20 percent in Hedge Funds. The SRF is mostly invested in short-term assets, such as money market securities.

During the reporting period, the Office of Special Reclamation (OSR) used State Regulatory inspectors to inspect completed bond forfeiture sites to ensure compliance with approved reclamation plans, and upon request, DMR issues letters terminating jurisdiction over the sites. WVDEP retains jurisdiction over any bond forfeiture site, or portions thereof, that require treatment of discharges emanating from such sites and are required to obtain an NPDES permit any discharges (Keeley Decision 1/14/2009 - WVHC versus Huffman).

As mentioned below, WVDEP in cooperation with the United States Environmental Protection Agency (EPA) and OSM continued an alternative means project for treating water within the Muddy Creek and Sandy Creek Watersheds (Preston and Barbour Counties, WV). Rather than treating water discharges from bond forfeiture sites on a site-by-site basis, WVDEP petitioned EPA to conduct in-stream treatment, thus addressing both pre-law and post-law AMD problems, while improving each stream's biological integrity. In 2017, EPA approved WVDEP's request for a variance for Muddy Creek.

A watershed-based NPDES permit will cover water treatment sites within the watershed where the variance is applied, and WVDEP will be required to meet in-stream water quality standards at predetermined stream locations. WVDEP is considering other locations to pursue similar opportunities to conduct in-stream treatment.

On May 8, 2020 a notice of intent to sue was filed with the WVDEP over the SRF/SRWTF for inadequacy of funds to address outstanding bond liabilities of Earth Restoration Project Environmental Fund, LLC permits. This topic is discussed in section VI.I.2.b of this report.

#### **J.4. AMD Remediation: Muddy Creek & Sandy Creek**

WVDEP in cooperation with the United States Environmental Protection Agency (EPA) and OSM continued an alternative means project for treating water within the Muddy Creek and Sandy Creek Watersheds (Preston and Barbour Counties, WV). Rather than treating water discharges from bond forfeiture sites on a site-by-site basis, WVDEP petitioned EPA to conduct in-stream treatment, at equivalent cost, thus addressing both pre-law and post-law AMD problems, while improving each stream's biological integrity. In June 2017, and February 2018, the EPA approved WVDEP's request for variances within Muddy Creek and Sandy Creek respectively.

Watershed-based NPDES permits now cover bond forfeiture water treatment sites within these watersheds where the variance is applied, and WVDEP will be required to meet instream water quality standards at predetermined stream locations. WVDEP is considering other locations to pursue similar opportunities to conduct in-stream treatment.

##### **J.4.a Muddy Creek**

AMD from Bond forfeiture sites within Martin Creek, a tributary of Muddy Creek (Preston Co., direct drain to the Cheat River), accounted for roughly 16% of the total acid loads at the mouth. AML sources were responsible for the remaining 84%. The NPDES permit for the Muddy Creek Watershed Restoration Project was approved July 29, 2019 and is located at the mouth of this tributary. This in-stream permit now supersedes four WVDEP NPDES permits throughout the Martin Creek watershed. The NPDES permit for the T&T Fuels Treatment Facility, located on Muddy Creek approximately one mile downstream of Martin Creek, remained active. This facility took on some overwhelming AMD loads from within Martin Creek, including AML sources. Since the combined, in-stream/at-source treatment approach took effect conditions within Muddy Creek have improved substantially. Muddy Creek is now net alkaline with a circumneutral pH, and the fish population went from zero to over 1400 in 2019, including some moderately sensitive fish species such as mottled sculpin and rainbow trout.

##### **J.4.b. Sandy Creek**



The WVDEP is taking a similar permitting approach in the Sandy Creek watershed (Barbour Co, direct drain to the Tygart River) as it did for the Muddy Creek Watershed. By obtaining instream NPDES permits at the mouths of two tributaries of Little Sandy Creek, Left Fork of Little Sandy (LFLS) and Maple Run, using the in-stream treatment approach, the WVDEP is able to treat all AMD sources within these two tributaries. The LFLS accounts for 91 percent of the downstream loadings in Little Sandy, yet the one bond forfeiture site in this watershed contributes a mere two percent, and the three bond forfeitures in Maple Run only account for approximately 11 percent of the loadings of this tributary. The WVDEP obtained NPDES permits for these two tributaries December 13, 2019. Although travel restrictions due to COVID-19 have not allowed for fish surveys, conditions appear favorable for stream recovery. Minnows have been observed throughout certain stream reaches in Sandy Creek and Little Sandy and the WVDEP continues to record circumneutral pH values at the mouths of these streams.

### **J.5. Rare Earth Elements (REEs)**

During EY 2019, WVDEP continued to collaborate with West Virginia University (WVU) in evaluating the concentrations of REEs in AMD sludge that is present on several bond forfeiture sites throughout the State. According to WVU, test results show that the concentrations of REEs in AMD sludge were of commercial grade, and no uranium or thorium was present in the samples evaluated. In addition, about 77 percent of the REEs present contain heavy versus light metals. Typically, AMD sludge with a low pH contains better quality REEs.

Recent research conducted by WVU has shown that AMD is enriched in REE and the critical mineral cobalt. It has been found that AMD has an average total REE concentration of about 287 µg/L (0.287 ppm), ranging from negligible to 2,000 µg/L. WVU has created a concentrate of 80% REE derived from AMD treatment precipitates. The strategy of using raw AMD as the feedstock to their acid leaching/solvent extraction (ALSX) refining process was demonstrated on a bench scale level and also in the field where a mobile field unit was deployed at a conventional AMD treatment plant operated by WVDEP.

WVDEP engineers designed an AMD treatment facility at a Buffalo Coal bond forfeiture site located on the Grant and Tucker County line near Mount Storm, WV. The engineers then worked closely with WVU to incorporate a full-scale pilot REE extraction component to the treatment plant. Rockwell Automation Corporation is providing the sensors and control technologies for the pilot plant to process the sludge predicted to hold REEs in commercial quantities for future development. Construction of the pilot project began November 12, 2020 and is expected to be complete in the fall of 2021.

Studies show that the Appalachian basin could produce 800 tons of REEs per year or the same amount the defense industry needs annually.

Ownership of the REEs remains a legal issue that still needs to be determined.



## **J.6. Tax Incentives to Reclaim Bond Forfeiture Sites**

As discussed in Subsection VI.B.1.i, WVDEP submitted a statutory revision to provide tax incentives for mine operators to reclaim bond forfeiture sites within the State. Pursuant to WV Code §22-3-11(h), the State Tax Department is authorized to promulgate rules to carry out the purposes of this law. On June 6, 2014, the State Tax Department filed its rules with the Secretary of State. On November 13, 2014, OSM published a **Federal Register** notice that reopened the comment period on the Special Reclamation Tax Credit Rule. The comment period closed on November 24, 2014. In section VI.B.1.a of this report WV-113-FOR was published May 7, 2020 and finalized in the **Federal Register**. Operators can use the tax credit to offset their special reclamation tax liability by completing reclamation on other bond forfeiture sites. Part of the intent is to free up OSR personnel to work on other bond forfeiture sites throughout the State.

## **J.7. Bond Forfeiture NPDES Permits**

As discussed in Subsection VI.I.2.a, the U.S. Fourth Circuit Court of Appeals upheld a U.S. District Court decision finding the State was violating the CWA by emitting pollutants from a point source without a permit, and ordered WVDEP to obtain NPDES permits for discharges from 21 bond forfeiture sites within the State. Due to this decision, the State entered a Consent Decree approved by both the Northern and Southern District Courts. At the end of the EY 2020, WVDEP had obtained 162 NPDES permits for 201 bond forfeiture permits because of the Consent Decree.

## **J.8. Timeliness of Bond Forfeiture Reclamation**

During the review period, OSM conducted a study to evaluate the timeliness of bond forfeiture reclamation by OSR. The 38 CSR 2-12.4.c provides that after the notice of forfeiture has been served, the Secretary shall in a timely manner, but not later than 180 days after such notice, initiate reclamation operations to reclaim the site in accordance with the approved reclamation plan or modification thereof, including action to remediate any acid mine drainage from the site. This study will be finalized in EY2021 and will be published in next EY report.

As discussed above under Subsection VI.B.1.m, the West Virginia Legislature adopted Enrolled SB 163 on February 16, 2018, and the Governor approved it on February 27, 2018. As a result of this action, WVDEP proposes to remove subsection 12.4.c from its regulations. This amendment is pending OSM approval.

## **K. Trend Station/Watershed Health Oversight**

During EY 2017, two AmeriCorps members, along with OSM's CHFO developed tools to investigate the possibility of post-SMCRA mining contributing to stream degradation. Work continues developing a procedure to utilize existing water quality monitoring programs to

prioritize inspections. Using water quality information available from NPDES, WVDEP WAB, and WVDEP Trend Station programs, mining operation site inspections were conducted to determine potential contributors to worsening iron impairment of Scott's Run and Mod Run. OSM CHFO is investigating these two watersheds as part of the ongoing study to determine if post-SMCRA mining is contributing to the increased iron concentrations. This study was not completed before the end of the EY and will be reported in the 2021 EY report.

#### **L. Incidental Boundary Revisions (IBR)**

As previously reported, CHFO evaluated the State's implementation of its IBR requirements. The evaluation found WVDEP was performing many aspects of its IBR process well adding all new acreage under an IBR or amendment is bonded. In addition, WVDEP recognized that an IBR application did not quite fit the profile of a minor boundary revision and treated such requests as significant permit revisions with public comment periods.

However, many of the IBRs in the review were combined with other operational changes, and the IBR acreage limits for surface mines were exceeded making the classification of all the changes subject to question as an IBR. Some of the problems identified in the study relate to the State's IBR policy, which, in some instances, does not require all the necessary information or conflicts with State program requirements. That policy provides waivers reserved for underground mining operations used for coal refuse disposal or coal preparation operations where the activity directly facilitates underground mining operations. The OSM found examples where waivers granted in those situations that do not meet program requirements.

Because WVDEP submitted a program amendment to OSM relating to its IBR requirements that may resolve some of these concerns, OSM and WVDEP agreed to complete processing the program amendment before taking any action on this issue. A complete review of WVDEP's IBR modification is part of a larger effort and was pending OSM's approval at the end of the reporting period. For further information regarding the status of this effort, see Subsection VI.B.1.c above. Once a final decision is rendered on the State's proposed IBR modification, additional action may be needed to address the issues described in the IBR oversight evaluation. The relevant program amendment was not approved or finalized before the end of the review period. This evaluation will be considered for action during the next EY subject to the program amendment being approved.

#### **M. Land Unsuitable Mining Petitions - Blair Mountain Battlefield**

On June 27, 2018, Joy Beasley, National Park Service's Keeper of the Register, issued a Decision Memorandum remanding the 2009 decision removing the Blair Mountain Battlefield from the National Register of Historic Places. The West Virginia State Historic Preservation officer nominated the site to the National Register in 2005. The National Register subsequently listed the

site in 2009 but removed it months later. More than 10,000 union coal miners fought with coal company guards along the Blair Mountain Ridge, between Boone and Logan Counties in 1921. Many consider Blair Mountain Battlefield as the site of the largest armed confrontation in the United States labor history.

In her decision, Ms. Beasley determined that the Keeper's December 30, 2009, decision to remove Blair Mountain Battlefield from the National Register was erroneous, because she determined that 66.26 percent of the private property owners did not object prior to the listing, as alleged by the coal industry. Therefore, she confirmed on June 27, 2018, the National Register of Historic Places once again listed Blair Mountain Battlefield.

On July 31, 2018, Dr. Charles Keeney, Friends of Blair Mountain, Inc., sent a letter to Harold Ward, Director, DMR, WVDEP, requesting WVDEP take action to protect Blair Mountain from mining. He requested the State declare the 1,669-acre battlefield area and the 500-acre Northwest Flank of the battlefield unsuitable for mining since the area is part of the National Register of Historic Places. During EY 2019, WVDEP participated in meetings concerning the request; however, at the end of the evaluation year, WVDEP had not responded officially to the Keeney letter. There was no change in the status of this issue during the EY. OSM will continue to monitor actions of WVDEP during EY 2021.

## **N. Underground Mine Hydrology Field Review**

The topical report prepared for this review summarizes OSM's hydrologic assessment of underground mines, post closure (Phase I, II, or III bond release). This evaluation covers the time period November 15, 2016, to June 30, 2018, and encompasses underground mine bond release requests for 34 permits. A similar evaluation was conducted previously for the period November 15, 2015, to November 15, 2016. The associated report for that review was finalized and posted on OSM's website : <https://www.odocs.osmre.gov/> (ID 5221).

In addition to on-the-ground inspections, an important element of the review was an evaluation of the current hydrologic conditions within the deep mine, and projection of the stability of those conditions into the future to prevent adverse impacts to the hydrologic balance outside the permit area.

As the EY 2018 OSM study was progressing, WVDEP made significant changes on how and when the evaluation of the final hydrologic impacts occurs. On June 13, 2016, WVDEP issued instructions to the industry and its consultants requiring underground mines at the time of a bond release request, to submit a "Deep Mine Abandonment Plan" in the form of an Article 3 permit revision. This new process intends to ensure the operator provides appropriate information to substantiate the approved PHC and HRP and to reduce the need for a separate PUMA. The memo

also provides clarification of how WVDEP reviews the documents and bond releases.

Although WVDEP implemented improvements to its procedures for the review of underground mines at bond release, it has been an OSM finding that applicants did not provide information needed to assess post mine closure hydrology conditions for 7 of the 34 bond release applications reviewed during this study period. Consequently, those bond release requests were ultimately withdrawn. Further, OSM had recommended withholding bond release on 2 other permits (of the 34) due to hydrologic issues but were inadvertently released. However, after review by WVDEP management it was determined that the permits should not have been released, resulting in monitoring requirements being placed on the permits. After a year of satisfactory results, the permits were released from liability.

The OSM is continuing to work with WVDEP to evaluate underground bond releases to determine that post closure hydrology for the mine will not create a long-term pollutional source and that barriers are sufficient to prevent blowouts. A report will be drafted describing results of the current OSM effort and will be discussed in the next EY report.

## **VII. Regulatory Program Problems and Issues**

### **A. Acid Mine Drainage Inventory of Active Permits**

As previously reported, WVDEP and OSM established a joint team to update information regarding water treatment activities on active permits within the State. The team identified approximately 370 active permits in the State with appreciable water treatment costs. As discussed in Subsection VI.E, because of a lack of accurate and complete water treatment flow and cost data, work on this project was never completed. Accurate and complete knowledge of active mine treatment liabilities is necessary for determining the solvency of the State's ABS.

As discussed in Subsection VI.E, WVDEP undertook several activities during this evaluation year to improve its AMD inventory. The WVDEP is now working to develop cost estimates on all outlets with potential long-term pollution associated with SMCRA permits and hopes to have this effort completed next year. OSM will continue to coordinate with WVDEP on this effort.

### **B. State Regulatory Staffing and Program Funding**

As discussed in Subsection VI.G, during EY 2020, the State had an approved regulatory program staff of 226.51 Full-Time Equivalent (FTE) positions, but there are 33.45 vacant positions, resulting in only 192.61 FTE filled positions as shown in Table 8. Ninety-eight of the vacancies are in the critical mission areas of permitting and inspection and enforcement.

During EY 2020, the State also submitted its proposed three-month budget estimate for FY 2021.

The WVDEP projects that its regulatory staff will decline to 226.51 FTE positions in FY 2021. The proposed Regulatory Staff is the same as what it currently has in FY 2019. In addition, WVDEP expects to have 33.45 vacant positions in FY 2021. Unlike prior years, the State is not having much success in filling vacant positions. With approximately 30 percent of the existing regulatory staff eligible to retire, State officials are anticipating its vacancy problem will continue with more positions to fill in the future.

As previously reported, the State did increase its permit fees, resulting in approximately \$3 million in additional revenue to administer its Regulatory Program. In addition, coal tax revenue exceeded projections, and WVDEP collected approximately \$2.3 million in coal taxes and other revenue. However, these increases have not compensated for the lost revenue from the repeal of the synfuels tax. Presently, the WVDEP projects it should have sufficient revenue to meet the 50 percent matching requirement under its regulatory grant through 2023. However, WVDEP must still find a permanent solution to the State's revenue match prior to 2023, if it is to resolve this ongoing issue.

### **C. Acid Mine Drainage Prediction-Underground Mining and Expansions – Underground Mine Monitoring**

During a previous study, OSM and WVDEP completed a review of nine underground mine permits where AMD had developed. The design of the review was to determine whether AMD formation could have been predicted and properly addressed through better informed permitting considerations and decisions. The review found State permit reviewers could use available data to more consistently predict and/or prevent AMD issues and that revised CHIA's should be required with significant underground mine expansions. This action is consistent with the guidance and recommendations put forth by a 2007 joint Quality Assessment Quality Control (QAQC) panel that was comprised of WVDEP/OSM/industry specialists that completed CHIA guidance for Division of Mining and Reclamation (DMR) permit reviewers.

The WVDEP agreed to take several actions to improve how to address AMD issues in the future. These included updating of the WVDEP CHIA Guidance document. A WVDEP/OSM task group also developed a Guidance Manual for Monitoring Underground Coal Mining Operations for use by WVDEP's DMR Permit Review Staff and the coal industry. This manual addresses issues concerning the prediction and monitoring of potential hydrologic impacts from underground coal mining operations. In EY 2013, a joint OSM and WVDEP task group completed a draft of the Guidance Manual.

During EY 2018, CHFO worked with WVDEP's DMR in reviewing, editing, and completing the document to finish this project. During EY 2019, WVDEP's DMR advised that it would use portions of the manual for training purposes. OSM will follow up with WVDEP in EY 2021 to determine progress on implementing and using the manual in its day to day operations.

#### **D. Financial Adequacy of the Special Reclamation Fund (SRF)**

As discussed in Section VI.J, the Advisory Council, through WVDEP, contracted Taylor & Mulder, Inc. to conduct an actuarial study of the State's SRF and SRWTF in late 2019. By law, the State contracts an actuarial study every two years, and completes informal reviews annually. The State's prior actuarial analysis showed the SRF would develop a negative cash balance in 2021. However, Taylor & Mulder, Inc. projected both funds to maintain a positive cash balance through 2052; they recommend transferring \$38 million in assets from the SRWTF to the SRF. The SRF would be able to maintain a positive balance position throughout the projected period without causing the SRWTF to move into a negative balance position. In lieu of transferring the funds, WVDEP decided to closely monitor both funds and transfer funds if necessary.

As noted in Subsection VI.I.5, coal companies in some stage of bankruptcy during 2016-2017 own 59 percent of the State's active and inactive permits. At the time of this writing, none of the bankruptcies had resulted in a revoked permit or forfeited bond. However, some bankruptcies continued into EY 2020, and the State faces potential reclamation liability well into the future as a result. In Section II, this report acknowledges a continued declining long-term trend in State coal production, which is the primary source of funding for the SRF and SRWTF. Furthermore, as discussed in Section VI.J, the Consensus Coal Production Forecast commissioned by the Advisory Council during EY 2019 shows no expectation that the long-term trend in State coal production will improve. As discussed in VII.A, WVDEP has taken action to improve its assessment of water treatment liabilities at active permitted sites and in the future will use this information to improve its assessment of bond forfeiture water treatment liabilities. Finally, as described in Section VI.B, OSM continues to support the various efforts taken by the State to improve its SRF and SRWTF to date and we will continue in EY 2020 working with WVDEP to improve the financial stability of its bonding program.

As discussed in OSM's April 2015 letter to WVDEP, when projecting future liabilities about the State's alternative bonding system, actuarial firms have relied extensively on historic bond forfeiture reclamation data. However, given the nature and cost of existing bond forfeiture reclamation, we strongly believe it would be prudent for WVDEP and the Advisory Council to consider the risk of failure of some active sites with unusual reclamation liabilities, such as selenium, reverse osmosis, etc., that are not reflected in current bond forfeiture reclamation data used by actuarial firms today.

### **VIII. OSM Assistance – Regulatory Program**

#### **A. Underground Mine Monitoring – Technical Guidance Manual**

The OSM assisted WVDEP with the preparation of a Guidance Manual to promote consistency and efficiency in the preparation and review of the hydrologic portions of underground mine



permit information. A draft of this document was completed in May 2013, and during EY 2017-2018, CHFO in conjunction with WVDEP's DMR management reviewed and completed editing the document. The WVDEP management received the document for final review and comment, but during EY 2019, the document was still going through the final reviews. It is anticipated the finalized document will be guidance or used as a training module during EY 2021.

## **B. Technical Training – Technical Innovation and Professional Services (TIPS) and National Technical Training Program (NTTP)**

The OSM organizes and conducts in the classroom training courses throughout the year for State and Federal program staff. The courses are specifically oriented toward the latest technologies useful for the regulation of active mining and reclamation of abandoned mines. OSM's NTTP and TIPS Program administers these courses. During EY 2020, WVDEP sent 37 regulatory staff to 14 NTTP courses and 6 regulatory staff to 3 TIPS courses. The OSM also makes online training courses available for various subjects through its TIPS training program, and 4 WVDEP Regulatory Program Staff participated in the online courses during the year.

## **C. Lexington Coal Company**

Horizon Natural Resources Company (Horizon) filed for Chapter 11 bankruptcy protection in November 2002, resulting in the largest coal company bankruptcy in United States history at the time. In August 2004, the U.S. Bankruptcy Court in Kentucky approved the company's reorganization plan, which included the formation of Lexington Coal Company, LLC (LCC). LCC's primary responsibility was to complete land reclamation on the remaining permits and to provide for the treatment of any pollution discharges found to be present.

Due to the bankruptcy, there were 16 sites, involving 13 permits, in West Virginia requiring land reclamation by LCC. LCC completed land reclamation of all those sites by EY 2014.

LCC also created three Trust Fund Agreements to treat water at four of the reclaimed mine sites. During EY 2019, LCC continued water treatment activities at the four sites. An enforcement follow-up was conducted by WVDEP and OSM on September 13, 2019 for one of the four sites. WVDEP issued 2 NPDES single event violations (SEV's) at the time of the inspection, for conditions not allowable in State waters and for exceeding limits of pH. On September 19, 2019 the SEV's were terminated after meeting pH compliance and removing the white precipitate in the creek. The four sites are being monitored by WVDEP routine NPDES inspections.

The LCC submits summaries of its operation, maintenance, and capital improvement costs at sites requiring water treatment to WVDEP. Pursuant to the Trust Fund and Bond Agreements, WVDEP and LCC review and update the water treatment cost estimates and adjust the bond amounts based on the Primary and Capital Trust and Target valuations set forth in the Agreements. Based on this



review, monies within the Trust Funds can be adjusted over time. If the Trust valuations are less than the Target valuations, WVDEP can request that LCC add monies to the Funds. However, if the Trust valuations are more than the Target valuations used in managing the trust funds, WVDEP is required to instruct the Trustee to disburse the excess funds to LCC.

The State's Investment Management Board (IMB) invests the three trust funds for WVDEP. According to the IMB, the three trust funds had a value of \$9,119,159 as of May 31, 2020. In March 2019, LCC requested that WVDEP reimburse it for operation and maintenance and capital costs that it incurred during 2019 at these three sites. During this evaluation period, WVDEP reviewed LCC's request and applied it to a model previously developed by OSM for evaluating trust funds. Based on its review, WVDEP's results show that LCC was due a funds reimbursement at its three sites for 2019. The WVDEP determined that LCC's total Trust valuations were greater than its target valuations, thus making them eligible for reimbursement in 2019. The WVDEP's final decision for LCC's request for reimbursement was granted and made in the amount of \$337,765.

As part of our routine oversight inspections at the end of last year, OSM inspected the four LCC permits associated with the three trust fund sites mentioned previously. During EY 2020 OSM provided WVDEP inspection results for LCC's permits that OSM and WVDEP jointly inspected. As previously mentioned, one of the four surface mine permits had stream staining at the time of inspection, which the State inspector issued two NPDES SEV's. The OSM plans to conduct a follow-up inspection at this site during low flow conditions to assess the staining issue. The WVDEP and OSM continue to monitor and report on LCC's water reclamation activities at these four mine sites in future reports.

#### **D. The Quality Assessment Quality Control Panel (QAQC Panel)**

The Bragg vs. Robertson Lawsuit Consent Decree entered in the U.S. District Court for Southern West Virginia on December 22, 1999, created a QAQC Panel, with the purpose of "reviewing surface mining permits and to visit mine sites, as appropriate, to apprise the Director of WVDEP respecting administrative completeness of permits and to help assure consistent application of policies and procedures." The Consent Decree also specified that the Director create and post new positions to include a biologist (with at least a master's degree in biology) and trained and qualified (professional) engineer with at least a Bachelor of Science Degree in mining or civil engineering. Five personnel make up the QAQC Panel: two coal industry representatives, two environmental representatives, and one WVDEP representative. The WVDEP also provides a full-time "Approximate Original Contour (AOC) Engineer" and other WVDEP representatives, if needed, to assist and support the Panel. The OSM is not a member of the Panel, but often has a representative to attend meetings as an observer and resource to the team.

The Panel is required to meet nine times per year. This generally consists of four, two-day sessions at WVDEP regional offices and two one-half-day sessions to prepare and present the Panel's

annual report to the Director and his staff at WVDEP headquarters. The calendar year 2020 represents the QAQC Panel's 21<sup>st</sup> year in existence.

While the Panel reviews and monitors the overall completeness and quality of permit applications, examples of specific technical areas on which it has concentrated in the past include:

- AOC calculations, determinations, and compliance certifications;
- AOC variances and alternate post-mining land use justifications;
- Contemporaneous reclamation plans and variances;
- Topsoil substitute waivers;
- Endangered Species issues;
- Storm Water Runoff Analyses (SWROAs);
- Drainage control designs;
- Slurry impoundment construction plans;
- §404 Clean Water Act delineation and mitigation requirements; and
- Field application of specific reclamation techniques (such as forestland and ARRI).

The Panel annually reviews permitting statistics, reports on recent trends and permit practices, reviews user issues, and makes overall recommendations to WVDEP to improve permit quality and the efficiency of permit reviews. Over the past several years, the panel has identified and commented on general completeness and any potential deficiencies needing to be addressed. At the request of WVDEP staff, the Panel has also reviewed specific state policies and/or proposed guidelines, offered assistance with the development or revision of various certification forms, assisted with industry training sessions, and recommended measures to clarify/update WVDEP's e-permitting system (now called ESS or Electronic Submission System).

The panel's plans and goals for the calendar year 2020 included:

- Visit each regional office as practical.
- Continue to review most recently submitted SMA's by region
- Conduct site visits, approximately 1-2 meeting days;
  - Re-visit site(s) previously visited by the Panel in early stages of mining in order to review progress and current compliance;
  - Visit Alternative Post Mining Land Use (PMLU) sites;
- Prepare a SWROA Frequently Asked Questions (FAQ) document/help file, based on the results of last year's most common SWROA deficiency project;
- Assist WVDEP with training seminars/sessions, as requested; and
- Take on any special project or review of issues requested by the Director or Secretary.
- Prepared and presented End of Year (EOY) Report to the Director.

Panel postponed during the first half of 2020 due to the Covid-19 pandemic.

- Continue to review most recently submitted SMAs or Amendments in each region:
- Continuing work on SWROA FAQ project:
- Assist WVDEP with draft policy on submission standards for .pdf files of permit application maps and drawings; and,
- Assist WVDEP with 2020 Industry Training sessions and/or planning.

The QAQC Panel expects to present its annual report to the Director in early December 2020; the report will summarize 2020 activities, recent permitting trends, plans for 2021, and any Panel recommendations to WVDEP.

### **E. ESA Stream Assessment for the Guyandotte and Big Sandy Crayfish**

The WVDEP requested OSM provide technical assistance to determine if environmental controls on surface mine operations are adequate to protect the Guyandotte River Crayfish (*Cambarus veteranus*) and the Big Sandy Crayfish (*Cambarus callainus*), both listed in early 2016 under the Endangered Species Act due to declining range and habitat loss.

The OSM currently assists in reviewing water-monitoring data from existing mining operations, other available sources, and collects new data as part of an on-the-ground field project. This analysis will include end-of-pipe data at drainage structures, stream monitoring, and potential watershed impacts from other sources.

The project is ongoing with OSM field staff collecting data and performing literature reviews. The OSM will provide updates and recommendations to WVDEP and coordinate with FWS on continuing fieldwork.

## **Abandoned Mine Lands Reclamation Program**

### **A. General**

#### **A.1. Introduction**

The mission of the Abandoned Mine Lands Reclamation Program is to reclaim AML sites by abating hazards, reducing or mitigating the adverse effects of past mining, and restoring adversely affected lands and water to beneficial uses. The WVDEP's OAMLRL is successfully carrying out this mission by addressing the most serious of the health and safety issues created by these AML problems. There are many more AML problems on West Virginia landscapes and streams needing to be addressed and ultimately abated. The OAMLRL conducts all the AML reclamation in West Virginia.

## A.2. Program Administration

The OSM has approved four primary AML components to the West Virginia Program:

- The regular construction program abates high priority, non-emergency problems caused by past mining practices. The OSM approved the regular abandoned mined lands construction program on February 23, 1981.
- The State's Emergency Program abates problems caused by past coal mining practices. These must be expedited because the health and safety issues result from a sudden occurrence too serious to be addressed under the regular construction program. The OSM approved the State's Emergency Program section on August 26, 1988. In FY 2011, OSM stopped providing specific funding for emergency projects, but OAMLRL continues to address emergency issues with its regular grant funding and continues to operate an Emergency Program as it did prior to the elimination of direct, Federal emergency funding.
- Potable water supply provisions allow the State to repair or replace water supplies when the damage from past mining practices occurred primarily before August 3, 1977. The OSM approved this program provision on July 25, 1990.
- The Acid Mine Drainage Abatement and Treatment Program (AMD set-aside) allows the State to use a percentage of its annual grant allocation to reclaim watersheds impacted by AMD. The OSM originally approved this program component on March 26, 1993 and limited the amount of the "set-aside" to ten percent. The 2006 Reauthorization of the AML program allowed the State to increase the amount of funding in the set-aside for AMD treatment and abatement to 30 percent of its annual grant.

An additional function of the OAMLRL Program is the administration of the Abandoned Mine Lands and Reclamation Economic Development Pilot Program (Pilot). During FY 2016, as part of The Consolidated Appropriation Act of 2016 (Public Law 114-113), \$30 million was made available to WVDEP to partner with other entities to develop economic revitalization projects focused in areas of the State severely impacted by the economic downturn in the coal market. The focus of these grant monies is to accelerate the remediation of AML sites with economic and community development end uses, and to explore strategies to convert legacy coal sites into productive land uses. During FY 2017, FY 2018 and FY 2019, \$25 million was made available to the WVDEP for each of these FYs, through subsequent Pilot grants. Throughout these four FYs, the WVDEP has submitted 44 potential projects for OSM's review.

### **A.3. Abandoned Mine Land Inventory System Update**

On December 12, 2012, OSM finalized Directive, AML-1, which outlines the policies and procedures for developing and maintaining the AMLIS. The OAMLRL staff continues to develop Problem Area Description (PAD) forms, and associated documents, for inclusion into AMLIS. The OAMLRL submits these PADs, along with significant changes to existing PADs, to OSM for approval. The electronic version of AMLIS (e-AMLIS) allows for multiple maps and documents to be uploaded to the system and linked directly to problem areas. This information, as well as completion data, can now be easily accessed later through queries and downloads. The OAMLRL staff continues to amend existing information within e-AMLIS to more accurately reflect existing conditions in the field, and update AMLIS with completion data as sites are reclaimed. This information is available to the public at <https://amlis.OSMRE.gov>.

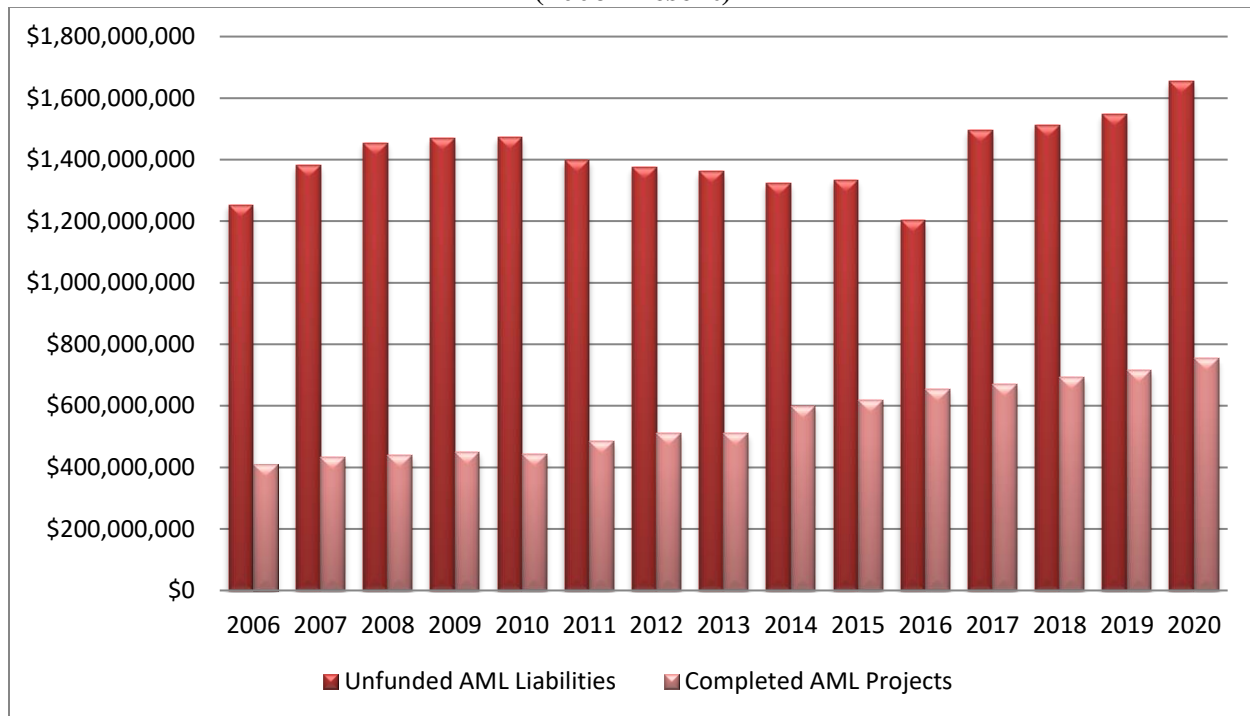
Programs developed within AMLIS allow users to enter problem type units, such as numbers of portals, gallons of water, or feet of highwall, and the program equates those problems to a predetermined number of acres for a problem type. A consistent measurement such as this allows users to get a general idea of the overall status of reclamation throughout the nation. The chart labeled “Figure 1” shows the status of reclamation in West Virginia and the changes that have occurred in recent years.

Last EY, the OAMLRL had entered 77 new PADs into AMLIS for OSM’s approval. This year, OAMLRL submitted 136 new or significantly revised PADs into AMLIS for OSM’s approval. As outlined in last year’s EY, many of these new PAD entries is a continued effort by OAMLRL to include an existing inventory of abandoned AML eligible highwalls into the system. This effort will continue until this data update is completed. The OAMLRL then proposes to add a large mine fire inventory to AMLIS.

There is also a concerted effort on the part of OAMLRL to enter completion data into AMLIS as soon as possible after project completion to ensure that the database contains the most accurate data possible.

The OSM concurs that many changes in the local communities, including the proliferation of off-road utility vehicles has led to a greater public access to areas previously considered too remote to be considered a Priority 1 or 2 hazard.

### Unfunded OAMLRL Liabilities vs. Completed OAMLRL Projects (2006-Present)



**FIGURE 1. —Unfunded AML liabilities vs. completed AML projects and the cumulative amounts between years.**

As presented above, completed AML projects (reclaimed sites, including a variety of project types – Priority 1, Priority 2, and elevated Priority 3) continue to increase yearly as OAMLRL addresses more projects. Figure 1 also shows that unfunded AML liabilities (problem areas which are inventoried sites that require reclamation) continue to heavily outweigh completed projects which abate these liabilities. An increase in AML funding occurred after 2007, due to the 2006 reauthorization. Over the past several years, a decrease in grant funding occurred, largely the result of a federally-required sequestration, less income into the State share of the AML fund because of reduced mining, and the decline of coal sales due to the significant drop in the coal market. The OAMLRL continues to complete AML projects, and the upward trend in completed projects shown on the graph reflects an increase in water supply projects, AMD stream treatment projects, and emergency projects. An important factor regarding the West Virginia AML inventory is the liability costs associated with the large number of highwalls, AMD stream treatment sites, and underground mine fires that do not presently appear on the inventory. The OAMLRL has initiated an effort to update AMLIS with eligible abandoned highwall information. These highwalls, and the other AML features indicated above, will be added to the inventory to accurately display the State's reclamation liabilities. Addition of the abandoned mine fire

inventory will likely double the State's unfunded reclamation costs that will be reflected in the EY 21 AER.

Below is summary of the current West Virginia AML inventory costs as reflected in eAMLIS. The detailed AML tables attached to this report provide an in-depth look at the State AML inventory and the status of the State's reclamation accomplishments.

**West Virginia Inventory Summary (as currently reported in AMLIS)**

Unfunded OAMLRL Liability Status (AML Problems Requiring Reclamation):  
\$1,653,637,326.27

Funded OAMLRL Liability Status (Current AML Projects under, or proposed for, reclamation):  
\$46,393,581.19

Completed OAMLRL Liability Status (Completed AML Projects):  
\$753,838,552.22

#### **A.4. AMLER Economic Development Pilot Projects**

As outlined earlier in this report, CHFO has received 44 potential Pilot projects for review. To date, CHFO has approved (vetted) eight projects proposing to utilize FY 2016 Pilot funding, 12 projects that propose to utilize FY 2017 Pilot funding, and 11 which propose to utilize FY 2018 funding and 13 that propose to utilize FY 2019 funding. Although available to the State, the WVDEP had not requested funding through the FY 2020 AML Pilot grant as the time of this writing. Of these vetted Pilot projects, CHFO has issued 17 authorization-to-proceeds.

### **B. Noteworthy Accomplishments**

#### **B.1. WebAML Updates**

In EY 2008, West Virginia OAMLRL began the development of a new information database and management system known as WebAML. In April 2010, WebAML became a reality, allowing AML management and staff to store and manage data electronically. The system is the primary source for information for all aspects of the AML program and continues to be utilized by CHFO staff on a regular basis. WebAML continues to improve and expand from the basic framework to include access to more data and programs. This EY, time was spent on data quality, operational



adjustments, security adjustments, and user support. Several upgrades to the system were completed this year, including:

- Transition from WebAML to AMLNET Complete (Website no longer requires Flash, which is end of life at the end of 2020);
- .Net codebase migrated to .Net Core;
- Crystal Reports implementation underway;
- Application has been Containerized, improving portability, performance, security, and scalability;
- Significant code quality, performance, exception logging, and documentation improvements;
- Approximately 308 total work items (76 Bugs, 232 new features and enhancements) completed;
- AML Maintenance module developed.

These improvements were put into place during this EY, and the agency continues to work on enhancements to the functions.

## **B.2. Monthly OAMLRL/CHFO Meetings**

During EY 2020, the OAMLRL continued monthly project meetings with CHFO to discuss the progress, and any issues, related to any of the activities within the AML program. These meetings were originally proposed to discuss AML Pilot projects; however, they have expanded to discussion any aspect relating to the program. These meetings have been extremely beneficial to CHFO and OAMLRL and will continue. As a note, these meetings were temporarily discontinued during the second half of EY 2020 due to issues related to the Covid-19 pandemic.

## **B.3. OAMLRL Training**

The seventh annual statewide OAMLRL training was conducted in February 2020 for all field employees in the OAMLRL program. This year's meeting was held at Camp Dawson, in Preston County, West Virginia. The CHFO participated in this training, discussing results of OSM studies, issues, and successes observed in oversight inspections, and the role of CHFO in the State's AML Program.

## **B.4. U.S. Army Corp of Engineers (USACE) Meetings**

As noted in the last AER, the USACE issued its new regional general permit on February 22, 2018, and it is valid until February 22, 2023. There were no USACE meetings conducted this EY or issues identified.

### **B.5. AMD Set-Aside Projects**

West Virginia continues to have over 500 streams, with a combined length of approximately 2,700 miles, that are impaired due to AMD from pre-law mining. The SMCRA allows up to 30 percent of the State and historic coal share funding set-aside into an AMD abatement and treatment fund. The fund, including all interest, is specifically for the abatement of the causes and treatment of the effects of AMD in a comprehensive manner within qualified hydrologic units affected by past coal mining practices.

OAMLRL did not dedicate any of its 2020 AML grant funding to the set aside subaccount through its initial grant request due to a decrease in grant funding available, and the number of proposed AML construction projects planned for reclamation. According to OAMLRL, they plan to transfer a portion of its unobligated funding from previous grants to the set aside fund. The CHFO encourages OAMLRL to make every attempt to add funding to this account on an annual basis due to the significant need in West Virginia for cleaning up AMD impacted streams.

The AML Chart 7 of this report outlines the annual accomplishments by OAMLRL utilizing its set-aside funding. However, AER AML Table 4 (EY 2020 Completed Projects) does not include most of this data since the expenditures of this funding is a project maintenance type requirement to continue to treat AMD impacted streams at several of their established water treatment facilities.

<b>Project Name</b>	<b>GPRA Acres Reclaimed</b>	<b>Number of People with Reduced Exposure</b>	<b>EY 2020 Expenditures</b>
Abram Creek AMD Treatment	14,633	53	\$12,023.58
Flatbush Limestone Sand	1,310	75	\$3,971.96
Grassy Run AMD Treatment	2,090	75	\$7,763.56
Kanes Creek South Site #1 (KCSS 1)	8.5	983	\$1,990.00
Middle Fork Limestone Sand Treatment	12,096	155	\$78,737.10
Pringle Run (Pace) Doser (FODC)	5	450	\$6,000.00
Three Forks Creek Watershed Restoration	82,085	223	\$248,519.02
Valley Highwall #3 (FODC Doser)	14	340	\$4,537.20
Weaver Portals & Drainage	450	937	\$3,741.16
<b>Total</b>	<b>112,691.5</b>	<b>3,291</b>	<b>\$367,284</b>

**CHART 7. —AMD treatment projects in which eAMLIS indicate set-aside funding spent during the past year.**

As outlined earlier in this report, OAMLRL is now utilizing a new funding mechanism to accrue interest on the AMD abatement and treatment fund. Leaving the principal amount in the fund, the OAMLRL uses only the accrued interest to fund the approximately \$350,000 annual operation and maintenance costs associated with its AMD treatment facilities. Under this new investment strategy, most funds have been included in the State of West Virginia's Investment Management (IMB) financial investment pool. Traditionally, the State of West Virginia allowed investments in money market and short-term bond accounts. These types of investments normally provided a minimal yearly return rate, often less than one percent annually. This new investment mechanism allows the AMD set-aside funding to grow at a more substantial rate. However, since this investment strategy is subject to overall market activity, the fund is subject to both positive and negative market conditions. To date, this approach has yielded overall positive results for the set-aside fund. The CHFO will continue to monitor this revised investment program and reports its progress in subsequent AERs.

## **C. Utilization of OSM Technical Assistance**

### **C.1. Technical Training**

The OSM conducts classroom-style courses throughout the year in the latest technology related to active and abandoned mine regulations. Administration of these courses is through OSM's NTTP and the TIPS programs. During EY 2020, OAMLRL sent 14 employees to 7 NTTP courses and no employee to a TIPS course. The OSM makes online training courses available for various subjects through its TIPS training program. No OAMLRL employees reported participation in an online course this EY. Many courses were cancelled due to the Covid-19 pandemic, impacting course participation for this EY.

### **C.2. OSM/Fish & Wildlife Programmatic Consultation Update**

In April 2008, OSM and FWS signed an agreement, titled "Programmatic Consultation on the Abandoned Mine Lands Reclamation Program" (Programmatic Agreement). The agreement allows AML to conduct project activities without prior notification to the FWS for specific actions the agencies agree would have no effect on federally listed species or critical habitats. On March 19, 2013, a new agreement went into effect, which was valid for five years (until March 19, 2018).

During EY 18, CHFO worked with the FWS to complete revisions to the current Programmatic Agreement. To date, FWS has not approved the revised document. The FWS allows OAMLRL to operate under the expired agreement in the interim period.

## **D. Public Participation and Outreach**

Refer to Section III., Overview of the Public Participation Opportunities in the Oversight Process, located near the beginning of this report. The CHFO combines both the Regulatory and AML Programs in the AER and in our outreach efforts so that the public and stakeholders are aware of all OSM activities in West Virginia.

## **E. Results of Evaluation Year 2020 Reviews**

### **E.1. Regular AML Construction Program**

During EY 2020, OAMLRL initiated 12 non-water construction projects (down 5 projects from EY 19) and completed reclamation at 12 projects (up 1 project from last EY). The AML construction contracts are down for several of reasons. The number of emergency expenditures was higher than normal over the past EY, and three AML Waterline project were put out to bid. As available grant funding trends downward, there is less funding available for regular AML project reclamation.

As part of their water supply restoration program, the OAMLRL, whether entirely or in partnership with another entity, initiated three water supply projects during EY 2020. This number was down by seven over the last EY but represented nearly 6.4 million dollars in AML funding. See Chart 8 on the following page for more information.

<b>Water Supply Project Name</b>	<b>OAMLRL Funding Amount</b>	<b>Number of Customers Served</b>
Standard Paint Creek	\$3,800,000	26
Preston PSD #2 Herring Subarea #1 & #3	\$2,100,000	42
Town of Newburg/ Independence	\$486,035	24
<b>TOTALS</b>	<b>\$6,386,035</b>	<b>92</b>

**CHART 8. —Water supply projects funded over the past EY.**

As outlined below, OAMLRL issued 13 construction contracts during the past year, down 4 from last EY. As can be seen in Chart 9 below, the number of construction projects requesting an ATP from CHFO decreased by half from last EY.

<i>EY</i>	<b>Authorizations- to-Proceed</b>	<b>Completed Designs</b>	<b>Construction Contracts Issued</b>	<b>Construction Contracts Complete*</b>
EY 2020	14	2	13	12
EY 2019	28	9	17	11
EY 2018	24	15	17	23
EY 2017	22	26	33	36
EY 2016	21	24	13	29
EY 2015	16	27	17	34
EY 2014	22	28	29	24
EY 2013	42	39	28	42
EY 2012	44	48	54	38
EY 2011	56	64	50	41
EY 2010	53	60	45	39
EY 2009	62	55	31	20
EY 2008	12	36	21	14
EY 2007	16	18	10	17
Total	418	449	365	357
<b>Average</b>	<b>30.8</b>	<b>32.2</b>	<b>27</b>	<b>26.4</b>

**CHART 9. —Number of construction projects requesting an ATP.**

\* This number reflects projects possibly implemented under preceding grant years.

The actual accomplishments of the on-ground reclamation are accessible in e-AMLIS. The e-AMLIS provides the units of problem areas reclaimed for all work completed and is publicly available on the OSM website. The AML tables at the end of this report also provide specific information concerning the actual accomplishments.

## **E.2. Emergency Program**

During EY 2020, OAMLR's program investigated 534 citizen's complaints, resulting in the declaration of 30 emergencies, down 15 from last EY. All emergency projects began in a timely manner, with most projects reaching completion within days or weeks of the Authorization-to-Proceed. The larger projects, such as landslide abatement projects and a large coal refuse fire project, required a longer performance period to address the emergency aspects of the project.

<b>Evaluation Year</b>	<b>Complaints Investigated</b>	<b>Emergency Declarations Issued</b>
EY 2020	534	30
EY 2019	461	45
EY 2018	353	26
EY 2017	280	31
EY 2016	281	21
EY 2015	278	28
EY 2014	249	33
EY 2013	213	22
EY 2012	261	30
EY 2011	260	33
EY 2010	306	34

**CHART 10. —Number of complaint investigations and emergency declarations issued.**

## **E.3. OAMLR Project Oversight**

During this EY, CHFO conducted oversight inspections of OAMLR reclamation projects in various stages of construction, including 78 site visits on 26 abandoned mine land reclamation projects, AML Enhancement projects, and West Virginia Pilot projects. The CHFO completed oversights during the pre-bid, construction, post-construction, and the completion phases of the projects. Note that of the 78 CHFO oversights reported, seven were performed as part of the CHFO Bat Gate Study described in Section E.5.

### **E.3.a. AML Emergency Project Oversight**

The following emergency projects received CHFO oversight inspections this EY:

- Rockhouse Creek (Pack) Burning Refuse (one oversight)
- Smithers (Moore) Landslide (one oversight)

Overall, CHFO found minimal issues with the construction activities and the overall contract requirements of these projects.

### **E.3.b. Non-Emergency Project Oversight**

The following non-emergency projects received CHFO oversight inspections this EY:

- Craig Hollow Refuse (one oversight)
- Coopers Creek Portals (one oversight)

The CHFO found no reportable issues with the Craig Hollow Refuse project during the oversight. CHFO did find several issues with the Coopers Creek Portals project, including mine seal installations not completed in accordance with the project plans and revegetation issues. As a result of the findings of the CHFO oversight, the OAMLRL Southern Regional Engineer scheduled an on-site meeting and training exercise for all the southern region inspection staff, to review the deficiencies to minimize issues of this type on future projects.

The CHFO continues to emphasize the adherence to the project plans and specifications when completing all AML funded projects. It is also noteworthy that the OAMLRL has indicated that OSM field inspections provide a significant benefit toward staff development, and the quality of reclamation projects. The OAMLRL continues to request an increase in the frequency of field reviews by the CHFO.

### **E.3.c. AML PILOT Project Oversight**

As mentioned earlier in this AER, CHFO currently has 41 AML Pilot projects in some stage of progress, from applicant preparation of NEPA documents for ATP requests, to some projects nearing completion. To date, CHFO has issued 17 ATPs to the WVDEP to initiate construction on Pilot projects. The Pilot projects that received CHFO oversights this EY are as follows:

- Aquaponics on AML
- WV Elk Restoration Project
- I-79 Technology Park
- Mountain State Broadband Expressway
- Patriot Gardens Golden Delicious Apple Project
- ATV Camp at Coaldale
- Beaver Creek Fishery Enhancement
- Ashland Resort ATV Tourism Park
- Berwind Water Treatment Plant
- Triadelphia ATV Resort



There were no reportable issues found during these CHFO oversights. However, during the upcoming EY, CHFO anticipates that most of the Pilot projects vetted to date will be in some phase of construction CHFO proposes to stay engaged in the progress of the AML Pilot projects and perform periodic project evaluations throughout project completion. The OSM report on all AML Pilot projects may be found at: [www.odocs.OSMRE.gov](http://www.odocs.OSMRE.gov).

#### **E.3.d. AML Enhancement Project Oversight:**

The AML Enhancement projects that received CHFO oversight inspections this EY were as follows:

- Bearwallow Branch Refuse (8 oversights)
- Bottom Creek Refuse (8 oversights)
- Caretta Mining (8 oversights)
- Clear Fork Refuse 2 (5 oversights)
- Farmington Refuse (1 oversight)
- Harmon Branch Refuse (3 oversights)

This EY, CHFO continued to focus the majority of our oversight efforts on AML Enhancement projects due to the culmination of the OAMLRL Enhancement and 3.14 Oversight Study (completed in EY 18), and due to an overall increase of these type of projects submitted for an ATP by OAMLRL. Currently, there are five active projects being performed, two that have been given an ATP, but have not started, and one proposed AML Enhancement project under consideration by OAMLRL at this time. During this EY, one of the enhancements, Farmington Refuse, was released by OAMLRL after a one-year warranty period.

CHFO's oversights noted several issues with the majority of the AML Enhancement projects. The majority of issues relate to the lack of adherence to erosion and sediment and control criteria. One project, Clear Fork Site 2, has had a multitude of issues, including access restriction by the operator and off-site disturbance for unauthorized coal removal. In addition, the West Virginia Department of Environmental Protection's Office of Environmental Enforcement issued multiple stormwater permit violations and has assessed an outstanding monetary violation against the operator. The OAMLRL is in the process of revoking the operator's performance bond, and reclamation will likely be completed by the OAMLRL.

Section F contains additional information regarding issues, and improvements, regarding the OAMLRL's AML enhancement program.

The CHFO continues to work with OAMLRL to address any issues found during our oversight

#### **E.4. Project Maintenance Program Oversight**

During EY 2017, a plan was developed, and accepted, by OAMLRL for an oversight study on its project maintenance program, which is used to correct deficiencies found on AML project

completed in past years. Included in this review will be an evaluation of the policy/procedures used by OAMLRL to determine when maintenance is required, maintenance program planning, types of maintenance, funding, construction, inspection, procurement, and payment for services. This oversight will also include an analysis of whether maintenance projects should be subject to updated NEPA reviews, or not. This study is ongoing. This work plan will be on OSM's website at: [www.odocs.OSMRE.gov](http://www.odocs.OSMRE.gov).

#### **E.5. Culverted Bat Gate Study**

During EY 19, a work plan was developed, and accepted by OAMLRL, for an oversight study to evaluate the success of the OAMLRL to properly, and successfully, install culverted-type bat access gates, as part of Title IV reclamation projects. Specifically, this oversight evaluation examined culverted-type bat gates installed by contractors for the OAMLRL. The study focused on AML reclamation projects completed between the years 2013 and 2016, and any installation in 2019, if occurring before the end of the review period. The study assessed the overall condition of these types of seals since their installation and considered any revisions/enhancements to the design made after construction started, or that differed from the original design. In addition, a review of the frequency of maintenance required for any post-construction damages and/or failures was assessed.

In addition, as part of this study, OSM staff reviewed available scientific literature to determine if the gates, as installed, are the best, or acceptable, technology to mitigate damage to bat habitat while providing for human safety. This study was recently completed by CHFO, and a draft copy has been forwarded to OAMLRL for review and comment. This work plan is on OSM's website at: [www.odocs.OSMRE.gov](http://www.odocs.OSMRE.gov). Findings of the review will be summarized in the EY 2021 Annual Report.



Culverted Bat Gates, Monarch Portals

## **F. OAMLRL Program Problems and Issues**

### **F.1. AML Enhancement and Refuse Removal (3.14) Oversight Follow-up**

As outlined in the EY 18 AER, CHFO completed an AML Enhancement and Refuse Removal Oversight Report Study. Due to the study, WVDEP's OAMLRL proposed the development of an improvement plan completed on January 1, 2019. The improvement plan consisted of the following actions:

- Increase OAMLRL inspection frequency to be consistent with a usual inspection of a regular AML construction project.
- Develop a temporary shutdown plan for any future projects. Incorporate this plan into the project agreement and will include, at a minimum, proper erosion and sediment control maintenance throughout the shutdown period, weekly inspections between the operator and OAMLRL, securing the site from non-authorized personnel, and performing temporary site regrading and revegetation. These procedures could include a requirement for notification when the operation restarts.



- Develop a set of performance standards to be used for bond release.
- Utilize WVDEP's Office of Water and Waste Management Environmental Enforcement Section to assist in compliance with the project's permit for construction of storm water control measures.
- Utilize injunctive relief to force compliance with the project contract, as appropriate.
- Review all the existing 3.14 and enhancement contracts. If the OAMLRL deems that the project contractor does not have, or is not seeking, a viable contract for the coal or coal refuse material, they should utilize the site reclamation options available in the contract. Otherwise, contract termination is considered, and bond revocation proceedings initiated. The OAMLRL requires the stabilization of each site and the placement into eAMLIS for future reclamation consideration. Projects, which are currently operating in accordance with the reclamation agreement, should continue to completion, provided completion is within the approved timeframes.
- The project contract should include language that requires the contractor to contact OAMLRL any time that the project is active and during any periods of construction shutdown, and/or an anticipated shutdown.

As part of this report, OAMLRL proposed to work with CHFO to standardize and improve some of the standard specifications and contractor requirements to be utilized in future enhancement contracts.

By March 1, 2019, WVDEP's OAMLRL and Division of Mining and Reclamation proposed to investigate current conditions at the Bowyer Creek Enhancement site to ascertain the legal measures available for site reclamation, and the non-payment of any required AML fees as part of the site activities.

In response to the issues found as part of the study, the EY 19 AER outlined several revisions to the program that had been taken during the reporting period. During EY 20, the OAMLRL continued their response to the improvement plan including the following:

- OAMLRL has completed revisions to the project contract between the agency and operator. Some of the most important revisions are inclusion of a temporary shutdown plan; a set of performance standards that can be utilized for bond release; and, an consultant engineer's approved plan for any changes to the overall proposed reclamation plan, including revised regrading schemes, drainage control measures and top soil measures.
- Bonding amounts required for AML enhancement projects are calculated based upon typical AML reclamation project analysis.

- CHFO staff received advance copies of the project plans for comment as part of the project application process.
- Active enhancement projects are receiving inspections on a more frequent basis, with the inspection reports, including photos, documented in WebAML for access by both OAMLRL and CHFO.
- Project plans for each site are completed by a consulting engineering firm, including all associated permitting requirements.
- The CHFO staff are periodically accompanying OAMLRL Staff during AML Enhancement Inspections.
- The CHFO has not received any correspondence to date regarding the outstanding issues at the Boyer Creek Enhancement site.

## **Appendix 1: Summary of Core Data to Characterize the Program**

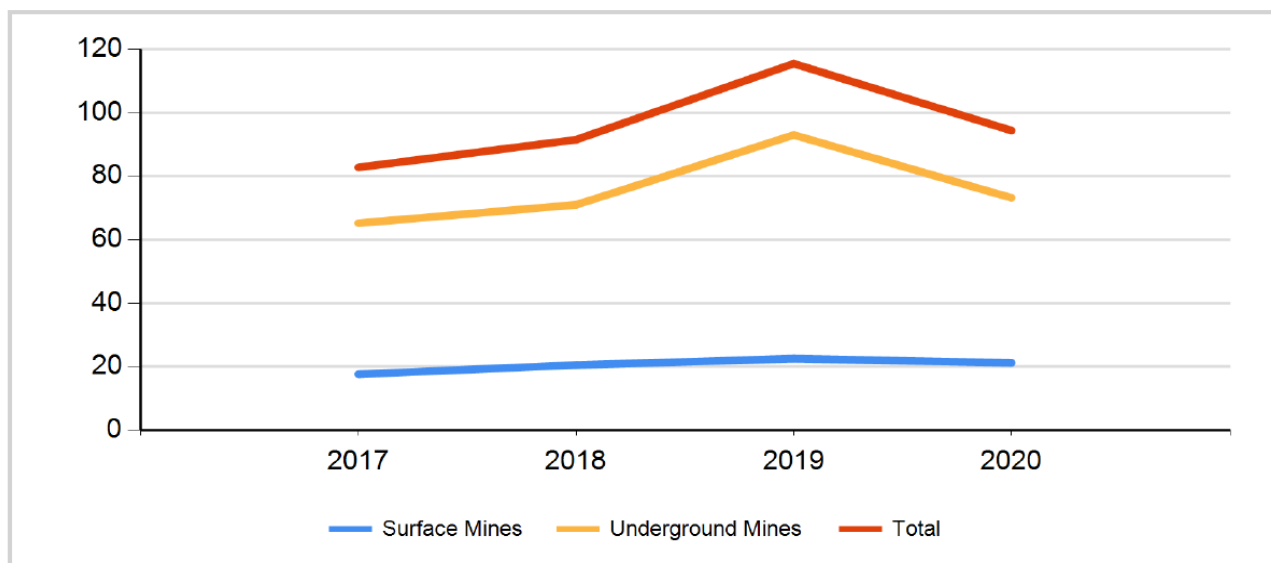
West Virginia  
EY 2020, ending June 30, 2020

**TABLE 1**

<b>COAL PRODUCED FOR SALE, TRANSFER, OR USE <sup>A</sup></b> (Millions of short tons)			
<b>Calendar Year</b>	<b>Surface Mines</b>	<b>Underground Mines</b>	<b>Total</b>
2016	17.6	65.2	82.8
2017	20.5	71.0	91.5
2018	22.5	93.0	115.5
2019	21.2	73.2	94.4

A Coal production is the gross tonnage (short tons) and includes coal produced during the calendar year (CY) for sale, transfer or use. The coal produced in each CY quarter is reported by each mining company to OSM during the following quarter on line 8(a) of form OSM-1, "Coal Reclamation Fee Report." Gross tonnage does not provide for a moisture reduction. OSM verifies tonnage reported through routine auditing of mining companies. This production may vary from that reported by other sources due to varying methods of determining and reporting coal production.

**TABLE 1**  
**COAL PRODUCED FOR SALE, TRANSFER, OR USE**  
**DURING THE CALENDAR YEAR**  
(Millions of short tons)





West Virginia  
EY 2020, ending June 30, 2020

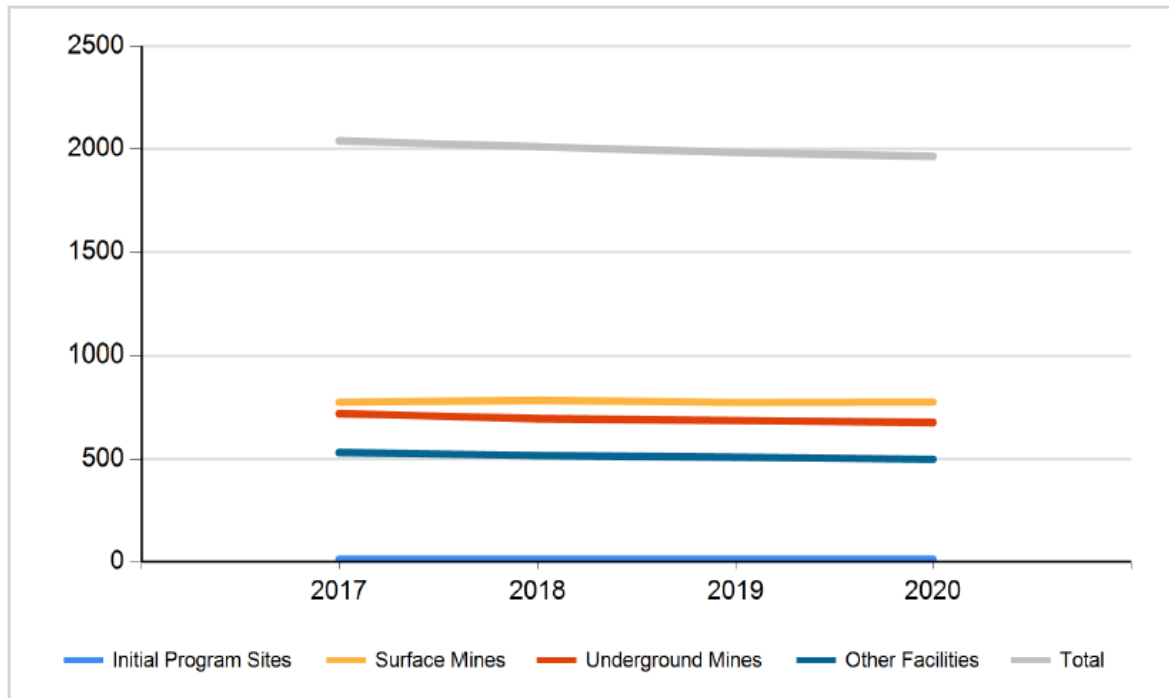
TABLE 2

PERMANENT PROGRAM PERMITS, INITIAL PROGRAM SITES, INSPECTABLE UNITS, AND EXPLORATION															
Mines and Other Facilities	Numbers of Permanent Program Permits and Initial Program Sites								Insp. Units <sup>1</sup>	Area in Acres <sup>2</sup>				Total Area	
	Permanent Program Permits				Initial Program Sites					Permanent Program Permits (Permit Area)		Initial Program Sites			
	Active	Inactive	Abandoned	Total	Active	Inactive	Abandoned	Total		Federal Lands	State/Tribal and Private Lands	Federal Lands	State/Tribal and Private Lands		
Surface Mines	351	237	189	777	0	0	10	10	787	0	279,359	0	944	280,303	
Underground Mines	317	306	54	677	0	0	1	1	678	0	19,755	37	6	19,798	
Other Facilities	326	136	36	498	0	0	2	2	500	0	41,803	0	11	41,814	
Total	994	679	279	1,952	0	0	13	13	2,096	0	340,917	37	961	341,915	
Permanent Program Permits and Initial Program Sites (Number on Federal Lands: 2)				Total Number:		1,965				Average Acres per Site:				174.00	
Average Number of Permanent Program Permits and Initial Program Sites per Inspectable Unit (IU):				Total Number:		1.00				Average Acres per IU:				174.00	
Permanent Program Permits in Temporary Cessation:				Total Number:		94				Number More than 3 Years:				91	
EXPLORATION SITES				Total Number of Sites				Sites on Federal Lands <sup>4</sup>				Exploration Inspectable Units			
Exploration Sites with Permits:				131				0				131			
Exploration Sites with Notices:				0				0				0			
<sup>1</sup> An Inspectable Unit may include multiple small and neighboring Permanent Program Permits or Initial Program Sites that have been grouped together as one Inspectable Unit, or conversely, an Inspectable Unit may be one of multiple Inspectable Units within a Permanent Program Permit.															
<sup>2</sup> Total Inspectable Units calculation includes Exploration Sites Inspectable Units															
<sup>3</sup> When a Permanent Program Permit or Initial Program Site contains both Federal and State and Private lands, the acreage for each type of land is in the applicable column.															
<sup>4</sup> The number of Exploration Sites on Federal lands includes sites with exploration permits or notices any part of which is regulated by the state under a cooperative agreement or by OSM pursuant to the Federal Lands Program, but excludes exploration sites that are regulated by the Bureau of Land Management															

West Virginia

EY 2020, ending June 30, 2020

**CHART 2A HISTORICAL TRENDS**  
**NUMBER OF INITIAL PROGRAM SITES AND PERMANENT PROGRAM PERMITS**

**TABLE 2A**

NUMBER OF INITIAL PROGRAM SITES AND PERMANENT PROGRAM PERMITS					
Year	Initial Program Sites	Permanent Program Permits			Total
		Surface Mines	Underground Mines	Other Facilities	
2017	13	776	720	531	2040
2018	13	785	696	517	2011
2019	13	775	687	508	1983
2020	13	777	677	498	1965

West Virginia

EY 2020, ending June 30, 2020

**CHART 2B HISTORICAL TRENDS**  
**AREA OF INITIAL PROGRAM SITES AND PERMANENT PROGRAM PERMITS**

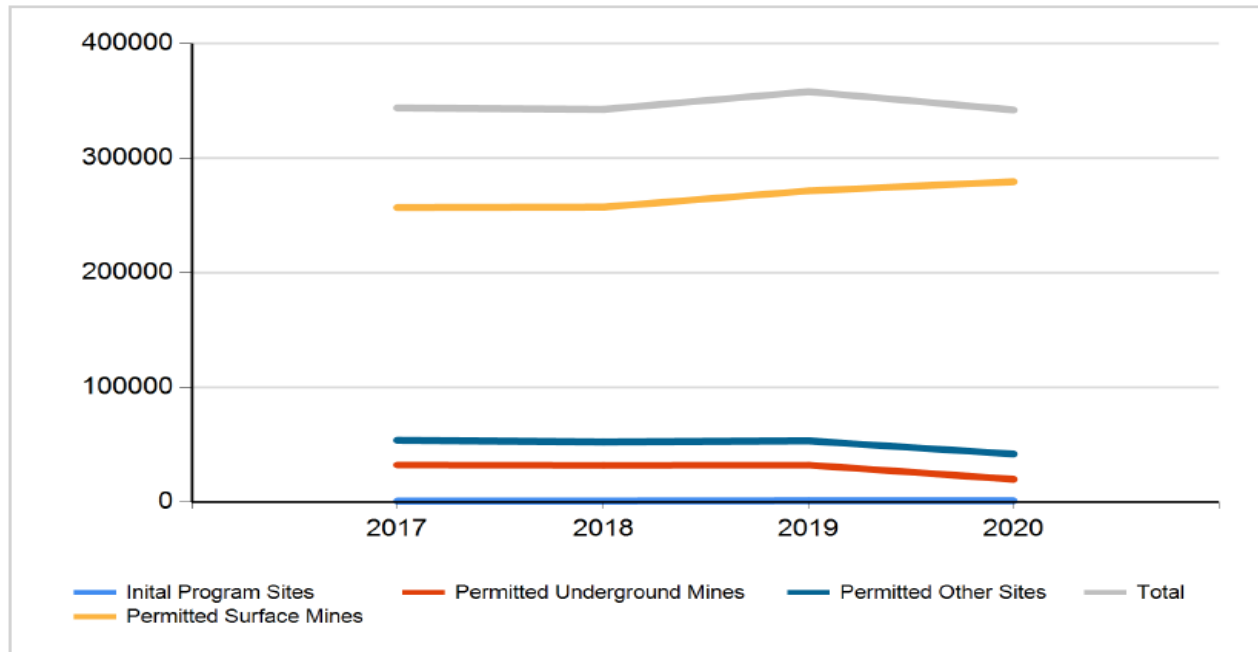


TABLE 2B

AREA OF INITIAL PROGRAM SITES AND PERMANENT PROGRAM PERMITS					
Year	Initial Program Sites	Permanent Program Permits			Total
		Surface Mines	Underground Mines	Other Facilities	
2017	761.0	256835.0	32285.0	53730.0	343611.0
2018	817.0	257203.0	32031.0	52379.0	342430.0
2019	998.0	271375.0	32222.0	53301.0	357896.0
2020	998.0	279359.0	19755.0	41803.0	341915.0

West Virginia

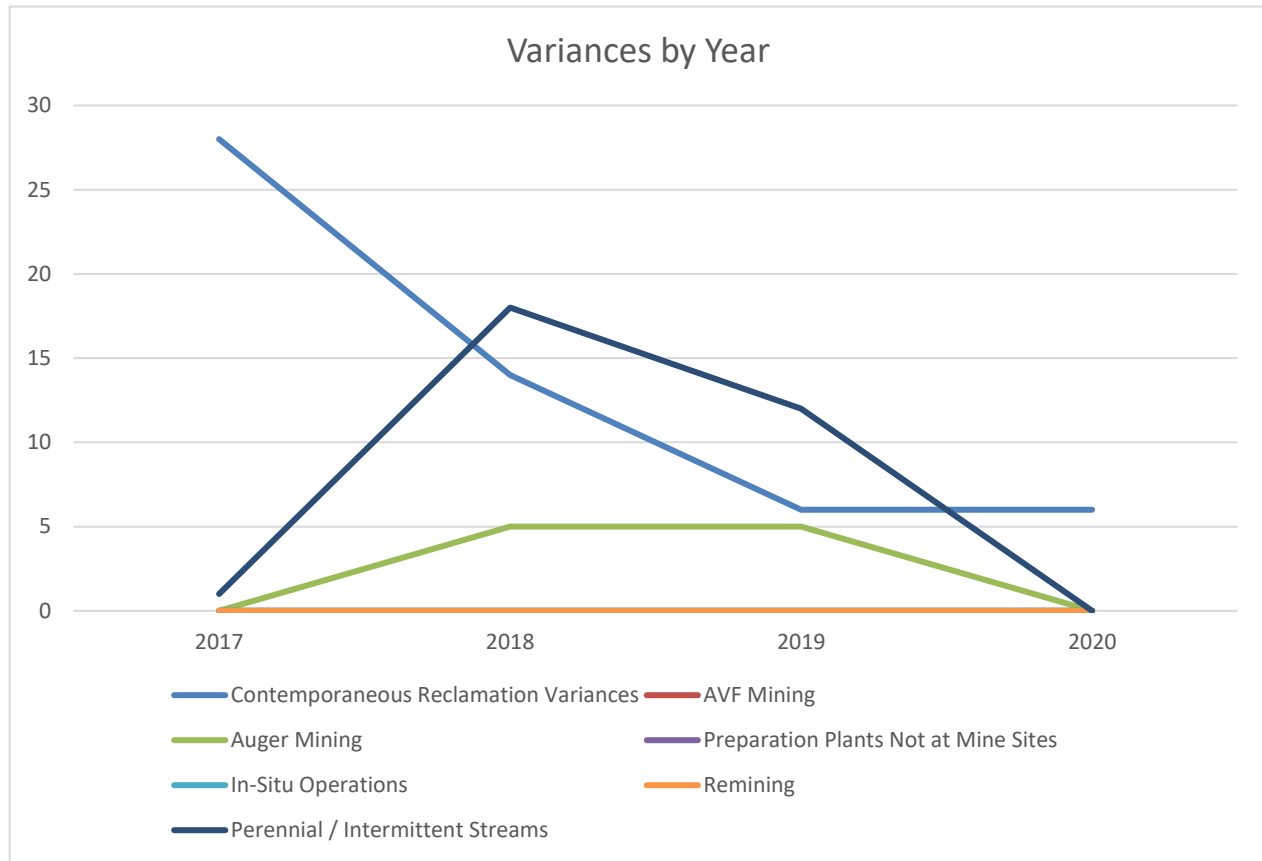
EY 2020, ending June 30, 2020

TABLE 3

PERMITS ALLOWING SPECIAL CATEGORIES OF MINING			
Special Category of Mining	30 CFR Citation Defining Permits Allowing Special Mining Practices	Numbers of Permits	
		Issued During EY	Total Active and Inactive Permits
Experimental Practice	785.13(d)	0	0
Mountaintop Removal Mining	785.14(c)(5)	0	167
Steep Slope Mining	785.15(c)	0	127
AOC Variances for Steep Slope Mining	785.16(b)(2)	0	31
Prime Farmlands Historically Used for Cropland	785.17(e)	0	0
Contemporaneous Reclamation Variances	785.18(c)(9)	0	136
Mining on or Adjacent to Alluvial Valley Floors	785.19(e)(2)	0	0
Auger Mining	785.20(c)	0	271
Coal Preparation Plants Not Located at a Mine Site	785.21(c)	0	0
In-Situ Processing	785.22(c)	0	0
Remining	773.15(m) and 785.25	0	6
Activities in or Within 100 Feet of a Perennial or Intermittent Stream	780.28(d) and/or (e) 784.28(d) and/or (e)	0	926

TABLE 3A

NUMBER OF PERMITS ISSUED AND REVISIONS APPROVED					
Year	Experimental Practices	Mountaintop Removal Mining	Steep Slope Mining	Steep Slope Variances	Prime Farmlands
2017	0	0	0	3	0
2018	0	0	2	0	0
2019	0	0	2	0	0
2020	0	0	0	0	0

**Table 3B Historical Trends**

	2017	2018	2019	2020
Contemporaneous Reclamation Variances	28	14	6	0
AVF Mining	0	0	0	0
Auger Mining	0	5	5	0
Preparation Plants Not at Mine Sites	0	0	0	0
In-Situ Operations	0	0	0	0
Remining	0	0	0	0
Perennial / Intermittent Streams	1	18	12	0

West Virginia  
EY 2020, ending June 30, 2020

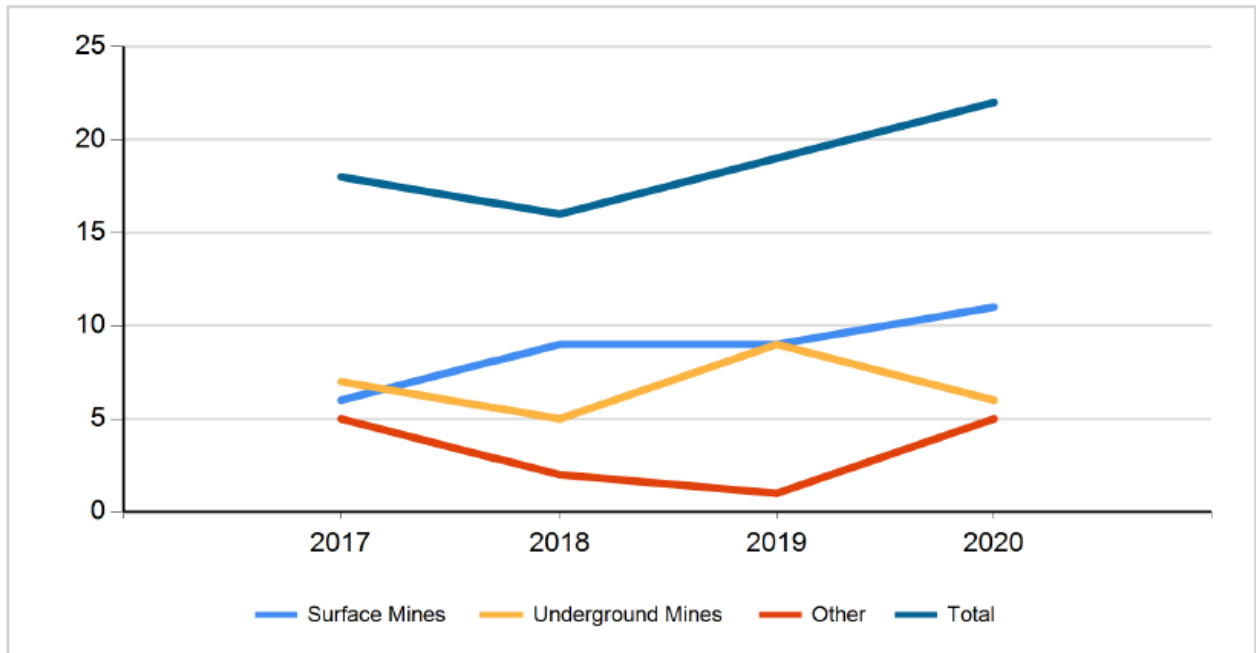
TABLE 4

PERMITTING ACTIVITY													
Type of Application	Surface Mines			Underground Mines			Other Facilities			Totals			
	App. Rec.	Issued/ Appvd	Acres	App. Rec.	Issued/ Appvd	Acres <sup>1</sup>	App. Rec.	Issued/ Appvd	Acres	App. Rec.	Issued/ Appvd	Acres	
New Permits	12	11	3,829	6	7	91	4	5	529	22	23	4,449	
Renewals	35	41		64	68		51	57		150	166		
Transfers, sales, and assignments of permit rights	47	23		20	15		27	21		94	59		
Small operator assistance	0	0		0	0		0	0		0	0		
Exploration permits										51	54		
Exploration notices <sup>2</sup>											0		
Revisions that do not add acreage to the permit area	144	128		116	114		62	57		322	299		
Revisions that add acreage to the permit area but are not incidental boundary revisions	5	7	542	0	1	7	0	0	0	8	8	549	
Incidental boundary revisions	61	63	(95)	76	78	239	44	42	1,453	181	183	1,598	
Totals	307	273	4,276	282	283	337	188	182	1,983	831	791	6,596	
Permits terminated for failure to initiate operations:									Number:	0	Acres:	0.0	
Acres of Phase III bond releases (Areas no longer considered to be disturbed):									Acres:				7,643.0
Permits in temporary cessation							Notices received:		94	Terminations:		0	
Midterm permit reviews completed							Number:		189				
<sup>1</sup> Includes only the number of acres of proposed surface disturbance													
<sup>2</sup> State approval not required. Involves removal of less than 250 tons of coal and does not affect lands designated unsuitable for mining.													



West Virginia  
EY 2020, ending June 30, 2020

**CHART 4A HISTORICAL TRENDS  
NEW PERMITS ISSUED**



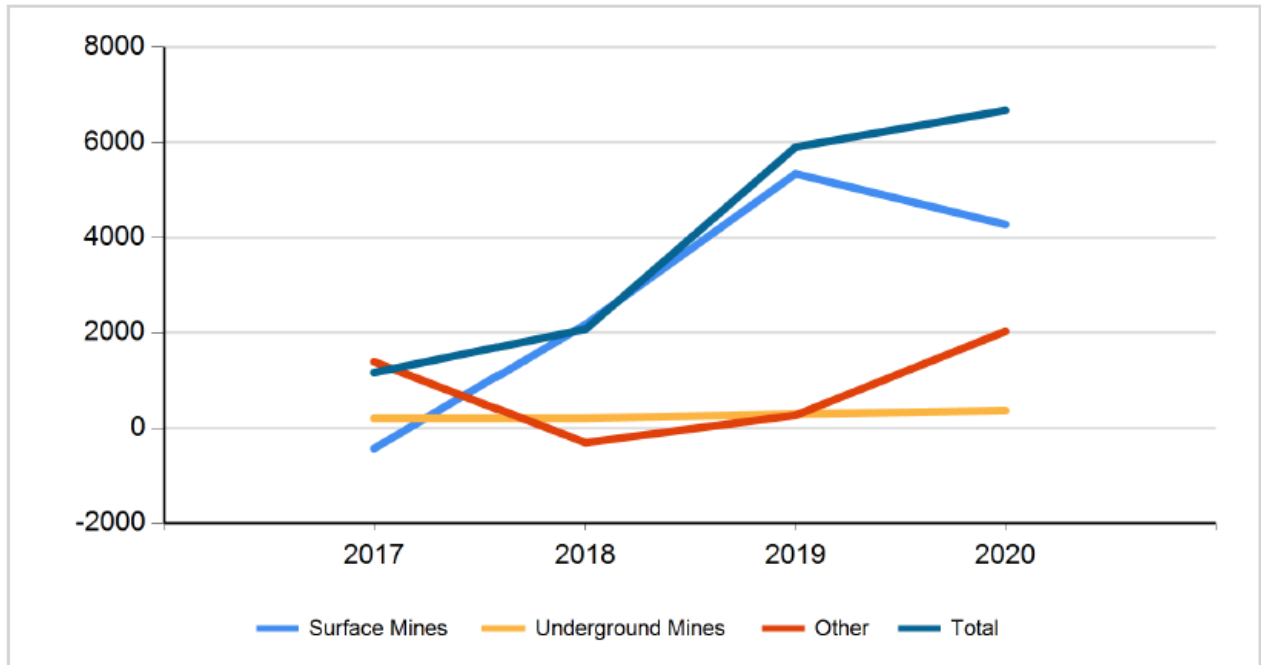
**TABLE 4A**

**NEW PERMITS ISSUED**

Year	Surface Mines	Underground Mines	Other	Total
2017	6	7	5	18
2018	9	5	2	16
2019	9	9	1	19
2020	11	6	5	22

West Virginia

EY 2020, ending June 30, 2020

**CHART 4B HISTORICAL TRENDS  
NEW ACREAGE PERMITTED****TABLE 4B**

NEW ACREAGE PERMITTED				
Year	Surface Mines	Underground Mines	Other	Total
2017	(431.0)	204.0	1392.0	1165.0
2018	2176.0	207.0	(307.0)	2076.0
2019	5340.0	293.0	268.0	5901.0
2020	4275.0	366.0	2032.0	6673.0

TABLE 5

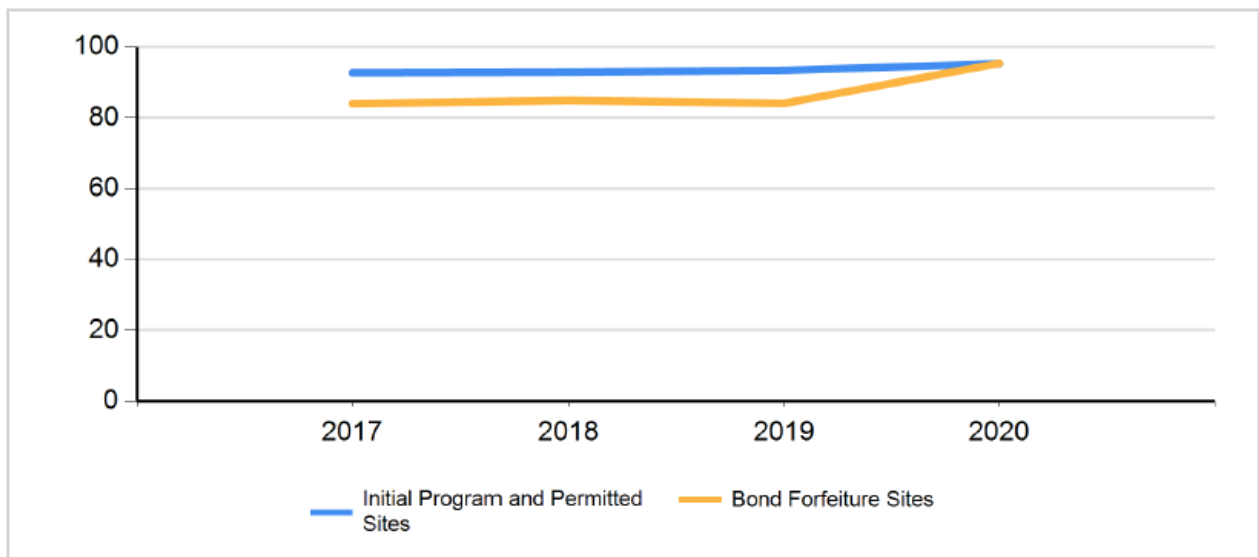
OFF-SITE IMPACTS EXCLUDING BOND FORFEITURE SITES													
RESOURCES AFFECTED		People			Land			Water			Structures		
DEGREE OF IMPACT		Minor	Moderate	Major	Minor	Moderate	Major	Minor	Moderate	Major	Minor	Moderate	Major
TYPE OF IMPACT EVENT	NUMBER OF EVENTS												
Blasting	4	1	0	0	0	1	1	0	0	0	1	0	0
Land Stability	16	0	0	0	6	9	1	0	0	0	0	0	0
Hydrology	92	0	10	0	0	5	0	9	61	1	2	4	0
Encroachment	31	2	10	0	7	9	1	0	1	0	0	1	0
Other	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	143	3	20	0	13	24	3	9	62	1	3	5	0
Total Number of Inspectable Units <sup>1</sup> :				1858									
Inspectable Units with one or more off-site impacts:				87									
Exploration Inspectable Units with one or more off-site impacts <sup>2</sup> :				0									
Inspectable Units free of off-site impacts:				1771				% of Inspectable Units free of off-site impacts <sup>4</sup> :				95	
<sup>1</sup> Total number of Inspectable Units is (1) the number of active and inactive inspectable units at the end of the Evaluation Year and (2) the number of Inspectable Units that were final bond released or removed during the Evaluation Year													
<sup>2</sup> Exploration Inspectable Units with one or more off-site impacts is a subset of Inspectable Units with one or more off-site impacts													
OFF-SITE IMPACTS AT BOND FORFEITURE SITES													
RESOURCES AFFECTED		People			Land			Water			Structures		
DEGREE OF IMPACT		Minor	Moderate	Major	Minor	Moderate	Major	Minor	Moderate	Major	Minor	Moderate	Major
TYPE OF IMPACT EVENT	NUMBER OF EVENTS												
Blasting	0	0	0	0	0	0	0	0	0	0	0	0	0
Land Stability	3	0	0	0	2	1	0	0	0	0	0	0	0
Hydrology	7	0	0	0	0	0	0	5	0	2	0	0	0
Encroachment	2	0	0	0	0	2	0	0	0	0	0	0	0
Other	1	0	0	0	0	1	0	0	0	0	0	0	0
Total	13	0	0	0	2	4	0	5	0	2	0	0	0
Total Number of Inspectable Units <sup>3</sup> :				283									
Inspectable Units with one or more off-site impacts:				13									
Inspectable Units free of off-site impacts:				270				% of Inspectable Units free of off-site impacts <sup>4</sup> :				95	
<sup>3</sup> Total number of Inspectable Units is (1) the number of bond forfeiture sites that were reclaimed during the Evaluation Year and (2) the number of bond forfeiture sites that were unreclaimed at the end of the Evaluation Year													

TOTAL OFF-SITE IMPACTS INCLUDING BOND FORFEITURE SITES													
RESOURCES AFFECTED		People			Land			Water			Structures		
DEGREE OF IMPACT		Minor	Moderate	Major	Minor	Moderate	Major	Minor	Moderate	Major	Minor	Moderate	Major
TYPE OF IMPACT EVENT	NUMBER OF EVENTS												
Blasting	4	1	0	0	0	1	1	0	0	0	1	0	0
Land Stability	19	0	0	0	8	10	1	0	0	0	0	0	0
Hydrology	99	0	10	0	0	5	0	14	61	3	2	4	0
Encroachment	33	2	10	0	7	11	1	0	1	0	0	1	0
Other	1	0	0	0	0	1	0	0	0	0	0	0	0
Total	156	3	20	0	15	28	3	14	62	3	3	5	0
Total Number of Inspectable Units <sup>5</sup> : 2141													
Inspectable Units with one or more off-site impacts: 100													
Exploration Inspectable Units with one or more off-site impacts: 0													
Inspectable Units free of off-site impacts: 2041													

## West Virginia

EY 2020, ending June 30, 2020

**CHART 5A HISTORICAL TRENDS**  
**PERCENT OF INSPECTABLE UNITS FREE OF OFF-SITE**  
**IMPACTS**



**TABLE 5A**

<b>PERCENT OF INSPECTABLE UNITS FREE OF OFF-SITE IMPACTS</b>		
<b>Year</b>	<b>Initial Program and Permanent Program Permits</b>	<b>Bond Forfeiture Sites</b>
2017	92.7	84.0
2018	92.9	84.9
2019	93.4	84.1
2020	95.3	95.4

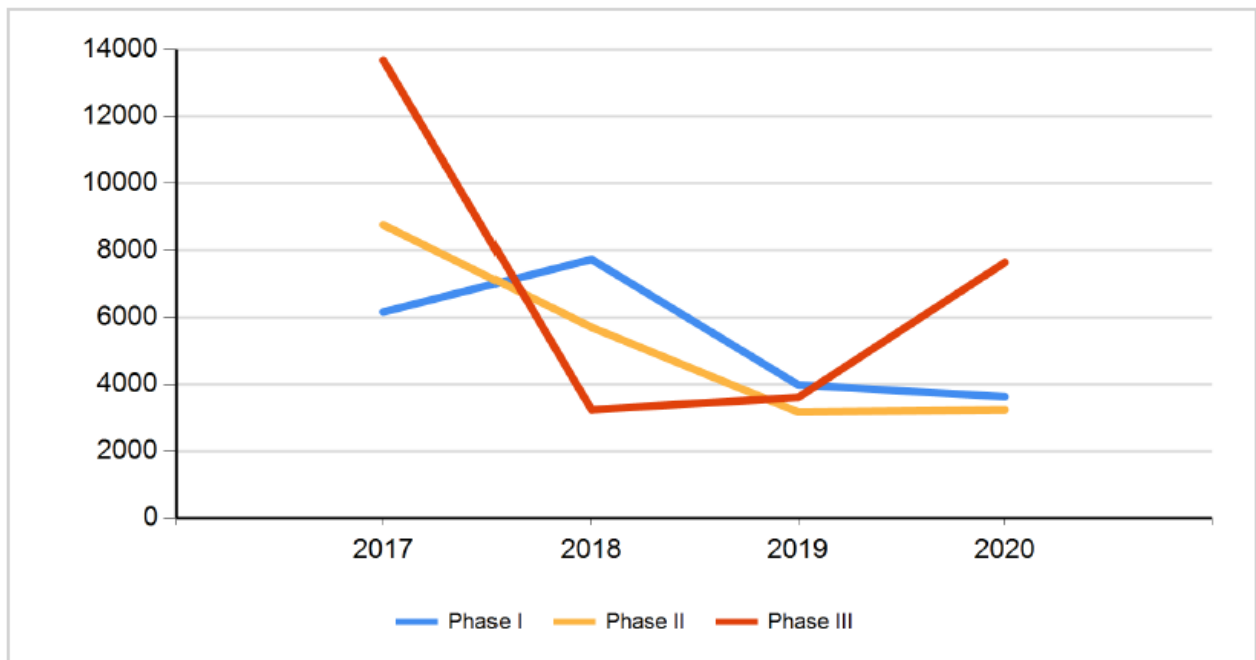
TABLE 6

SURFACE COAL MINING AND RECLAMATION ACTIVITY							
Areas of Phase I, II, and III Bond Releases During the Evaluation Year (EY)							
Phase I Releases	Phase II Releases		Phase III Releases			Total Acres Released During the EY	
Total Acres Released in Approved Phase I Releases	Total Acres Released in Approved Phase II Releases	Acres not previously released under Phase I	Total Acres Released in Approved Phase III Releases	Acres not previously released under Phase II	Acres not previously released under Phase I or II		
2,401		865			362	Phase I	3,628
	2,868			373		Phase II	3,241
			7,643			Phase III	7,643
Number of Permanent Program Permits with Jurisdiction Terminated Under Phase III Bond Release During the Evaluation Year					40	Other Releases - Acres	
Initial Program Sites with Jurisdiction Terminated During the Evaluation Year					0	Administrative Adjustments	2721
Number of Inspectable Units Removed					40	Bond Forfeiture	105
					Total Acres at Start of EY	Total Acres at End of EY	Change in Acres During EY
New Area Bonded for Disturbance							4,449
Total Area Bonded for Disturbance					347,390	341,466	(5,924)
Area Bonded for Disturbance without Phase I Bond Release					279,969	259,870	(20,099)
Area Bonded for Disturbance for which Phase I Bond Release Has Been Approved					52,810	54,143	1,333
Area Bonded for Disturbance for which Phase II Bond Release Has Been Approved					50,553	12,106	(38,447)
Area Bonded for Disturbance with Bonds Forfeited During Evaluation Year							9
Area Bonded for Remining					0	0	0
Areas of Permits Disturbed by Surface Coal Mining and Reclamation Operations							
Disturbed Area					137,707	136,536	(1,171)

West Virginia

EY 2020, ending June 30, 2020

**CHART 6A HISTORICAL TRENDS  
ACRES OF PHASE I, II, AND III BOND RELEASES**



**TABLE 6A**

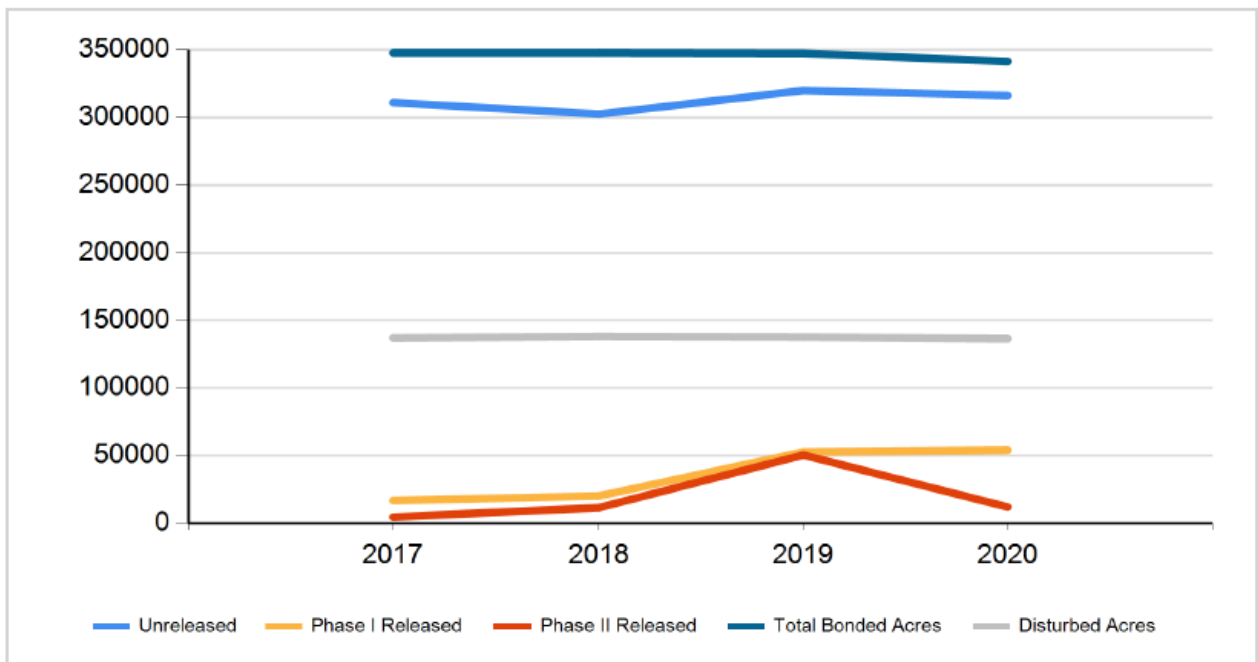
ACRES OF PHASE I, II, AND III BOND RELEASES			
Year	Phase III	Phase II	Phase I
2017	13685	8763	6161
2018	3244	5705	7733
2019	3609	3173	3984
2020	7643	3241	3628



West Virginia

EY 2020, ending June 30, 2020

**CHART 6B HISTORICAL TRENDS  
ACRES BONDED FOR DISTURBANCE AND DISTURBED AREA**



**TABLE 6B**

AREAS BONDED FOR DISTURBANCE AND DISTURBED AREA					
Year	ACRES BONDED FOR DISTURBANCE				Disturbed Area
	Unreleased	Phase I Released	Phase II Released	Total Bonded Area	
2017	311053.0	16932.0	4679	347740.0	137071.0
2018	302505.0	20280.0	11652	347796.0	138119.0
2019	319942.0	52810.0	50553	347390.0	137707.0
2020	316188.0	54143.0	12106	341466.0	136536.0

West Virginia

EY 2020, ending June 30, 2020

TABLE 7

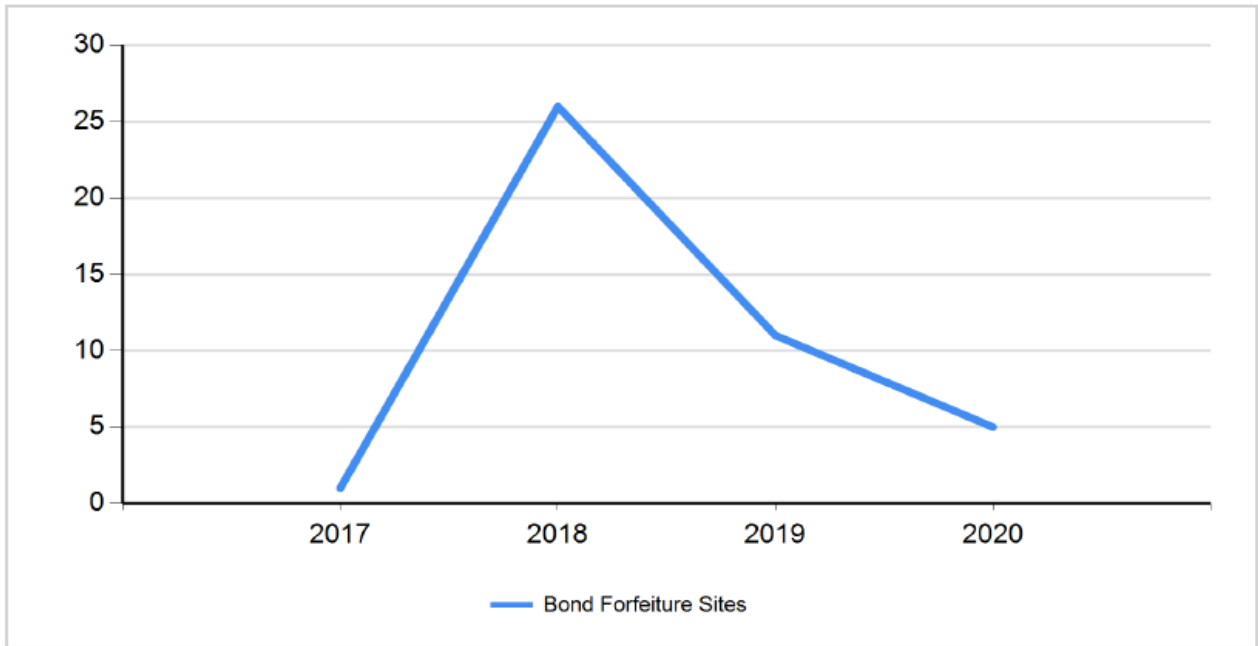
<b>BOND FORFEITURE ACTIVITY (Permanent Program Permits)</b>			
<b>Bond Forfeiture and Reclamation Activity</b>	<b>Number of Sites</b>	<b>Dollars</b>	<b>Acres</b>
Sites with bonds forfeited and collected that were un-reclaimed at the start of the current Evaluation Year (i.e. end of previous Evaluation Year) <sup>1</sup>	280		22,995
Sites with bonds forfeited and collected during the current Evaluation Year	3	5,000	9
Sites with bonds forfeited and collected that were re-permitted during the current Evaluation Year	0		0
Sites with bonds forfeited and collected that were reclaimed during the current Evaluation Year	5		105
Sites with bonds forfeited and collected that were un-reclaimed at the end of the current Evaluation Year <sup>1</sup>	278		22,899
Sites with bonds forfeited but un-collected at the end of the current Evaluation Year	2		394
<b>Forfeiture Sites with Long-Term Water Pollution</b>			
Bonds forfeited, lands reclaimed, but water pollution is still occurring	149		
Bonds forfeited, lands reclaimed, and water treatment is ongoing	80		
<b>Surety/Other Reclamation Activity In Lieu of Forfeiture</b>			

Sites being reclaimed by surety/other party at the start of the current Evaluation Year (i.e., the end of previous Evaluation Year) <sup>2</sup>	1		3
Sites where surety/other party agreed during the current Evaluation Year to do reclamation	4		716
Sites being reclaimed by surety/other party that were re-permitted during the current Evaluation Year	0		0
Sites with reclamation completed by surety/other party during the current Evaluation Year <sup>3</sup>	0		0
Sites being reclaimed by surety/other party at the end of the current Evaluation Year <sup>2</sup>	5		719
<sup>1</sup> Includes data only for those forfeiture sites not fully reclaimed. <sup>2</sup> Includes all sites where surety or other party has agreed to complete reclamation and the site is not fully reclaimed. <sup>3</sup> These sites are also reported in Table 6, Surface Coal Mining and Reclamation Activity, because Phase III bond release would be granted on these sites.			

West Virginia

EY 2020, ending June 30, 2020

**CHART 7A HISTORICAL TRENDS  
NUMBER OF BOND FORFEITURE SITES**

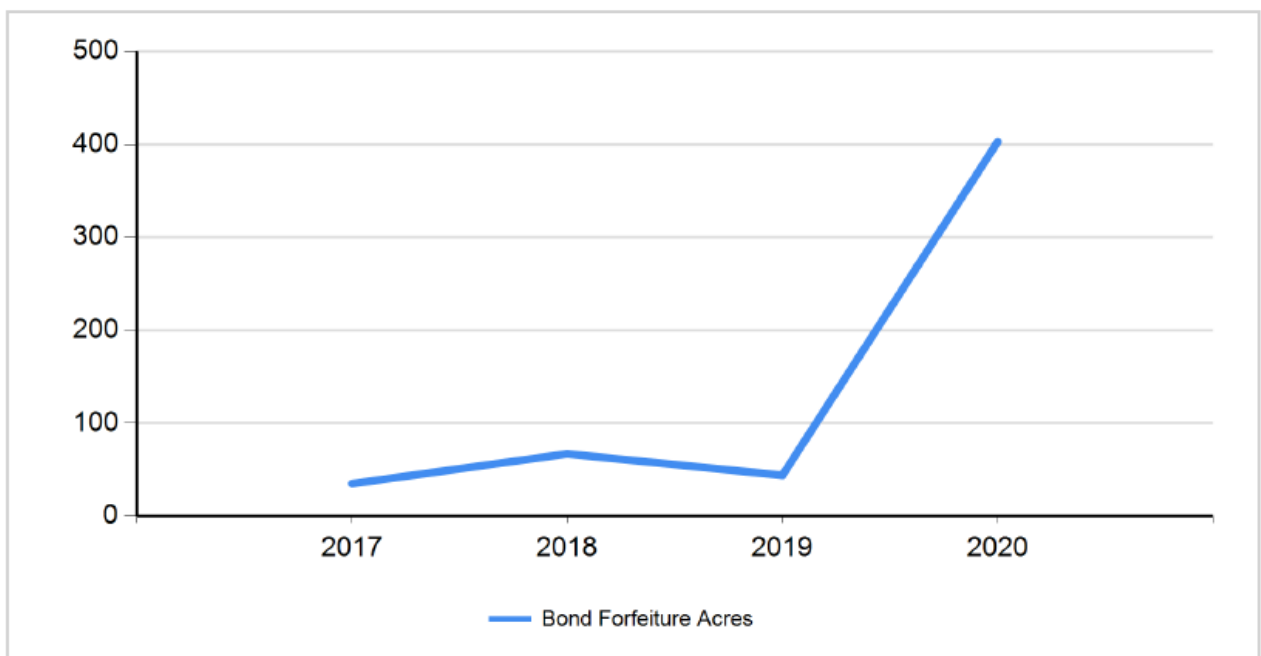


**TABLE 7A**

NUMBER OF BOND FORFEITURE SITES	
Year	Bond Forfeiture Sites
2017	1
2018	26
2019	11
2020	5

West Virginia  
EY 2020, ending June 30, 2020

**CHART 7B HISTORICAL TRENDS  
ACREAGE OF BOND FORFEITURE SITES**

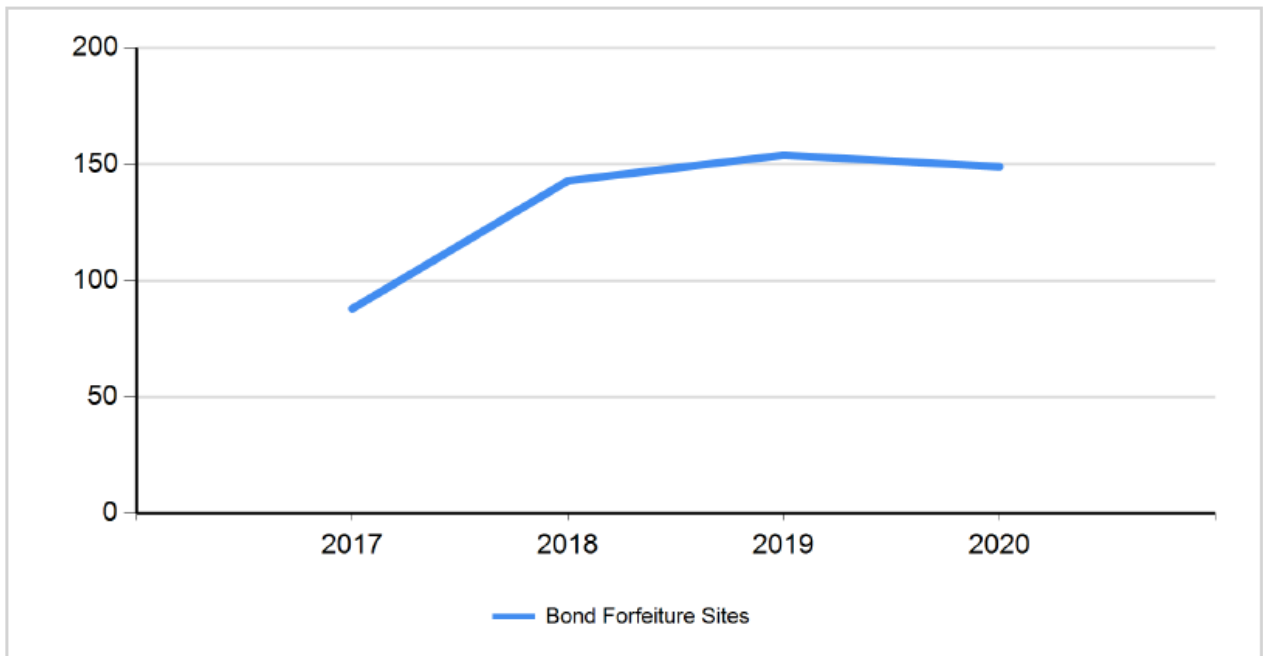


**TABLE 7B**

<b>ACREAGE OF BOND FORFEITURE SITES</b>	
<b>Year</b>	<b>Acres</b>
2017	35
2018	67
2019	44
2020	403

West Virginia  
EY 2020, ending June 30, 2020

**CHART 7C HISTORICAL TRENDS  
NUMBER OF SITES WITH WATER POLLUTION STILL  
OCCURRING**



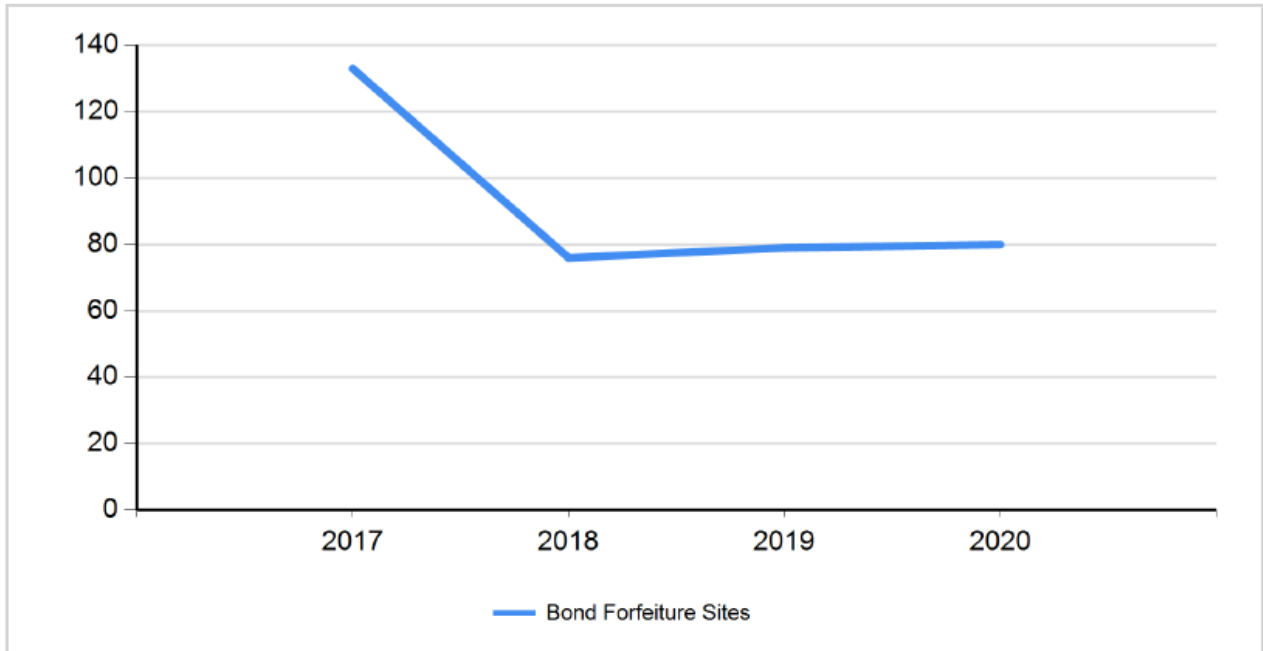


**TABLE 7C**

<b>NUMBER OF SITES WITH WATER POLLUTION STILL OCCURRING</b>	
<b>Year</b>	<b>Sites</b>
2017	88
2018	143
2019	154
2020	149

West Virginia  
EY 2020, ending June 30, 2020

**CHART 7D HISTORICAL TRENDS  
NUMBER OF SITES WITH WATER TREATMENT ONGOING**



**TABLE 7D**

NUMBER OF SITES WITH WATER TREATMENT ONGOING	
Year	Sites
2017	133
2018	76
2019	79
2020	80

West Virginia  
EY 2020, ending June 30, 2020

TABLE 8

REGULATORY AND AML PROGRAMS STAFFING	
Function	Number of FTEs
<b>Regulatory Program</b>	
Permit Review and Maintenance	57.50
Inspection	87.15
Other (supervisory, clerical, administrative, fiscal, personnel, etc.)	47.96
<b>Regulatory Program Total</b>	192.61
<b>AML Program Total</b>	65.00
<b>TOTAL</b>	257.61

West Virginia  
EY 2020, ending June 30, 2020

CHART 8A HISTORICAL TRENDS  
REGULATORY AND AML PROGRAMS STAFFING

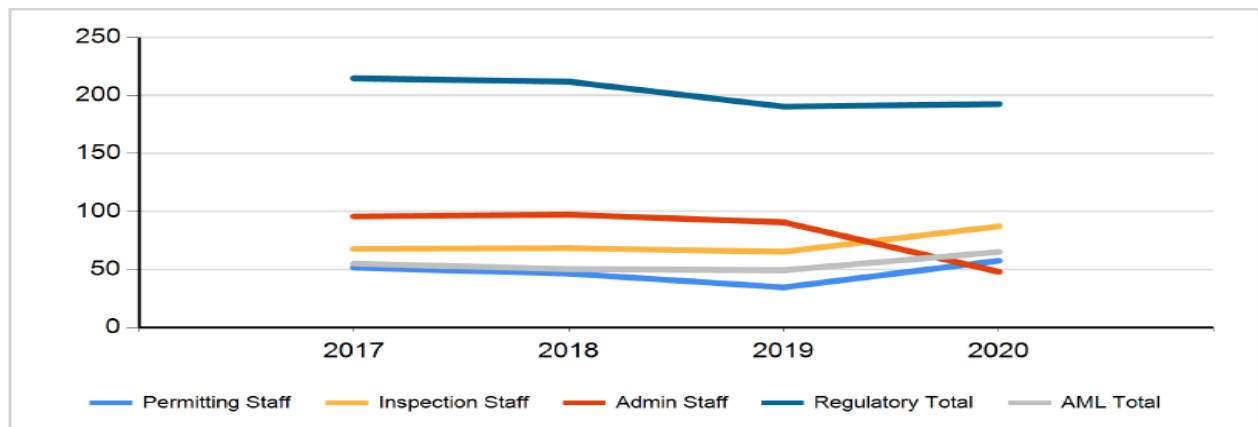


TABLE 8A

REGULATORY AND AML PROGRAMS STAFFING					
	Regulatory Program				
Year	Permitting	Inspection	Admin	Total	AML Program
2017	52	68	96	215	55
2018	47	68	97	212	50
2019	35	65	91	190	49
2020	58	87	48	193	65

West Virginia

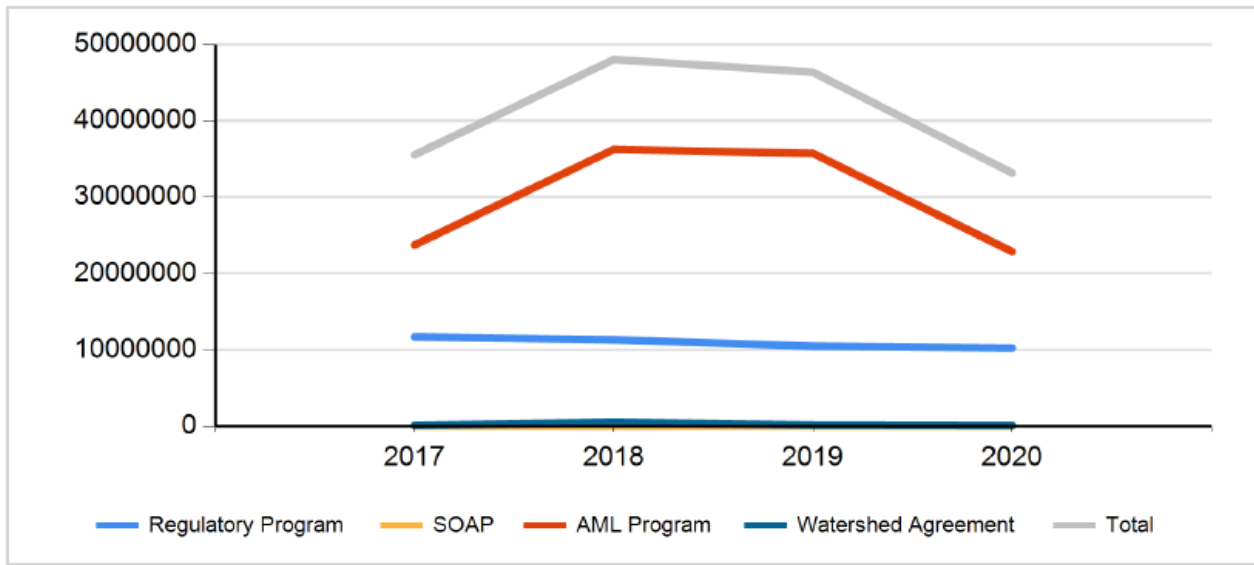
EY 2020, ending June 30, 2020

TABLE 9

FUNDS GRANTED TO STATE OR TRIBE BY OSM (Actual Dollars Rounded to the Nearest Dollar)			
Type of Funding	Federal Funds Awarded	Total Program Cost	Federal Funds Awarded as a Percentage of Total Program Costs
<b>Regulatory Funding</b>			
Administration and Enforcement Grant	10,226,486		
Other Regulatory Funding, if applicable	0		
<b>Subtotal (Regulatory Funding)</b>	10,226,486	20,452,973	50
<b>Small Operator Assistance Program Grant Funding</b>	0	0	
<b>Abandoned Mine Land Reclamation Funding</b>	22,865,581	22,865,581	100
<b>Watershed Cooperative Agreement Program</b>	93,600	316,510	30
<b>TOTAL</b>	33,185,667		

West Virginia  
EY 2020, ending June 30, 2020

**CHART 9A HISTORICAL TRENDS  
FUNDS GRANTED TO STATE OR TRIBE BY OSM**



**TABLE 9A**

FUNDS GRANTED TO STATE OR TRIBE BY OSM				
Year	Regulatory Program	SOAP	AML Program	Total
2017	11,696,446	0	23,750,487	35,560,933
2018	11,320,305	0	36,274,249	48,061,054
2019	10,476,486	0	35,754,311	46,382,797
2020	10,226,486	0	22,865,581	33,185,667

TABLE 10

STATE INSPECTION ACTIVITY

INSPECTABLE UNITS FOR WHICH STATE MET REQUIRED INSPECTION FREQUENCY ON AN INSPECTABLE UNIT-BY-INSPECTABLE UNIT BASIS<sup>1</sup>

Inspectable Units (IUs)	Total number of inspectable units <sup>2</sup>	Number of inspections required annually		Number of inspections conducted		IUs Met Complete Inspection Frequency Requirement		IUs Met Partial Inspection Frequency Requirement		IUs Met Complete and Partial Inspection Frequency Requirements		
		Complete inspections	Partial inspections	Complete inspections	Partial inspections	Number	Percent	Number	Percent	Total number of IUs	Number that met inspection frequency	Percent
COAL MINES AND FACILITIES												
Active	1142	4568	9136	4579	9329	1124	98	1115	98	1142	1114	98
Inactive	534	2136	0	2065	1462	517	97	534	100	534	517	97
Abandoned	288	288	0	1091	3532	288	100	288	100	288	288	100
TOTALS <sup>3</sup>	1964	6992	9136	7735	14323	1929	98	1937	99	1964	1919	98
Coal Exploration Activities <sup>4</sup>		Complete Inspections						Partial Inspections				
Exploration sites with permits		126						24				
Exploration sites with notices		0						0				

<sup>1</sup> Calculated on a site-specific basis.

<sup>2</sup> Total number includes both permanent program permits and initial program sites.

<sup>3</sup> OSM is assuming that all states have gone through the process described in 30 CFR 840.11(h) and 842.11(f) to reduce inspection frequency on abandoned/forfeited sites

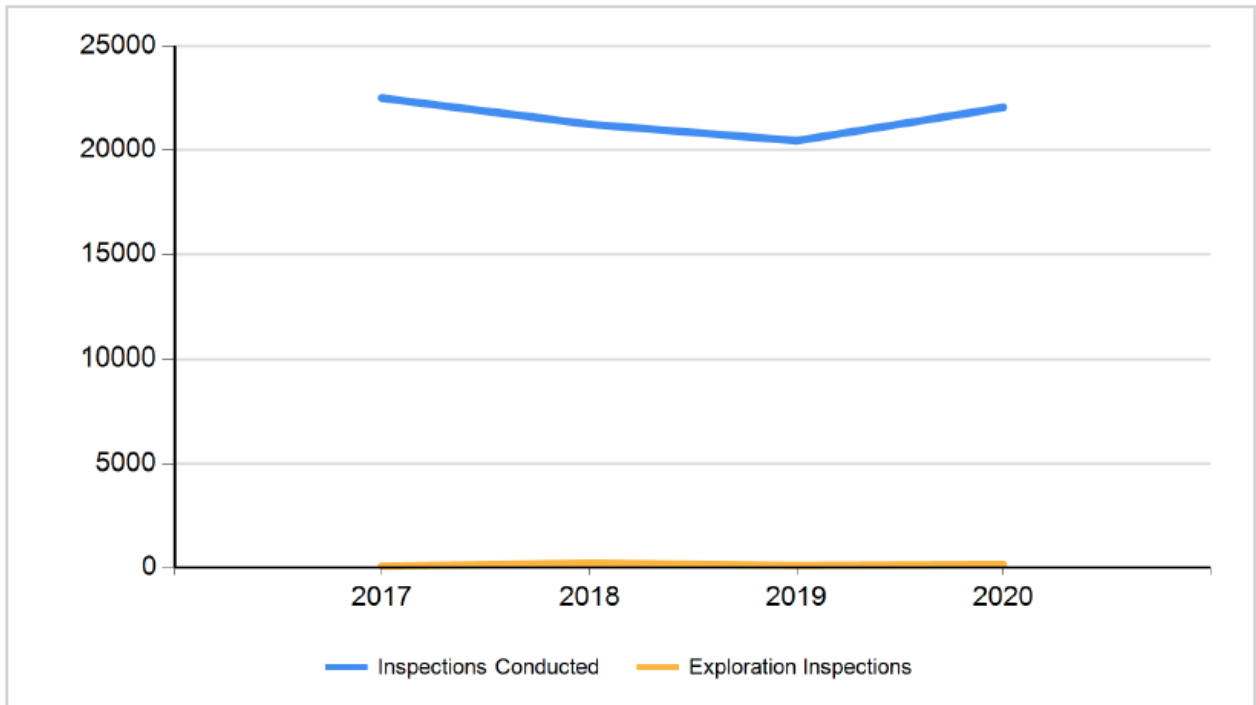
<sup>4</sup> Includes all valid notices and permits. No inspection frequency data are provided since SMCRA does not establish a minimum numerical inspection frequency for coal exploration activities.

<sup>5</sup> NA - Not Available

West Virginia

EY 2020, ending June 30, 2020

**CHART 10A HISTORICAL TRENDS  
STATE OR TRIBAL INSPECTION ACTIVITY**



**TABLE 10A**

STATE OR TRIBAL INSPECTION ACTIVITY		
Year	Inspections Conducted	Exploration Inspections
2017	22506	73
2018	21243	205
2019	20453	105
2020	22058	150



West Virginia  
EY 2020, ending June 30, 2020

TABLE 11

STATE OR TRIBAL ENFORCEMENT ACTIVITY		
Type of Enforcement Action	Number of Actions <sup>1</sup>	Number of Violations <sup>1</sup>
Notice of Violation	1,095	1,095
Failure-to-Abate Cessation Order	445	445
Imminent Harm Cessation Order	4	4

<sup>1</sup> Does not include actions and violations that were vacated.

**CHART 11A HISTORICAL TRENDS  
STATE OR TRIBAL ENFORCEMENT ACTIVITY**

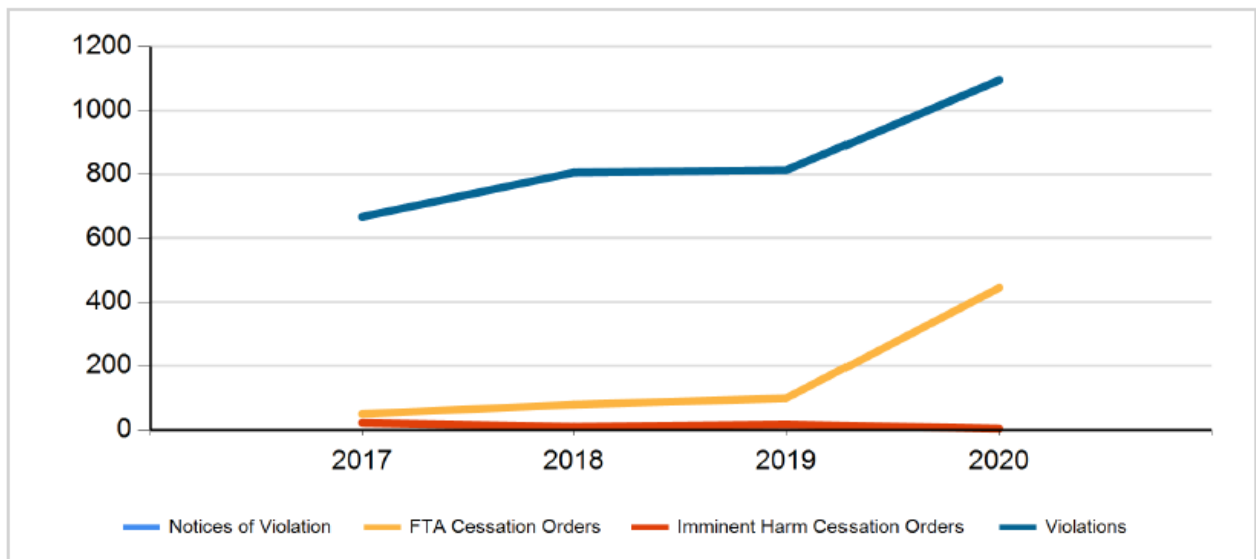


TABLE 11A

STATE OR TRIBAL ENFORCEMENT ACTIVITY				
Year	Notices of Violation	Violations	FTA Cessation Orders	Imminent Harm Cessation Orders
2017	667	667	50	22
2018	806	806	79	10
2019	813	813	99	17
2020	1095	1095	445	4

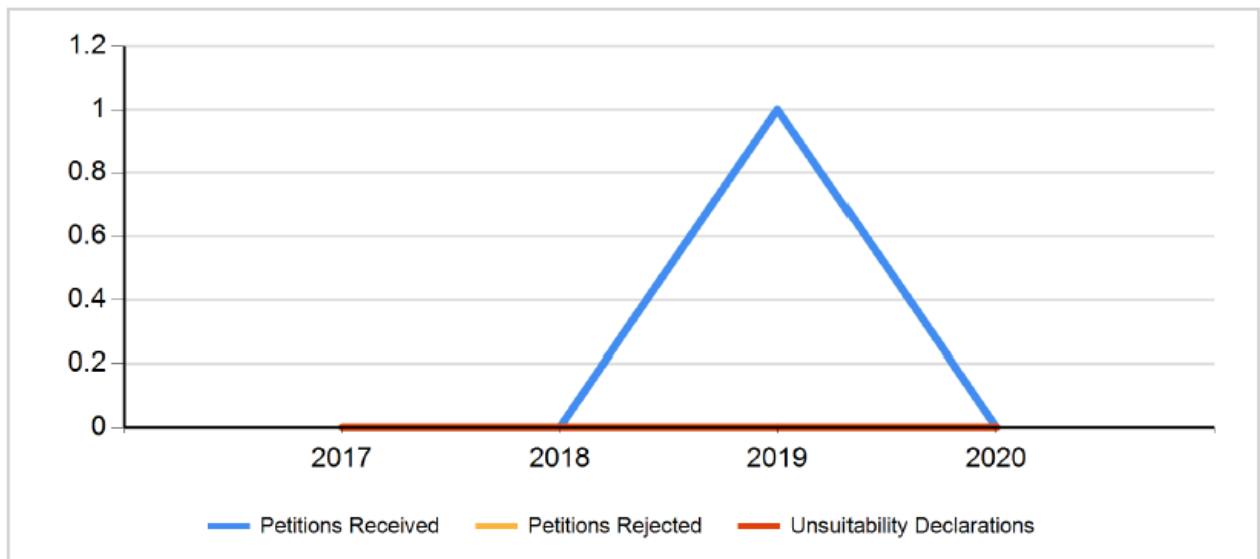
West Virginia  
EY 2020, ending June 30, 2020

TABLE 12

LANDS UNSUITABLE ACTIVITY		
Activity	Number	Acres
Petitions Received	0	
Petitions Rejected	0	
Petitions Accepted	0	
Decisions Denying Petition	0	
Decisions Declaring Lands Unsuitable	0	0
Decisions Terminating Unsuitable Designations	0	0

West Virginia  
EY 2020, ending June 30, 2020

**CHART 12A HISTORICAL TRENDS  
LANDS UNSUITABLE ACTIVITY**

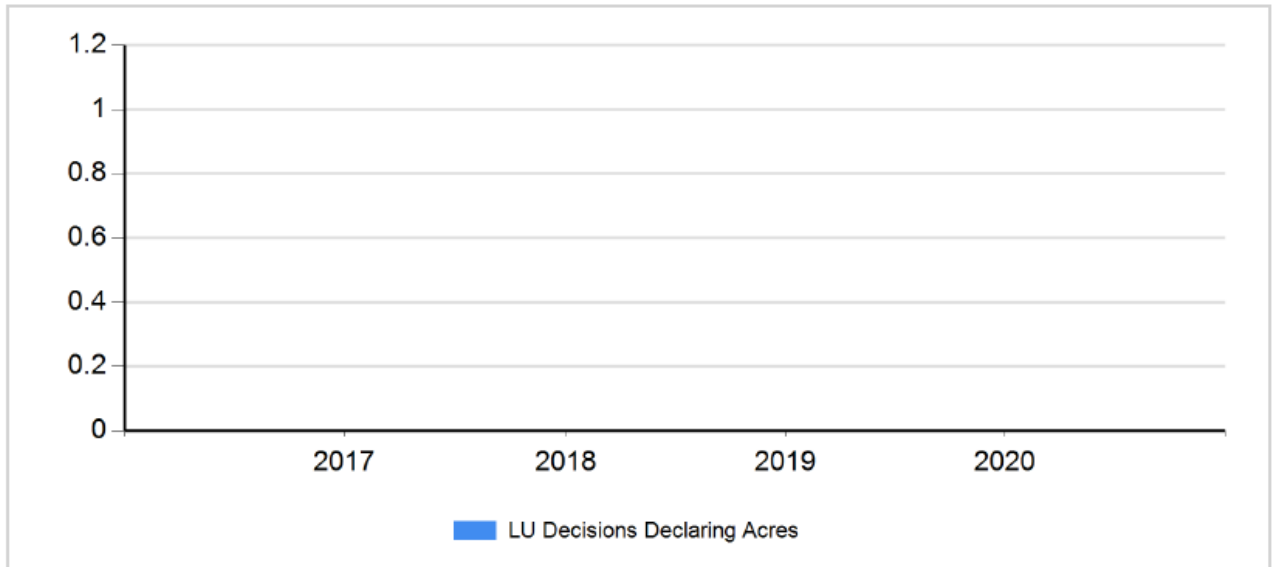


**TABLE 12A**

LANDS UNSUITABLE ACTIVITY			
Year	Petitions Received	Petitions Rejected	Unsuitability Declarations
2017	0	0	0
2018	0	0	0
2019	1	0	0
2020	0	0	0

West Virginia

EY 2020, ending June 30, 2020

**CHART 12B HISTORICAL TRENDS  
ACRES DECLARED UNSUITABLE****TABLE 12B**

ACRES DECLARED UNSUITABLE	
Year	Acres Declared Unsuitable
2017	0.0
2018	0.0
2019	0.0
2020	0.0

West Virginia  
EY 2020, ending June 30, 2020

TABLE 13

OSM OVERSIGHT ACTIVITY					
Oversight Inspections and Site Visits					
	Complete		Partial		
	Joint	Non-Joint	Joint	Non-Joint	Total
Oversight Inspections	32	5	60	21	118
	Technical Assistance		Other		Total
Site Visits	26		175		201
Violations Observed by OSM and Citizen Requests for Inspection <sup>1</sup>					
Type of Action					Total number of each action
How many violations were observed by OSM on oversight inspections?					115
Of the violations observed, how many did OSM defer to State action during inspections?					40
Of the violations observed, how many did OSM refer to the State through Ten-Day Notices? <sup>2</sup>					21
How many Ten-Day Notices did OSM Issue for observed violations? <sup>3</sup>					2
How many Ten-Day Notices did OSM issue to refer citizen requests for inspection?					0
How many Notices of Violation did OSM issue?					0
How many Failure-to-Abate Cessation Orders did OSM issue?					0
How many Imminent Harm Cessation Orders did OSM issue?					0
OSM Action for Delinquent Reporting or Non-Payment of Federal AML Reclamation Fees					
How many Ten-Day Notices for delinquent reporting or non-payment of Federal AML reclamation fees did OSM issue?					0
How many Notices of Violation for delinquent reporting or non-payment of Federal AML reclamation fees did OSM issue?					0
How many Federal Failure-to-Abate Cessation Orders for delinquent reporting or non-payment of Federal AML reclamation fees did OSM issue?					0
<sup>1</sup> This section does not include actions for delinquent reporting or non-payment of Federal AML fees that are reported in the last section of the table.					
<sup>2</sup> Number of violations contained in Ten-Day Notices not including those issued to refer citizen requests for inspection.					
<sup>3</sup> Number of Ten-Day Notices issued not including those to refer citizen requests for inspection.					

West Virginia

EY 2020, ending June 30, 2020

**CHART 13A HISTORICAL TRENDS  
OSM OVERSIGHT ACTIVITY**

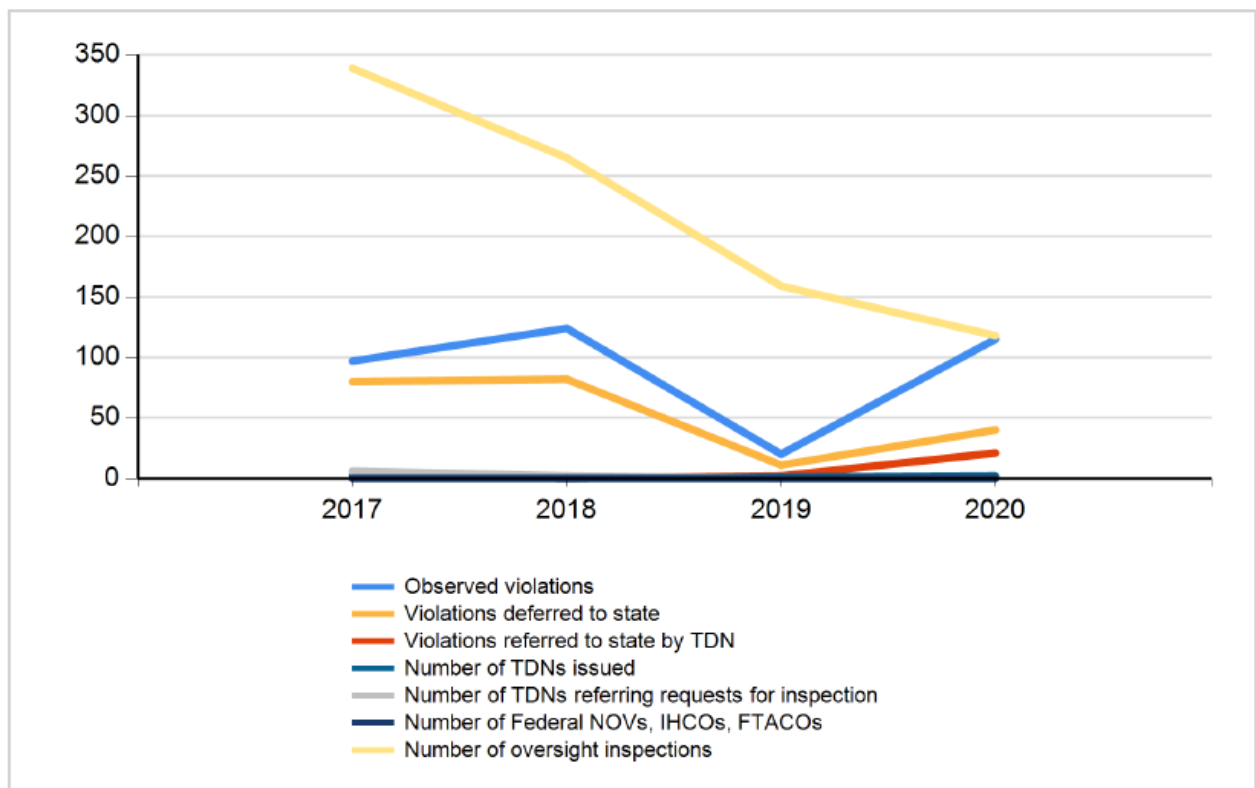


TABLE 13A

OSM OVERSIGHT ACTIVITY							
Year	Number of violations observed on OSM oversight inspections	Number of violations deferred to state action	Number of violations referred to state by TDN	Number of TDN's issued	Number of TDN's issued to refer requests for inspection	Number of Federal NOV's, FTACOs, & IHCOs issued	Number of oversight inspections
2017	97	80	2	2	6	0	339
2018	124	82	0	0	2	0	265
2019	20	11	2	1	0	0	159
2020	115	40	21	2	0	0	118

West Virginia  
EY 2020, ending June 30, 2020

TABLE 14

STATUS OF ACTION PLANS						
Action Plan ID	Problem Type <sup>1</sup>	Problem Title	Problem Description	Date Action Plan Initiated	Scheduled Completion Date	Actual Completion Date
None						
<sup>1</sup> Problem Type: "PA" indicates a required Program change under subchapter T or 732 "RP" indicates a Regulatory Program implementation or administrative problem						



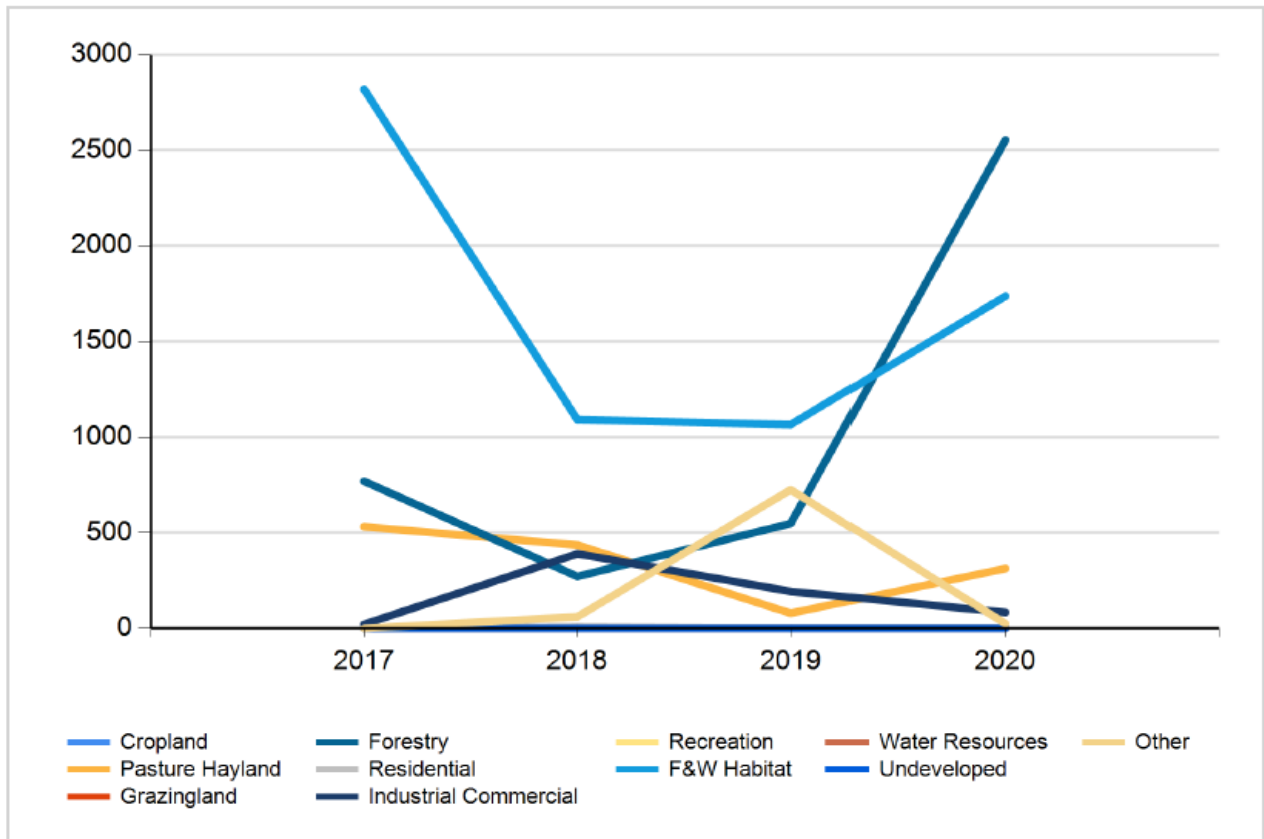
West Virginia  
EY 2020, ending June 30, 2020

**TABLE 15**  
**(Optional)**

<b>POST-MINING LAND USE ACREAGE OF SITES FULLY RECLAIMED</b> (Phase III bond release or termination of jurisdiction under the Initial Program)	
<b>Land Use<sup>1</sup></b>	<b>Acres Released</b>
Cropland	0.00
Pasture/Hayland	313.15
Grazingland	0.00
Forestry	2,553.48
Residential	2.99
Industrial/Commercial	83.80
Recreation	0.00
Fish & Wildlife Habitat	1,736.99
Developed Water Resources	0.00
Undeveloped land or no current use or land management	0.00
Other - Public Utilities	24.61
Other -	0.00
Other -	0.00
Other -	0.00
Other -	0.00
Other -	0.00
Other -	0.00
Other -	0.00
Other -	0.00
<b>Sub-Total Other</b>	24.61
<b>Total</b>	4,715.02
<sup>1</sup> Land uses as defined in 30 CFR 701.5 or "Other" as defined under the state or tribal program	

West Virginia  
EY 2020, ending June 30, 2020

**CHART 15A HISTORICAL TRENDS  
POST MINING LAND USE ACREAGES**



**TABLE 15A**

POST MINING LAND USE ACREAGES											
Year	Cropland	Pasture Hay	Grazing Land	Forest	Residential	Industrial Comm.	Recreation	F&W Hab.	Water Resources	Undeveloped	Other
2017	0	532	0	769	0	22	0	2818	0	0	0
2018	0	436	0	272	8	390	0	1091	0	0	61
2019	0	80	0	548	0	194	0	1066	0	0	725
2020	0	313	0	2553	3	84	0	1737	0	0	25

**Table 1 – (State/Tribe) Status of AML Inventory all Priority 1, 2, and 3 Hazards on June 30, 2020**

	High Priority		Elevated Priority 3	Stand-Alone Priority 3  (Not adjacent or in conjunction w/ P1&2)	Total
	Priority 1	Priority 2			
UNFUNDED					
GPRA Acres	1,395.78	83,687.17		69,025.85	154,108.80
Dollars	66,781,411.42	1,045,139,540.00		541,716,374.85	1,653,637,326.27
FUNDED					
GPRA Acres	158.60	6,591.41	6,395.80	1.60	13,147.41
Dollars	1,114,494.00	42,254,575.21	2,799,511.98	225,000.00	46,393,581.19
COMPLETED					
GPRA Acres	35,736.58	124,192.96	833.46	206,491.94	367,254.94
Dollars	197,650,598.77	533,142,735.61	4,113,407.68	18,931,810.16	753,838,552.22

**Table 2 - (State/Tribe) Accomplishments in Eliminating Health and Safety Hazards Related to Past Mining Priority 1 and 2 Hazards (As of July 1, 2020)**

	Clogged Stream (CS) (miles)	Clogged Stream Lands (CSL) (acres)	Dangerous Pile or Embankment (DPE)(acres)	Dangerous Highwall (DH) (feet)	Dangerous Impoundment (DI) (count)	Dangerous Slide (DS) (acres)	Gases: Hazardous /Explosive (GHE) (count)	Hazardous Equip. /Facilities (HEF) (count)	Hazardous Water Body (HWB) (count)
<b>UNRECLAIMED/REMAINING HAZARDS (Unfunded)</b>									
<b>Units</b>	5,011.71	159.25	5,085.01	2,402,394.00	1,076.00	386.49	2.00	582.00	30.00
<b>GPRA Acres</b>	25,037.70	305.50	5,084.16	40,234.65	5,390.00	375.04	2.00	62.50	150.00
<b>Dollars</b>	13,869,319.00	3,348,322.50	53,962,648.00	532,856,080.48	26,225,233.31	31,305,349.00	260,000.00	7,770,536.00	1,055,113.73
<b>ANNUAL RECLAMATION - EY2020 only (Completed)</b>									
<b>Units</b>	301.25	0.00	22.10	300.00	15.00	7.35	0.00	3.50	1.00
<b>GPRA Acres</b>	1,506.30	0.00	22.10	4.30	75.00	7.35	0.00	0.40	5.00
<b>Dollars</b>	230,327.85	0.00	2,586,345.89	93,800.00	1,179,184.31	3,497,584.65	0.00	142,851.96	15,515.00
<b>HISTORICAL RECLAMATION - EY1978 - 2020 (Completed)</b>									
<b>Units</b>	848.17	172.65	5,537.86	392,905.90	1,996.00	723.79	10.80	752.30	33.30
<b>GPRA Acres</b>	4,223.67	177.90	5,538.16	5,613.16	9,980.00	722.59	10.80	75.38	165.00
<b>Dollars</b>	20,117,971.09	6,456,784.00	171,352,601.49	61,131,638.57	52,913,522.41	69,525,259.18	438,670.96	9,883,531.57	975,102.00
Table 2 Continued On Next Page									

Table 2 - (State/Tribe) Accomplishments in Eliminating Health and Safety Hazards Related to Past Mining Priority 1 and 2 Hazards (As of July 1, 2020)

	Industrial/Residential Waste (IRW) (acres)	Portal (P) (count)	Polluted Water: Agri/Industrial (PWA)(count)	Polluted Water: Human Consumption (PWHC)(count)	Subsidence (S) (acres)	Surface Burning (SB) (acres)	Underground Mine Fire (UMF) (acres)	Vertical Opening (VO) (count)	TOTAL
<b>UNRECLAIMED/REMAINING HAZARDS (Unfunded)</b>									
<b>Units</b>	8.00	2,379.10	153.80	935.00	774.20	96.81	2,078.40	139.00	N/A
<b>GPRA Acres</b>	8.00	243.10	769.00	4,675.00	772.50	96.80	2,078.40	13.90	85,298.25
<b>Dollars</b>	59,356.00	28,466,380.76	61,233,702.00	59,852,442.67	61,523,155.00	6,691,156.00	221,027,334.00	4,294,926.00	1,113,801,054.45
<b>ANNUAL RECLAMATION - EY2020 only (Completed)</b>									
<b>Units</b>	0.50	53.00	0.00	425.00	1.90	1.00	3.25	0.00	N/A
<b>GPRA Acres</b>	0.50	5.30	0.00	2,125.00	1.90	1.00	3.25	0.00	3,757.40
<b>Dollars</b>	150,000.00	1,136,797.22	0.00	308,441.56	340,678.88	297,940.87	723,248.10	0.00	10,702,716.29
<b>HISTORICAL RECLAMATION - EY1978 - 2020 (Completed)</b>									
<b>Units</b>	45.60	3,531.00	88.40	26,272.00	614.83	561.80	39.25	221.40	N/A
<b>GPRA Acres</b>	45.30	353.10	438.50	131,360.00	604.21	560.40	39.25	22.13	159,929.55
<b>Dollars</b>	806,981.00	38,657,548.26	14,604,425.35	180,835,767.75	59,480,890.28	30,089,462.05	6,955,730.09	6,567,448.33	730,793,334.38

Table 3 - (State/Tribe) Accomplishments in Eliminating Environmental Problems Related to Past Mining Priority 3 and SMCRA section 403(b) Hazards (As of July 1, 2020)

PROBLEM TYPE (keyword)								
	Bench , Solid Bench, Fill Bench (BE) (acres)	Industrial/Residential Waste Dump (DP) (acres)	Equipment and Facilities (EF) (count)	Gob (GO) (acres)	Highwall (H) (feet)	Haul Road (HR) (acres)	Mine Opening (MO) (count)	Pit, Open Pit, Strip Pit (PI) (acres)
<b>UNRECLAIMED/REMAINING HAZARDS (Unfunded)</b>								
Units	199.80	39.50	93.00	1,238.42	3,442,296.00	14.25	111.00	46.55
GPRA Acres	199.80	39.40	9.30	1,236.92	49,185.67	13.75	11.10	46.55
Dollars	781,401.00	235,116.25	556,942.00	11,455,446.50	535,785,743.84	416,501.00	1,150,294.00	316,868.00
<b>ANNUAL RECLAMATION - EY2020 only (Completed)</b>								
Units	0	0	0	0	0	0	7.00	0
GPRA Acres	0	0	0	0	0	0	35.00	0
Dollars	0	0	0	0	0	0	50,000.00	0
<b>HISTORICAL RECLAMATION - EY1978 - 2020 (Completed)</b>								
Units	44.00	34.15	20.00	190.46	48,363.00	11.00	17.00	6.00
GPRA Acres	43.50	34.15	2.00	188.96	690.94	11.00	1.70	6.00
Dollars	180,866.00	272,785.69	115,416.00	2,408,234.00	6,412,087.29	107,234.00	124,215.00	40,000.00

Table 3 - (State/Tribe) Accomplishments in Eliminating Environmental Problems Related to Past Mining Priority 3 and SMCRA section 403(b) Hazards (As of July 1, 2020)

PROBLEM TYPE (keyword)						
Spoil, Spoil Bank (SA) (acres)	Slurry (SL) (acres)	Slump (SP) (acres)	Water (WA) (gallons)	Other (specify)	Water Supplies (WS) - Section	TOTAL
<b>UNRECLAIMED/REMAINING HAZARDS (Unfunded)</b>						
1,219.50	10.00	31.86	35,361.00	153.00	0.00	N/A
1,219.00	10.00	31.76	25,999.40	0.00	0.00	78,002.65
7,471,023.85	12,001.00	2,637,744.00	22,221,289.00	1,338,249.00	0.00	584,378,619.44
<b>ANNUAL RECLAMATION - EY2020 only (Completed)</b>						
0.00	0.00	0.00	205,032.50	0.00	0.00	N/A
0.00	0.00	0.00	205,032.50	0.00	0.00	205,067.50
0.00	0.00	0.00	386,564.95	0.00	0.00	436,564.95
<b>HISTORICAL RECLAMATION - EY1978 - 2020 (Completed)</b>						
423.10	2.00	24.36	206,499.78	0.00	0.00	N/A
423.10	2.00	24.36	205,897.78	0.00	0.00	207,325.49
2,898,844.00	40,000.00	827,985.45	9,642,550.41	0.00	0.00	23,070,217.84

**Table 4 – (State/Tribe) Public Well-Being Enhancement  
(All Priority 1, 2, and 3 AML projects completed during EY 2020)**

#	PAD Number	Project Name	Problem Type(s) Reclaimed	GPRA Acres	Cost	Number of People with Reduced Exposure Potential (State Estimated /or/ Census Data)
1	WV005173	Adrian (Zickefoose) Burning Refuse II	SB	1.00	\$297,940.87	154.00
2	WV005584	Bethlehem (Bittering) Subsidence IX	S	0.10	\$55,382.50	469.00
3	WV006864	Bethlehem (Citro) Subsidence II	S	0.10	\$29,278.12	469.00
4	WV006988	Big Creek (Surgoin) Landslide	DS	1.00	\$389,000.00	997.00
5	WV006988	Big Creek (Surgoin) Landslide	P	0.20	\$20,321.00	
6	WV001981	Big Creek Complex	DH	4.30	\$93,800.00	493.00
7	WV001981	Big Creek Complex	DI	10.00	\$212,450.00	
8	WV001981	Big Creek Complex	P	0.90	\$234,973.60	
9	WV007009	Braeholm (Maynard) Drainage	DI	5.00	\$87,862.24	217.00
10	WV007027	Clarksburg (Quinn) Subsidence	S	0.10	\$31,727.40	1,963.00
11	WV007011	Coal (Branch) Watkins Subsidence	S	0.10	\$63,000.00	671.00
12	WV006601	Consol Number 9 (Sopuch) Subsidence	S	0.50	\$32,993.54	387.00
13	WV006601	Consol Number 9 (Sopuch) Subsidence II	S	0.10	\$12,025.00	387.00
14	WV006843	Coopers Creek (Harper) Portals	P	0.60	\$83,820.00	1,838.00
15	WV001897	Crany Mine Dump	DPE	20.00	\$2,333,681.00	139.00
16	WV006291	Crooked Run (Davis) Subsidence II	S	0.10	\$5,602.26	2,086.00
17	WV005750	Delbarton (Curry) Landslide II	DS	0.25	\$333,415.00	225.00
18	WV006987	Dingess (Dammron) Burning Coal Seam	UMF	0.25	\$14,200.00	167.00
19	WV007006	Fairmont (Fluharty) Subsidence	S	0.10	\$11,555.60	3,386.00
20	WV007012	Fairmont (Middletown Mall) Subsidence	S	0.10	\$50,970.00	1,004.00
21	WV006994	Glen Dale (Vogler) Mine Opening	P	0.10	\$7,400.00	1,426.00
22	WV007018	Holcomb (Wilson) Portals	P	0.20	\$69,804.00	128.00
23	WV006965	Hutchinson (Persutti) Mine Blowout	CS	0.50	\$100,000.00	1,004.00
24	WV006965	Hutchinson (Persutti) Mine Blowout	DI	5.00	\$41,168.55	
25	WV006838	Lake (Bell) Portals	DI	5.00	\$20,000.00	302.00
26	WV006838	Lake (Bell) Portals	HWB	5.00	\$15,515.00	
27	WV006838	Lake (Bell) Portals	P	0.10	\$10,000.00	
28	WV005128	Laurel Run Mine Shaft	WA	250.00	\$27,044.93	110.00
29	WV006821	Lens Creek (Pugh) Portals	DI	30.00	\$325,000.00	228.00
30	WV006821	Lens Creek (Pugh) Portals	P	0.30	\$28,796.60	
31	WV004150	Maurin Mine Fire and Portals	DPE	2.00	\$223,913.09	397.00
32	WV004150	Maurin Mine Fire and Portals	MO	35.00	\$50,000.00	
33	WV004150	Maurin Mine Fire and Portals	P	0.70	\$100,000.00	
34	WV004156	Mill Creek Complex	P	1.00	\$347,722.00	193.00
35	WV000711	Monarch Portals	DI	15.00	\$192,683.52	139.00
36	WV000711	Monarch Portals	HEF	0.20	\$87,778.05	
37	WV000711	Monarch Portals	P	0.50	\$147,724.02	
38	WV005576	Montgomery (WVUIT) LS PHII	DS	1.00	\$230,974.00	249.00
39	WV001062	Morgan Run #3	DS	0.10	\$498,170.10	983.00
40	WV001062	Morgan Run #3 Phase II	DI	5.00	\$300,000.00	983.00
41	WV006647	Music Valley Road (Brown) Subsidence III	S	0.10	\$11,042.80	519.00
42	WV007028	North Matewan (Ross) Landslide	DS	2.00	\$706,390.00	196.00
43	WV001124	Paddy Creek Portals	CS	0.80	\$10,000.00	196.00
44	WV001124	Paddy Creek Portals	P	0.70	\$86,236.00	
45	WV007013	Peora (Edwards) Subsidence	S	0.10	\$5,631.60	469.00
46	WV006814	Pickshin-Besoco Waterline Extension	PWHC	35.00	\$300,678.00	195.00
47	WV007005	Reedsville (Butler) Subsidence	S	0.10	\$6,176.66	340.00
48	WV006972	Rivesville (Caputo) Landslide and Clogged Stream	CS	1,500.00	\$50,000.00	584.00
49	WV006978	Sharpe Knob (USFS) Structure	HEF	0.10	\$2,460.00	43.00
50	WV006738	Venus (Davis) Hazardous Materials	HEF	0.10	\$52,613.91	316.00
51	WV006738	Venus (Davis) Hazardous Materials	IRW	0.50	\$150,000.00	
52	WV006000	Verdunville (Spry) Drainage	CS	5.00	\$70,327.85	671.00
53	WV005886	Viropa (Templeton) Subsidence III	S	0.10	\$4,733.40	469.00
54	WV006075	Wades Run Dangerous Embankment	DPE	0.10	\$28,751.80	389.00
55	WV005179	West Milford Landslide, aka West Milford (Chapman) Dangerous Slide	DS	3.00	\$1,339,635.55	391.00
56	WV006966	Whitehall (Bonasso) UMF	UMF	3.00	\$709,048.10	1,004.00
57	WV006977	Worthington (Hess) Subsidence	S	0.10	\$9,260.00	912.00
58	WV006224	Wyatt (Currey) Subsidence IV	S	0.10	\$11,300.00	469.00
TOTAL				1,952.40	\$10,771,997.66	28,357.00



**Table 5 – (State/Tribe) - Partnership Financial Resources Dedicated to Protecting the Public from Adverse Effects of Past Mining (AML projects completed during EY 2020)**

#	PAD Number	Project Name	SMCRA Program Funding Source	Total SMCRA funding	Alternate Non-SMCRA Funding Source	Total non-SMCRA Funding	In-Kind Services	Total Project Funding	Comments
1	WV003068	Valley Highwall #3 Upgrade	WCAP	\$93,600.00	EPA 319	\$198,950.00	\$23,960.00	\$316,510.00	
<b>TOTAL</b>				\$93,600.00		\$198,950.00	\$23,960.00	\$316,510.00	

**Table 6 – (State/Tribe) – Reclamation Projects Started and/or Completed (AML projects started and/or Completed during EY 2020)**

Project Type	Projects Started	Projects Completed
State/Tribe (EY 2020):	43	40
Federal (EY 2020):	0	0
<b>Total (EY 2020):</b>	43	40

**Table 7 – (State/Tribe) – AML Program Grant Awards and Staffing  
(State/Tribe)  
AML Program Grant Awards and Staffing  
(During EY 2020)**

<b>AML Program Costs</b>	
Administration	<b>\$6,644,825</b>
Construction	<b>\$8,865,581</b>
Water Supply Construction	<b>\$7,355,175</b>
AMD Set-Aside	<b>\$0</b>
Other(s) (Specify)	<b>\$0</b>
<b>Total AML Funding</b>	<b>\$22,865,581</b>
<b>AML Program Staffing</b> (full-time equivalents on June 30, 2020):	<b>65</b>

**Appendix 2: State's Comments on the Annual Evaluation Report**

## **Appendix 2: State's Review and Response**

### **1. WV DEP Comment:**

TABLE 2: Total of 2096 is incorrect, should be 1965.

#### **OSM response:**

OSM did not revise report in response to WVDEP's comment. Total number in Table 2 is inspectable units in addition to exploratory permits. The correct number of inspectable units is 1965, there are 131 exploratory permits, which were added to the total number of inspectable units resulting in the table showing 2065 inspectable units.

### **2. WVDEP comment:**

TABLE 2: Permits in Temporary Cessation=94. Number Greater than 3 years = 91. Was this at the end of the year or total through 2020, how was Number Greater than 3 years calculated?)

#### **OSM Response:**

OSM did not revise report in response to WVDEP's comment. Number of permits in temporary cessation longer than 3 years is compiled by reports in ERIS. Historical report and current report are compared, permits on both reports are matched and counted.

### **3. WVDEP comment:**

CHART 3A: What are the units of measure? Same for Chart 3B.

#### **OSM Response:**

These are the number of special permit variance types issued within the evaluation year.

### **4. WVDEP comment:**

TABLE 4: Definition of Exploratory Permits and Exploratory Notices is not correct in respect to WV law/regs.

#### **OSM Response:**

OSM revised the report in response to WVDEP's comment. OSM will change exploration permits to explorations notices in EY 2021 report to reflect discussions with WVDEP staff.

The DST tables include a description of each exploration type of permit/notice.

**“Exploration permits** include all exploration sites where exploration activities require approval from the regulatory authority before commencing the exploration activities.”

**“Exploration notices** include all exploration sites where the exploration activities may be conducted without prior approval from the regulatory authority, but where prior notice must be provided to the regulatory authority before such exploration activities begin.”

**5. WVDEP Comment:**

Table 4 Per WVDEP Numbers:

PERMITTING												
Type of Application:	Surface Mines			Underground Mines			Other Facilities			Totals:		
	App. Rec.	Issued / Appvd	Acres	App. Rec.	Issued / Appvd	Acres	App. Rec.	Issued / Appvd	Acres	App. Rec.	Issued / Appvd	Acres
New Permits	12	11	3,829	6	7	91	4	5	529	22	23	4,449
Renewals	35	40		64	67		51	56		150	163	
Transfers, Sales, Assignments of Permit	47	23		20	15		27	22		94	60	
Small Operator Assistance	0	0		0	0		0	0		0	0	
Exploration Permits										54	53	
Exploration Notices											0	
Revisions that do not add acreage to the Permit Area	144	127		116	113		62	57		322	297	
Revisions that add acreage to the permit area but are not incidental boundary revisions (AMEND)	8	7	542	0	1	7	0	0	0	8	8	549
Incidental boundary revisions	60	78	15	76	78	239	44	42	1,453	180	198	1,708
<b>Totals:</b>	<b>306</b>	<b>286</b>	<b>4,386</b>	<b>282</b>	<b>281</b>	<b>337</b>	<b>188</b>	<b>182</b>	<b>1,983</b>	<b>830</b>	<b>802</b>	<b>6,706</b>

**OSM Response:**

OSM revised the report in response to WVDEP's comment. OSM and WVDEP worked together and revised the table to more accurately reflect data in ERIS, updated table is reflected in above report. OSM's Table 4 in report has been revised to reflect the data received from WVDEP.

**6. WVDEP Comment:**

Table 4A: Underground Mine permits issued for EY 2020 is 7.

**OSM Response:**

See response above. Table 4 has been revised within the evaluation report to reflect data.

**7. WVDEP Comment:**

Table 4B numbers are incorrect, the numbers are as follows

New Surface Mine Acreage = 4,370.53

New Underground Mine Acreage = 97.94

New Other Acreage = 529.28

**OSM Response:**

OSM revised the report in response to WVDEP's comment.

**8. WVDEP Comment:**

Table 10: Total number of inspectable units is different from Table 2. Active, Inactive, Abandoned, Total.

**OSM Response:**

The report was not changed in response to WVDEP's comment. Table 2 data is pulled from "permit in County" report within the ERIS system. Categories are filtered to show Active, Inactive, and Abandoned inspectable units. This shows the most up to date numbers of the evaluation year.

Table 10 data is pulled from inspection frequency reports, OSM compiles data in a 'snapshot' in time from the reports pulled from ERIS. OSM recognizes WVDEP's data is organic and constantly changing from day to day. Large inconsistencies in the number of permit categories are reviewed, but data will differ from State data pulls unless synced and duplicated with exact data.

**9. WVDEP Comment:**

Table 13 no dividing lines in column-Total Number of each action.

**OSM Response:**

OSM did not revise report in response to WVDEP's comment. This is a National standard across all OSM States – we do not have the capability to change it at the field office level. Comments have been forwarded to the appropriate office for such changes.

**10. WVDEP Comment:**

Table 13. 115 Violations observed by OSM; 40 referred to State Action. Where are the other 75?

**OSM Response:**

OSM did not revise report in response to WVDEP's comment. Table 13 does not align with the requirements of the current REG-8 directive dated May 2019, requiring OSM count all inspection types as oversight inspections. The software that generates Table 13 is still counting numbers as per the previous version of REG-8 where only inspection type codes beginning with "O" were counted. Therefore, the additional 75 violations identified are in relation to document review inspection reports (inspection type "DR"). The coding needed to generate Table 13 is done by OSM's Information Technology department in Headquarters. We do not have the capability to change it, however, a clarification will be added in the narrative section of this report for oversight inspections.

**11. WVDEP Comment:**

Page 3 A.2 Off site impacts: states 1703 permitted sites and 93%. Table 5 states 1858 Inspectable units and 95%.

**OSM Response:**

OSM revised the report in response to WVDEP's comment. State is correct and numbers should be 1858 and 95% of inspectable units calculated.

**12. WVDEP Comment**

Page 3 A.3 Oversight Inspections: states 318 oversights. Table 13 lists 118 Oversight Inspections and 201 Site Visits. Which is correct and if Site Visits are Oversight Inspections then table should be corrected (and it is 319 not 318) and Number of Violations Observed would be 115 on 319 Oversight Inspections.

**OSM Response:**

OSM revised the report in response to WVDEP's comment. Number was corrected in the executive summary.

**13. WVDEP Comment:**

Page 13 IV A.4 Off site impacts: Non-forfeited sites states 1676. A.2 says 1703, Table 5 1858.

**OSM Response:**

OSM revised the report in response to WVDEP's comment. State is correct, number should be 1858

**14. WVDEP Comment:**

Page 15 Chart 3: 329 is the correct total for the chart.

**OSM Response:**

OSM revised the report in response to WVDEP's comment. The original number is an addition error. OSM will correct in narrative accordingly.

**15. WVDEP Comment:**

Page 16 Findings section: It states OSM conducted 33 bond release oversight inspections. However, on page 18 it states OSM conducted review of 39 sites. Please clarify.

**OSM Response:**

OSM revised the report in response to WVDEP's comment. OSM conducted 39 bond release inspections – it will be corrected in narrative on page 16.

**16. WVDEP Comment:**

Page 16 Methodology section: The numbers of phase releases do match those on page 18 at A.1.a Bond Release.

**OSM Response:**

OSM revised the report in response to WVDEP's comment. This inaccuracy was created when an OSM Reclamation Specialist transferred from WV to VA. The 16 bond release inspections conducted in WV prior to the transfer were not included in the numbers. The total is 39, 25 phase III, 5 phase II, and 9 phase I.

**17. WVDEP Comment:**

Page 16 Findings section: According to WVDEP records we approved 31 Phase III releases and 57 Phase III Incremental releases for a total of 88.



**OSM Comment:**

OSM did not revise the report in response to WVDEP's comment. According to OSM data, WVDEP conducted Phase III release on 35 permits and Incremental Phase III on 57 increments for a total of 92. OSM takes bond release acres into account, rather than reclaimed acres.

**18. WVDEP Comment:**

Page 16 and 17 Findings section: According to WVDEP records we released 2,065.47 acres at P1; 2,596.84 acres at P2; and 4,264.22 acres at P3. The calculations for P1 and P2 do not include MR-12 Special Use acres.

**OSM Response:**

OSM did not revise the report in response to WVDEP's comment. WVDEP recorded reclaimed acres, rather than bond release acres. Reclaimed acres only record acres that are disturbed and reclaimed within the permit rather than the permit bonded acres which reflects total permit acres surety bonded by permittee.

**19. WVDEP Comment:**

Page 17 Chart 4: According to WVDEP records, we approved 88 P3 releases. The total acreage in the chart does not match Table 6.

**OSM Response:**

OSM did not revise report in response to WVDEP's comment. See response (#18) above for differences in reclaimed acres to surety bonded acres.

**20. WVDEP Comment:**

Page 18, VI A.1 General oversight: States OSM found 292 violations on oversight inspections with 43 deferred to state. Table 13 says 115 violations with 40 deferred to state. Also, that 198 violations were previously cited by the state (115 found in table 13, more already cited by state than total in table 13). Also, states 21 violations resulted in 2 TDNs, should be "from 2 TDNs".

**OSM Response:**

OSM did not revise report in response to WVDEP's comment. Please see previous comment on Table 13 (response #12). OSM observed 292 violations for the EY, this includes those violations identified during the inspection, not what the State has issued. The TDNs are the result of the identification of potential violations during an OSM oversight inspection.

**21. WVDEP Comment:**

Page 19 A.3. State Inspection Frequency Activity section: At paragraph 2, it states last EY's inspection frequency was 91 percent. According to the final 2019 report, OSM stated WV's inspection frequency was 98 percent.

**OSM Response:**

OSM revised the report in response to WVDEP's comment. Number is incorrect, the correct number is 98% in EY 2019. Older data recorded 91% before State reconciliation was used.

**22. WVDEP Comment:**

Page 19 A.3. State Inspection Frequency Activity section: The fourth bullet point states that not-started sites require one complete inspection per quarter. Not-started permits have no required inspection frequency in SMCRA. However, WVDEP requires inspectors to conduct one complete inspection per quarter.

**OSM Response:**

OSM revised the report in response to WVDEP's comment. The narrative for this section will note that the State regulations require one complete inspection per quarter.

**23. WVDEP Comment:**

Page 19 Chart 6: Inspection numbers per ERIS

**OSM Response:**

OSM did not revise report in response to WVDEP's comment. Calculated numbers are retrieved from ERIS system and downloaded by the 'monthly' reports. These reports are combined and evaluated. Total differences in calculated numbers between OSM and DEP could be due to differences in pulling data on different time periods or with different data filtering. In future reports OSM has agreed with DEP to duplicate and provide this data to DEP before evaluation.

**24. WVDEP Comment:**

Page 28 section C.2: If this section refers to Case No. 2:19-cv-00632, WVDEP was not a defendant in this case.

**OSM Response:**

OSM revised the report in response to WVDEP's comment. "WVDEP" will be removed from the narrative section as a defendant.

**25. WVDEP Comment:**

Page 30 number 5: The new CHIA Trend Analysis toolbar is operational and can be used by all interested parties including the public. It is located at <https://tagis.dep.wv.gov/mining/>

**OSM Response:**

OSM revised the report in response to WVDEP's comment. OSM added additional language to include "for public use".

**26. WVDEP Comment:**

Page 31 Section F: WVDEP has number of trees planted as 1.1 million on 1617 acres.

**OSM Response:**

OSM has adjusted the report narrative accordingly.

**27. WVDEP Comment:**

Page 31 Reforestation Activities: WVDEP records show during EY 2020 we issued new permits

and amendments covering 4,371 acres.

**OSM Response:**

OSM has adjusted the report accordingly.

**28. WVDEP Comment:**

Page 33 VI.G Staffing: WVDEP has vacant FTE's at 33.9.

**OSM Response:**

OSM has adjusted the report accordingly.

**29. WVDEP Comment:**

Page 33, VI.G Staffing: Should it be 98% of the vacancies are in the critical mission areas of permitting and enforcement?

**OSM Response:**

OSM has adjusted the report accordingly.

**30. WVDEP Comment:**

Page 33 First sentence second paragraph: "three-month estimate for FY2021" was 2021 estimated for a 3-month period?

**OSM Response:**

OSM did not revise report in response to WVDEP's comment. Three-month estimate for FY2021 refers to the Inspection & Enforcement Title five grant estimate which OSM receives from WVDEP at three month and eighteen month estimates ahead of initial awards.

**31. WVDEP comment:**

Page 33 Third sentence 2nd paragraph:  
"currently has in FY 2019". Should be "as it was" in FY 2019. These are the same on page 49 V.2.B.

**OSM Response:**

OSM revised the report in response to WVDEP's comment. This has been corrected in narrative to reflect EY 2020.

**32. WVDEP Comment**

Page 44 J.4: WVDEP proposes this as an introduction for this section:

WVDEP in cooperation with the United States Environmental Protection Agency (EPA) and OSM continued an alternative means project for treating water within the Muddy Creek and Sandy Creek Watersheds (Preston and Barbour Counties, WV). Rather than treating water discharges from bond forfeiture sites on a site-by-site basis, WVDEP petitioned EPA to conduct in-stream treatment, at equivalent cost, thus addressing both pre-law and post-law AMD problems, while improving each stream's biological integrity. In June 2017, and February 2018,

the EPA approved WVDEP's request for variances within Muddy Creek and Sandy Creek respectively.

Watershed-based NPDES permits now cover bond forfeiture water treatment sites within these watersheds where the variance is applied, and WVDEP will be required to meet instream water quality standards at predetermined stream locations. WVDEP is considering other locations to pursue similar opportunities to conduct in-stream treatment.

Page 45 J.4.a Muddy Creek: WVDEP proposes these changes:

AMD from Bond forfeiture sites within Martin Creek, a tributary of Muddy Creek (Preston Co., direct drain to the Cheat River), accounted for roughly 16% of the total acid loads at the mouth. AML sources were responsible for the remaining 84%. The NPDES permit for the Muddy Creek Watershed Restoration Project was approved July 29, 2019 and is located at the mouth of this tributary. This in-stream permit now supersedes four WVDEP NPDES permits throughout the Martin Creek watershed. The NPDES permit for the T&T Fuels Treatment Facility, located on Muddy Creek approximately one mile downstream of Martin Creek, remained active. This facility took on some overwhelming AMD loads from within Martin Creek, including AML sources. Since the combined, in-stream/at-source treatment approach took effect conditions within Muddy Creek have improved substantially. Muddy Creek is now net alkaline with a circumneutral pH, and the fish population went from zero as early as 2015 to over 1400 in 2019, including some moderately sensitive fish species such as mottled sculpin and rainbow trout.

Page 45 J.4.b Sandy Creek: WVDEP proposes these changes:

The WVDEP is taking a similar permitting approach in the Sandy Creek watershed (Barbour Co, direct drain to the Tygart River) as it did for the Muddy Creek Watershed. By obtaining instream NPDES permits at the mouths of two tributaries of Little Sandy Creek, Left Fork of Little Sandy (LFLS) and Maple Run, using the in-stream treatment approach, the WVDEP is able to treat all AMD sources within these two tributaries. The LFLS accounts for 91 percent of the downstream loadings in Little Sandy, yet the one bond forfeiture site in this watershed contributes a mere two percent, and the three bond forfeitures in Maple Run only account for approximately 11 percent of the loadings of this tributary. The WVDEP obtained NPDES permits for these two tributaries December 13, 2019. Although travel restrictions due to COVID-19 have not allowed for fish surveys conditions appear favorable for stream recovery. Minnows have been observed throughout certain stream reaches in Sandy Creek and Little Sandy and the WVDEP continues to record circumneutral pH values at the mouths of these streams.

Page 46 Rare Earth Elements:

During EY 2019, WVDEP continued to collaborate with West Virginia University (WVU) in evaluating the concentrations of REEs in AMD sludge that is present on several bond forfeiture sites throughout the State. According to WVU, test results show that the concentrations of

REEs in AMD sludge were of commercial grade, and no uranium or thorium was present in the samples evaluated. In addition, about 77 percent of the REEs present contain heavy versus light metals. Typically, AMD sludge with a low pH contains better quality REEs.

Recent research conducted by WVU has shown that AMD is enriched in REE and the critical mineral cobalt. It has been found that AMD has an average total REE concentration of about 287 µg/L (0.287 ppm), ranging from negligible to 2,000 µg/L. WVU has created a concentrate of 80% REE derived from AMD treatment precipitates. The strategy of using raw AMD as the feedstock to their acid leaching/solvent extraction (ALSX) refining process was demonstrated on a bench scale level and also in the field where a mobile field unit was deployed at a conventional AMD treatment plant operated by WVDEP.

WVDEP engineers designed an AMD treatment facility at a Buffalo Coal bond forfeiture site located on the Grant and Tucker County line near Mount Storm, WV. The engineers then worked closely with WVU to incorporate a full-scale pilot REE extraction component to the treatment plant. Rockwell Automation Corporation is providing the sensors and control technologies for the pilot plant to process the sludge predicted to hold REEs in commercial quantities for future development. Construction of the pilot project began November 12, 2020 and is expected to be complete in the fall of 2021.

Studies show that the Appalachian basin could produce 800 tons of REEs per year or the same amount the defense industry needs annually. Ownership of the REEs remains a legal issue that still needs to be determined.

**OSM Response:**

OSM has adjusted the report accordingly.

**33. WVDEP Comment:**

Page 46 Section J.8: Second sentence should be 38 CSR 2-12.4.c.

**OSM Response:**

OSM has adjusted the report accordingly.

**34. WVDEP Comment:**

Page 58 and 59, B.1. WebAML Updates:

**OSM Response:**

OSM has adjusted the report to add State AML accomplishments by WVDEP.

**35. WVDEP Comment:**

Page 12 IV. State Accomplishments

**OSM Response:**

OSM adjusted the report to add the State regulatory accomplishments provided by WVDEP.

