



# OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT



## KNOXVILLE FIELD OFFICE ANNUAL EVALUATION REPORT



**FISCAL YEAR 2016**



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OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT

Annual Evaluation Report

for the

Regulatory and Abandoned Mine Land Programs

Administered by the Knoxville Field Office

of

TENNESSEE and GEORGIA

for

Fiscal Year 2016

October 1, 2015 to September 30, 2016

Prepared by:

Knoxville Field Office

October 2016

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## EXECUTIVE SUMMARY

### Tennessee and Georgia Federal Programs

The Surface Mining Control and Reclamation Act of 1977 (SMCRA) provides authority for the Office of Surface Mining Reclamation and Enforcement (OSMRE) to implement a Federal regulatory program in the states without approved regulatory programs. In Tennessee, OSMRE implemented the Federal regulatory program in October 1984 when the State repealed its surface mining law. OSMRE conducts full Federal program functions from the Knoxville Field Office (KFO) with primary regulatory responsibilities for inspection, enforcement, and permitting in the state of Tennessee. KFO also has regulatory responsibilities for surface coal mining activities in the state of Georgia because they never adopted an approved state program under SMCRA.

## REGULATORY

### Accomplishments

The following items highlight KFO's major accomplishments during Fiscal Year (FY) 2016:

- Lands Unsuitable for Mining Petition – The state of Tennessee submitted a Lands Unsuitable for Mining petition for the North Cumberland Wildlife Management Area and Emory River Tracts Conservation Easement to OSMRE on October 1, 2010. The petition requests that OSMRE designate more than 67,000 acres of mountainous terrain as unsuitable for surface coal mining in support of a conservation project called “Connecting the Cumberlands.” OSMRE determined the state of Tennessee’s petition was complete in November 2010.

In conjunction with three cooperating Federal agencies, U.S. Environmental Protection Agency (EPA), U.S. Fish and Wildlife Service (USFWS), and National Park Service, OSMRE initiated development of a combined Petition Evaluation Document/Environmental Impact Statement (PED/EIS). OSMRE entered into an Interagency Agreement with the Denver Service Center to provide project management services to OSMRE for the life of the project and secured a contractor to prepare the PED/EIS. The final document is scheduled to be published in the fall of 2016. Status updates for the Lands Unsuitable for Mining petition are located at <http://www.osmre.gov/programs/rcm/TNLUM.shtm>.

- Reforestation – Industry planted 110,220 trees on 160 acres of reclaimed mined land in Tennessee during FY 2016. This year marks the fourth consecutive year KFO achieved full utilization of the Forestry Reclamation Approach, with 100 percent of all trees planted on Forestry Reclamation Approach prepared areas. This success is in part due to KFO outreach efforts with industry, citizens, and academics interested in reforestation of mined land.
- Interagency Coordination – KFO and USFWS have developed a joint project to install continuous recording devices that will monitor conductivity at 10 locations in northeastern Tennessee. The recording devices detect impacts from mining operations in several streams where threatened blackside dace are present. KFO collects the data monthly and maintains a graph of the data for each location. KFO uses the data for making permitting decisions, developing species-specific protection measures, and making decisions concerning incidental take for the dace as required by the Endangered Species Act.

- Cost Recovery – In FY 2016, KFO continued preparing for implementation of the Cost Recovery Rule in anticipation of final rule promulgation. KFO reviewed and refined the Work Breakdown Structure or WBS codes in response to final rule language. KFO also developed process flow charts and assigned responsibilities to ensure project management is timely, efficient, and effective. The team working on implementing cost recovery developed an implementation handbook that addresses the process from developing cost estimates, to handling appeals, to closing out projects. The rule is expected to be finalized in the fourth quarter of 2016.
- Youth Initiative – KFO employed six interns during FY 2016, including two Pathways Program participants and five AmeriCorps team members. The interns worked in the areas of geology, Geographic Information Systems, hydrology, and administration. They provided program support for KFO missions and valuable assistance with projects related to the Lands Unsuitable for Mining petition, e-Records, Laserfische, GeoMine, SPOT Global Positioning System, utility terrain vehicle training, water quality databases, and youth environmental education initiative. KFO hired one of the AmeriCorps team members as an OSMRE full-time employee.

### National Measurements

- Coal Production – Tennessee ranked twenty-first in the production of coal among the 26 coal producing states in calendar year 2015, the last year data was available. Over the past 10-year period, coal production has declined from 2.69 million tons in calendar year 2006 to 0.85 million tons in calendar year 2015. This is an overall decrease of 68 percent. However, it is an increase from calendar year 2014 when 0.74 million tons were produced.

There was also an increase in the number of active coal producing mines from five (two surface mines and three underground mines) in FY 2015, to eight (four surface mines and four underground mines) to in FY 2016. There has been no coal production in the state of Georgia since the mid-1980s.

- Off-Site Impacts – The occurrence of off-site impacts in Tennessee has significantly decreased during the past 3 years. KFO reclamation specialists observed 24 off-site impacts in FY 2014, 5 in FY 2015, and only 1 in 2016. The only off-site impact observed in FY 2016 occurred at an active coal producing surface mine. A blast produced flyrock, which impacted the downslope area below the permit boundary. The reclamation specialist who cited the violation attributed the off-site impact to operator error. KFO has worked extensively with industry to reduce the number of off-site impacts and plans to continue the effort in the future.
- Inspections – KFO successfully conducted the required number of inspections for all active, inactive, and abandoned mine sites in Tennessee and Georgia during FY 2016. Reclamation specialists conducted 1,065 inspections at 113 mine sites and 12 Notice of Intent to Explore sites in Tennessee. They also conducted 13 inspections at the only mine site in Georgia, an abandoned underground mine being reclaimed with civil penalty funds. These totals include inspections conducted at sites released from the Inspectable Units List during FY 2016. Reclamation specialists issued 10 enforcement actions citing 11 violations to seven permittees.

- Reclamation Success – KFO approved bond releases on 191 acres for Phase I reclamation, 661 acres for Phase II reclamation, and 648 acres for Phase III reclamation. KFO granted Phase III bond release for one permit and removed it from the Inspectable Units List.

### Customer Service/Stakeholder Outreach

- KFO experienced an 83 percent decline in the number of citizen complaints received during the past 5 years. Staff promptly investigated the only complaint received during FY 2016 and provided a response to the complainant within 10 days after concluding their investigation.
- KFO ensures citizens, environmental groups, and industry representatives have access to all regulatory program files including permitting, bonding, inspection, and enforcement files. Managers and staff have open door policies for members of the public interested in issues that may arise. In FY 2016, KFO responded to assistance requests from individuals and groups ranging from simple questions concerning coal mine permits to requests related to complex water quality and inspection issues. Citizens receiving assistance continue to give KFO high feedback marks under the Government Performance and Results Act. KFO also solicits input from numerous local, State, and Federal agencies that may have an interest in a proposed permitting action. To facilitate communication with interested parties, KFO maintains a mailing and contact list that includes 9 State and Federal agencies and 26 citizens and citizen groups.

### Outstanding Issues

- During the latter part of 2014, the USFWS provided KFO with an updated list of threatened and endangered species for a number of permits on KFO's Inspectable Units List. According to Section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.), the USFWS recommended that KFO review each of the permits in the context of the updated species list and determine whether activities pursued as a consequence of the permits would impact the species. The USFWS also recommended that KFO provide documentation supporting the determinations and asked KFO to consider coordinating with them if:
  1. New information revealed permitting actions were affecting listed species or critical habitat in a manner not previously considered.
  2. Permitting actions were modified since the occurrence of previous coordination between the agencies and the modified actions were not considered.
  3. Permitting actions may affect newly listed species or designated critical habitat.

KFO has worked with the USFWS to prioritize permits on the Inspectable Units List for species review based on permitting milestones. On July 15, 2016, KFO met with USFWS to discuss Biological Assessments of active and proposed permits. The agencies mutually determined that OSMRE would complete a few programmatic Biological Assessments in 2016 and 2017. The Biological Assessments will be used to analyze the effects of mining activities to threatened and endangered species and their critical habitat across geographic areas. The agencies determined that programmatic analysis of permitted mining by watershed would be the most effective method to analyze any potential effects to aquatic

species. KFO will continue to refine the process to fulfill their coordination responsibilities and ensure protection of the species and/or critical habitat.

### **Technical Assistance and Grants**

- KFO maintains and uses a Geographic Information System as a tool to help evaluate new permit, midterm, and permit renewal applications; to assist with site inspections; and to capture monitoring data. The Geographic Information System also allows KFO to process numerous data requests from citizens, citizen groups, industry, and other Federal and state agencies more easily. OSMRE relied heavily on the system for various geospatial analyses during the technical review of the North Cumberland Wildlife Management Area, Lands Unsuitable for Mining petition review. The Geographic Information System was also a valuable tool in the recent Endangered Species Act litigation. It allowed KFO staff to represent the spatial attributes of the litigated mine sites and locations of endangered species in one document. This format facilitated the environmental analysis of several Endangered Species Act species in the biological assessments developed during formal Section 7 consultation.
- KFO personnel continue to serve on various projects and teams of interest to the Appalachian Region and OSMRE. During FY 2016, KFO personnel expended numerous hours working on OSMRE initiatives such as cost recovery; the North Cumberland Wildlife Management Area, Lands Unsuitable for Mining petition review; regional slurry impoundment breakthrough study; stream protection rulemaking; and electronic permitting.

### **ABANDONED MINE LANDS**

- The Tennessee Department of Environment and Conservation (TDEC) received a total of \$2,796,000 in Federal grant funding during FY 2016. TDEC's Land Reclamation Section completed two waterline extension projects and one reclamation project. Before the waterline projects were completed, the water quality in the area exceeded secondary drinking standards for iron and manganese. As a result, 48 households received potable water. Reclamation of the project areas assured that 1,074 people are no longer exposed to potential safety risks from abandoned mine lands.
- TDEC reclaimed 421 Government Performance and Results Act acres during FY 2016. The Government Performance and Results Act holds Federal agencies accountable for using resources wisely and achieving program results. It also requires agencies to develop plans for what they intend to accomplish, measure how well the agency is doing, and make appropriate decisions based on the information gathered.
- The Abandoned Mine Land Emergency program was transferred to the TDEC, Land Reclamation Section on October 1, 2010. Tennessee agreed to implement the program in accordance with the provisions of the Federal Assistance Manual. The State had no emergency projects during FY 2016.

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# REGULATORY

## I. Introduction

The Surface Mining Control and Reclamation Act of 1977 (SMCRA) created the Office of Surface Mining Reclamation and Enforcement (OSMRE) in the Department of the Interior. SMCRA provides authority to OSMRE to oversee the implementation of and provide Federal funding for state regulatory programs that OSMRE approved as meeting the minimum standards specified by SMCRA. The Act also provides authority for OSMRE to implement a Federal regulatory program in the states without approved regulatory programs. In Tennessee, OSMRE implemented the Federal regulatory program in October 1984 when the State repealed its surface mining law. OSMRE also has regulatory authority responsibilities for surface coal mining activities in Georgia because the state never adopted an approved state program under SMCRA.

This report contains summary information regarding the Tennessee and Georgia Federal programs and the effectiveness of the Federal programs in meeting the applicable purposes of SMCRA as specified in Section 102. This report covers the period of October 1, 2015, to September 30, 2016. Detailed background information and comprehensive reports for the program elements evaluated during this period are available for review on the OSMRE website at <http://odocs.OSMRE.gov/>. These reports are also available for review and duplication at the OSMRE, Knoxville Field Office located at 710 Locust Street, Second Floor, Knoxville, Tennessee 37902. The phone number is (865) 545-4103. The Field Office Director is Earl Bandy, and his email address is [ebandy@osmre.gov](mailto:ebandy@osmre.gov).

The following acronyms are used in the regulatory section of this report:

AMD	Acid Mine Drainage
ARRI	Appalachian Regional Reforestation Initiative
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
FRA	Forestry Reclamation Approach
FY	Fiscal Year
GIS	Geographic Information System
IUL	Inspectable Units List
KFO	Knoxville Field Office
LIWA	Local Interagency Working Agreement
LUM	Lands Unsuitable for Mining
NCWMA	North Cumberland Wildlife Management Area
NOI	Notice of Intent to Explore
NPDES	National Pollution Discharge Elimination System
OSMRE	Office of Surface Mining Reclamation and Enforcement
PED/EIS	Petition Evaluation Document/Environmental Impact Statement
SMCRA	Surface Mining Control and Reclamation Act of 1977
TDEC	Tennessee Department of Environment and Conservation
USFWS	U.S. Fish and Wildlife Service

## II. Overview of Tennessee and Georgia Coal Mining Industries

Tennessee's coal resources are located in 22 counties. They extend from the Kentucky border to the Alabama border in the east central portion of Tennessee as illustrated in Figure 1. Mining in the northern counties is primarily in the steep slope areas of the Cumberland Mountain range. Area mining has been the primary method of mining in the southern counties due to the relatively flat terrain associated with the Cumberland Plateau.



**Figure 1: Location of Tennessee coalfields.**

Tennessee's recoverable coal reserves of 0.5 billion short tons exist in bituminous coal beds that range from less than 28 inches to 42 inches in thickness at depths of up to 1,000 feet. Tennessee coal is primarily used for generating electric power.

Tennessee ranked twenty-first in coal production among the 26 coal producing states in calendar year 2015. The state ranked twenty-second the previous year. Coal production declined from a high of approximately 11.26 million tons in 1972 to 0.85 million tons reported in calendar year 2015. However, this was an increase from calendar year 2014, when 0.74 million tons were produced. Various factors may continue to affect the rate of coal production in Tennessee including competition from regions with lower production costs, competition from natural gas and renewable energy sources, declining markets, and an overall decline in coal consumption. Figures 2 and 3 on page 15 depict the recent trend in Tennessee coal production.

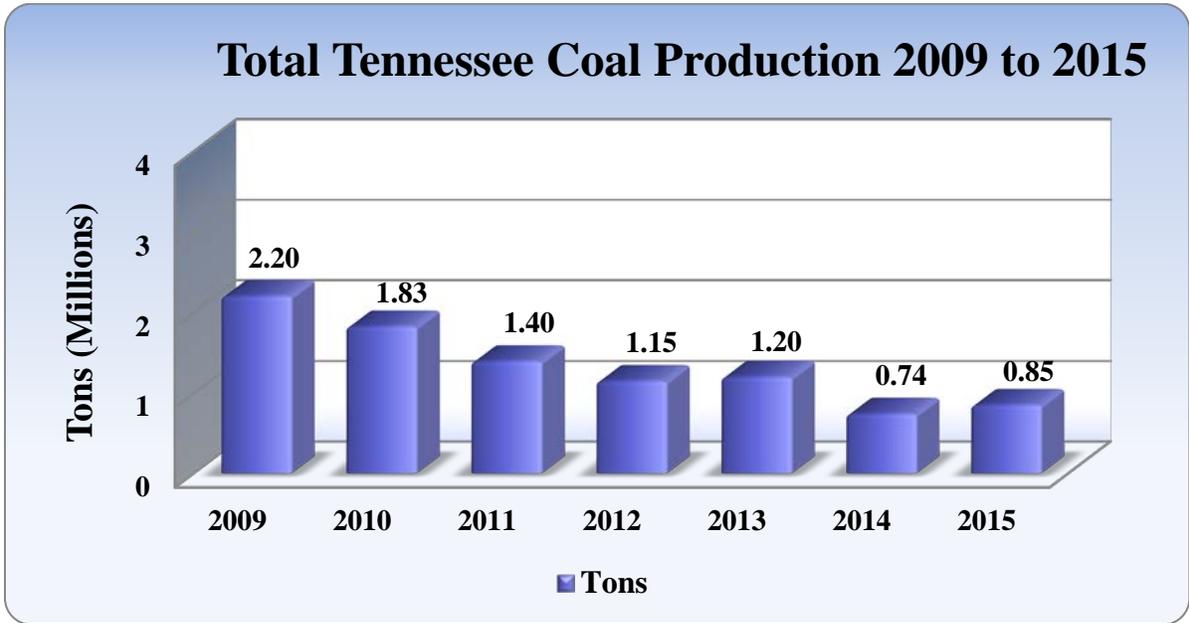


Figure 2: Total Tennessee coal production 2009 to 2015.

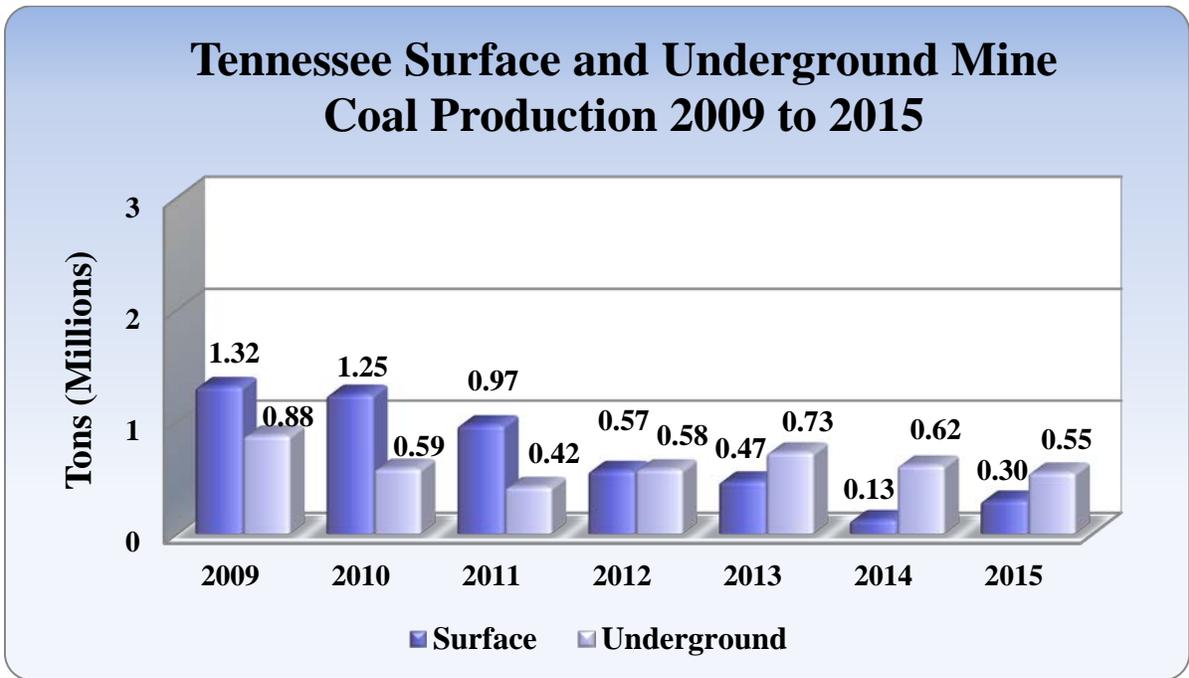


Figure 3: Tennessee surface and underground mine coal production 2009 to 2015.

During FY 2016, eight mines produced coal in Tennessee, four surface mines comprised of 2,186 acres and four underground mines comprised of 243 acres. The permitted acreage for the underground mines does not include the shadow area, which is the footprint of the underground disturbance transposed to the surface area above.

KFO currently inspects only one abandoned mine site in Georgia. It is located in Dade County in the northern portion of the state. Ten acres of this surface mine were disturbed during the mining operation. In FY 2015, KFO acquired funds to reclaim the site. A contractor completed reclamation of the site in March 2016. KFO plans to remove the site from the Inspectable Units List (IUL) in FY 2017, providing reclamation of the site is determined to be successful. There has been no coal production or permitting activity in Georgia since the mid-1980s.

### **III. Overview of the Public Participation and Outreach Efforts in the Tennessee Federal Program**

The Tennessee Federal Program provides numerous public participation opportunities. KFO encourages public participation and continually strives to inform the public of ways to participate in the regulatory program.

#### **Public/Citizen Participation in the Regulatory Process**

Citizens, environmental groups, and industry representatives have access to regulatory program files including permitting, bonding, inspection, and enforcement. Managers and staff have open-door policies for citizens who are interested in discussing SMCRA issues that arise.

During the permitting process, KFO staff members are available to meet informally with individual citizens or organizations that express concerns or have an interest in pending permit applications, permit renewals, or revisions to existing permits. The purpose of these meetings is to answer questions relative to their concerns and provide information and/or explanations with respect to permitting actions. As a part of this informal public participation process, KFO maintains a contact list of individuals and organizations who have expressed an interest in being notified of permitting actions under consideration by KFO. In FY 2016, KFO discussed numerous issues during telephone conversations and inquiries with several individual citizens and representatives of environmental groups.

Formal public participation opportunities are also available for all new permit applications, permit renewals, significant permit revisions, and bond release applications reviewed by KFO. Personnel conduct these processes in accordance with 30 CFR 773.6 and 800.40. KFO received four requests for site visits in response to bond release applications in FY 2016.

The OSMRE website located at <http://www.osmre.gov> provides information and resources of interest to citizens, such as the Federal Regulations, a list of frequently asked questions, the proposed Stream Protection Rule, the North Cumberland Wildlife Management Area (NCWMA) Lands Unsuitable for Mining (LUM) Petition, and guidance on how to submit comments to the agency. Citizens can also obtain resources and information regarding ongoing issues related to the Tennessee Federal Program and other Appalachian Regional states at <http://www.arcc.osmre.gov>.

## Agency Participation in the Regulatory Process

In addition to encouraging public participation in the SMCRA regulatory process, KFO also solicits input from numerous local, State, and Federal agencies that may have an interest in a proposed permitting action. KFO maintains a mailing and contact list that includes 10 State and Federal agencies and 25 citizens and citizen groups. KFO notifies those on the list of proposed permitting actions. KFO also maintains local or county mailing and contact lists for each of the 20 historical coal producing counties in Tennessee. Each of these county lists generally includes 8 to 10 local, State, and Federal agencies or officials that KFO notifies of proposed permitting actions.

In addition to providing written notification to these agencies, KFO continues to participate in periodic meetings with agencies such as the Tennessee Department of Environment and Conservation (TDEC), USFWS, Tennessee Wildlife Resources Agency, EPA, U.S. Army Corps of Engineers, and the National Park Service. The agencies meet to discuss permitting actions, and concerns and issues related to coal mining in Tennessee. In FY 2016, KFO met regularly with representatives of the USFWS in order to streamline our review and coordination of permitting actions.

## Outreach Efforts with Customers and Stakeholders

KFO continues to improve relationships with customers and stakeholders by providing increased opportunities for participation in regulatory functions. KFO meets regularly with State and Federal agencies, citizens, landowners, and industry representatives to discuss concerns and foster better working relationships. These efforts have resulted in KFO receiving beneficial input during the development of field office policies, procedures, and guidance documents. More operators are also taking the initiative to anticipate and address potential problems before they develop into violations. Feedback from customers indicates there has been enhanced communication with industry and citizens since outreach efforts began.

KFO routinely meets with individual coal company representatives or their consultants before they submit permit applications. The purpose of these meetings is to discuss potential issues that may arise during the permitting process and resolve concerns or problems related to regulatory requirements. KFO instituted a pre-application process within the Local Interagency Working Agreement (LIWA) whereby the applicant meets with OSMRE, U.S. Army Corps of Engineers, EPA, USFWS, and TDEC while the SMCRA application is being developed. The purpose of this meeting is to ensure all agencies with regulatory responsibilities have the opportunity to review the proposed application and request needed information before the company submits their application. The agencies did not hold a pre-application meeting in FY 2016.

In FY 2016, KFO met with four county mayors and mailed approximately 870 postcards to stakeholders announcing the pending release of the draft NCWMA LUM PED/EIS. Upon release of the draft PED/EIS, KFO hosted four public hearings to disseminate information and receive oral and written comments.

#### IV. Major Accomplishments, Issues, and Innovations

##### Inspection Frequency

KFO is responsible for conducting complete and partial inspections of coal mining and reclamation operations in Tennessee and Georgia in accordance with 30 CFR 842.11(c). This requirement specifies that OSMRE must conduct an average of at least one complete inspection per calendar quarter and an average of at least one partial inspection per month of each active coal mining and reclamation operation. With respect to inactive operations, OSMRE must conduct an average of at least one complete inspection per calendar quarter and such partial inspections as are necessary to ensure effective enforcement of the regulatory program and SMCRA. KFO reclamation specialists inspect abandoned sites in Tennessee and Georgia based on a site specific inspection frequency in accordance with the criteria established in 30 CFR 842.11 (e) and (f), which is known as the abandoned site rule. SMCRA does not require a minimum inspection frequency for Notice of Intent to Explore (NOI) sites.

KFO successfully conducted the required number of inspections for all active, inactive, and abandoned coal mining and reclamation operations on the IUL in Tennessee and Georgia during FY 2016. Reclamation specialists conducted 1,065 inspections of Tennessee inspectable units, 440 of which were complete inspections and 625 were partial inspections. KFO issued 10 enforcement actions citing 11 violations to seven companies. KFO reclamation specialists also conducted 13 inspections in Georgia, 4 complete inspections and 9 partial inspections. Table 1 below and Table 2 on page 19 summarize the number of required complete and partial inspections and the number of inspections conducted in Tennessee and Georgia. Table 10 for Tennessee and Table 10 for Georgia in Appendix 1, summarize inspection data for both states and include inspections conducted at NOI sites.

Mine Status of Tennessee Permits	*Complete Inspections Required Yearly	Complete Inspections Conducted	*Partial Inspections Required Yearly	Partial Inspections Conducted
Active	268	270	536	568
Inactive	136	138	0	25
Abandoned	11	20	0	26
<b>Total</b>	<b>415</b>	<b>428</b>	<b>536</b>	<b>619</b>

**Table 1: Number of required inspections and number of inspections conducted in Tennessee.**

**\*The totals for required complete and partial inspections in Table 1 are approximations based on the number of sites on the Inspectable Units List at the end of the fiscal year. Over the course of the year, KFO released some sites and some inactive sites became active. As a result, the actual number of required inspections may be less than the number depicted in Table 1. The table does not include inspections of NOIs because there is no required inspection frequency for these sites.**

Mine Status of the Only Georgia Permit	Complete Inspections Required Yearly	Complete Inspections Conducted	Partial Inspections Required Yearly	Partial Inspections Conducted
Abandoned	1	4	0	9

**Table 2: Number of required inspections and number of inspections conducted in Georgia.**

Tables 3 and 4 below summarize the number of inspectable units requiring inspections, the total number of inspections conducted, and the number and percentage of inspectable units that met the required inspection frequency. The data used to derive the number of permits requiring inspections and the number of inspections conducted is from Tables 2 and 10 of Appendix 1.

Tennessee Inspection Frequency	
*Number of Inspectable Units Requiring Inspections	112
Number of Inspections Conducted	1,047
Number of Inspectable Units meeting Frequency	112
Percentage of Inspectable Units Meeting Frequency	100

**Table 3: Inspection frequency calculations for Tennessee.**

**\*The number of inspectable units requiring inspections is the number of sites on the Inspectable Units List at the end of the fiscal year. This is in accordance with Option 1 instructions provided for populating Table 10 of the Data for States and Tribes system, a database of information gathered during Federal inspections and investigations. The table does not include the 18 inspections of NOIs because there is no required inspection frequency for these sites.**

Georgia Inspection Frequency	
Number of Inspectable Units Requiring Inspections	1
Number of Inspections Conducted	13
Number of Inspectable Units meeting Frequency	1
Percentage of Inspectable Units Meeting Frequency	100

**Table 4: Inspection frequency calculations for Georgia.**

## Abandoned Sites

There were 11 Tennessee abandoned sites on the IUL at the end of FY 2016. All are permanent program permits. Initial reclamation was completed on most of the sites. However, KFO cannot currently release them from the IUL because acid mine drainage (AMD) is present or because the sites were recently abandoned and reclamation efforts have not yet been completed. The majority of these sites have existed for more than 20 years. Most are stable and largely covered with naturally occurring vegetation. In FY 2016, KFO conducted 20 complete inspections and 26 partial inspections of Tennessee abandoned sites and met the required inspection frequency for all of them.

Only one Georgia mine site remains on the IUL. The site is an initial program underground mine site abandoned in 1983. During FY 2015, KFO used civil penalty funds to perform reclamation work at the site. KFO staff conducted four complete inspections and nine partial inspections of the site while it was undergoing reclamation in order to evaluate and report on the success of contract reclamation work. Contractors planted trees in the spring of 2016, completing planned reclamation efforts at the site. KFO met the required inspection frequency at Georgia site in FY 2016. KFO will evaluate the site in FY 2017 and possibly release it from the IUL if reclamation success continues.

## Bond Forfeiture Sites

During FY 2016, KFO inspected all bond forfeiture sites at the required frequency. KFO forfeited and collected the bond for two permanent program permits during FY 2015 and used bond forfeiture and civil penalty funds to reclaim one of the sites in FY 2016. KFO will evaluate the site in FY 2017 and possibly release it from the IUL if reclamation success continues.

OSMRE awarded a local construction contractor a contract in September 2016 to reclaim three bond forfeiture sites in Tennessee. Heather Mining Company, Inc., Mine No. 1 is an underground mine site located in Cumberland County. Scheduled work at the site consists of removing the impounding capabilities of a pond and converting it into a wetland. Two Dalco Coal of Tennessee LLC permits, Mine No. 1 and Popular Creek Mine, are located in Morgan County. Reclamation efforts at these sites will primarily focus on ditch reconstruction, sediment control enhancement, removal of noncoal waste, seeding, mulching, and tree planting.

## Notice of Intent to Explore Sites

Reclamation specialists conducted 12 complete inspections and 6 partial inspections of NOI sites, seven of which remained on the IUL at the end of the fiscal year. KFO released five reclaimed NOIs from the IUL during FY 2016. Industry did not submit any new NOIs during the fiscal year.

## **Civil Penalty Projects**

OSMRE uses civil penalty funds for reclamation of mine sites disturbed after the enactment of SMCRA where insufficient or no bond funds exist. During FY 2015, OSMRE combined civil penalty money with forfeited bond money to fund and reclaim one project in Fentress County,

Tennessee. The Hood Coal Corporation, Hoodtown surface mine consists of 49 acres that had deep rills and gullies, sediment control structures filled with sediment, and sparse vegetative ground cover on 80 percent of the permitted site. The reclamation work consisted of regrading 49 acres, eliminating all rills and gullies, constructing rock lined ditches and sediment check dams, reconstructing basin spillways, fertilizing, liming, seeding, mulching, and planting over 2,000 trees (Image 1). Reclamation efforts are currently proving successful, and there have been no maintenance issues as of the end of FY 2016. KFO will evaluate the site in FY 2017 and possibly release it from the IUL if reclamation success continues.



**Image 1: Hoodtown Mine before and after reclamation.**

The Dade Co. Mining site is located in Dade County, Georgia. It is an abandoned underground mine site (Image 2) OSMRE reclaimed in FY 2015 using civil penalty funds acquired in FY 2014 (Image 3). Reclamation efforts were successful and there have been no maintenance issues as of the end of FY 2016. KFO will evaluate the site in FY 2017 and possibly release it from the IUL if reclamation success continues.



**Image 2: Georgia abandoned mine site before reclamation.**



**Image 3: Georgia mine site after reclamation, with a cover of annual rye grass.**

## **North Cumberland Wildlife Management Area, Lands Unsuitable for Mining Petition**

### Background

On October 1, 2010, the state of Tennessee filed a petition with OSMRE to designate the ridgelines within the North Cumberland Wildlife Management Area (NCWMA) and the Emory River Tracts Conservation Easement in Anderson, Campbell, Morgan, and Scott Counties as unsuitable for surface coal mining operations. The State filed the petition on behalf of the Tennessee Wildlife Resources Agency and TDEC under OSMRE's Federal program regulating surface coal mining operations in Tennessee. As described in 30 CFR Part 942, the State alleges that surface coal mining operations may adversely affect the NCWMA in the following ways:

1. Surface mining is incompatible with the State's existing land use plans or programs; and
2. Surface mining affects fragile or historic lands in which such operations could result in sufficient damage to important historic, cultural, scientific, and esthetic values and natural systems.

OSMRE responded to the petitioner on October 29, 2010, with a letter requesting additional information in order to finalize the completeness review. The petitioner responded to OSMRE's request on November 8, 2010. OSMRE reviewed the additional information, deemed the petition administratively complete, and accepted it for processing on November 23, 2010.

OSMRE met with the petitioner on three different occasions during 2012. The purpose of these meetings was to obtain additional information that would facilitate a full and complete analysis of the proposed LUM petition. The petitioner provided a number of clarifications to their petition. OSMRE documented all additional information and clarifications and placed them in the LUM administrative record for public review.

## Public Outreach

On January 14, 2011, OSMRE proceeded to process the petition by mailing notices to the petitioner, interested State and Federal agencies, landowners, and other interested parties. The notices stated OSMRE had accepted the petition for processing. The parties also received notification that the action on the petition is a major Federal action. It would require that OSMRE prepare a combined PED/EIS. OSMRE created a website to inform the public of the LUM process and keep the public updated concerning the LUM petition and draft PED/EIS. The website is located at <http://www.osmre.gov/programs/rcm/TNLUM.shtm>.

On March 10, 2015, OSMRE initiated government-to-government consultation with Native American tribes concerning the LUM petition area, where tribes may have traditionally associated lands or tribal interests. The consultation was in accordance with 36 CFR 800.2(c)(2)(ii)(C) of the Advisory Council on Historic Preservation regulations. OSMRE provided the tribes an opportunity to voice concerns. OSMRE addressed concerns the tribes had in the LUM PED/EIS and coordinated Section 106 Consultation with the Tribal Historic Preservation Office. Section 106 of the National Historic Preservation Act requires Federal agencies to take into account the effects of their undertakings on historic properties and afford the Advisory Council on Historic Preservation a reasonable opportunity to comment on such undertakings.

In the March 10, 2015 letter to the tribes, KFO requested they submit information regarding the possible existence of historic properties of religious and cultural significance within the LUM petition area. A map of the petition area was enclosed. KFO followed up with the tribes via email and telephone on July 24, 2015, to provide them with an update on the draft PED/EIS. On January 20, 2016, KFO sent the tribes a letter regarding the publication of the draft PED/EIS along with a copy of the document and requested their input. No comments were received in regards to the draft PED/EIS.

During the week of January 11, 2016, KFO held four public hearings in the Tennessee cities of Wartburg, Huntsville, Clinton, and Jacksboro. The purpose of these hearings was to share information and obtain public comments on the draft PED/EIS published on December 11, 2015. A total of 210 people attended the hearings and of those, 84 presented oral comments.

As of the comment period closing (January 25, 2016), 3,220 individual comments were recorded in the National Park Service, Planning, Environment and Public Comment system, a comprehensive information and public comment website. This number does not include another 10,000 pre-packaged comments received via mail or e-mail from specific groups (i.e., Center for Biological Diversity and Alliance for Appalachia).

Comments received from the public, cooperators, and U.S. Department of the Interior officials were considered and incorporated as appropriate into the final PED/EIS. These comments resulted in the addition of clarifying text and the selection of a new preferred alternative. However, public comments did not result in significantly changes to the analysis or conclusions presented in the draft PED/EIS regarding the environmental impacts of each of the alternatives. OSMRE originally identified alternative 3 as its preferred alternative. However, based on public and agency comments, OSMRE has now identified alternative 4 because it is the most consistent with the State's request. The "agency's preferred alternative" is the alternative the agency

believes would best accomplish the purpose of and need for action, and fulfill its statutory mission and responsibilities, giving consideration to economic, environmental, technical, and other factors. Alternative 4 is the environmentally preferred alternative because of its long-term environmental benefits.

### Next Steps in the Lands Unsuitable for Mining Petition Evaluation

KFO evaluated all comments received during the public comment process and incorporated them into the final document. KFO expects to release the final document in early FY 2017. The public can track progress of the LUM on the OSMRE website located at <http://www.osmre.gov/programs/rcm/TNLUM.shtm>

### Agency Participation

OSMRE invited Federal agencies to participate as cooperating agencies in the development of the LUM PED/EIS. Three agencies, the National Park Service, USFWS, and EPA accepted the invitation. Each of the agencies has been participating in the development of the PED/EIS.

### Technical Evaluation

The LUM petition area is part of the NCWMA, comprised of the Royal Blue, Sundquist, and New River Units. It is also part of the Emory River Tracts Conservation Easement. The total acreage impacted by the LUM petition for the combined NCWMA and Emory River Tract is approximately 167,075 acres. The petition area, including the ridgelines and a 600-foot buffer zone on each side of the ridgelines identified by the State, is approximately 67,326 acres. The PED/EIS proposes to evaluate what environmental impacts the proposed action and each of the alternatives has on the existing environment of the NCWMA and Emory River Tract areas.

OSMRE contracted data and technical services to assist the agency in characterizing the existing environmental conditions and uses within the NCWMA and Emory River Tract. To help characterize the hydrologic regime within this area, OSMRE purchased equipment, collected field data, and sought analytical services from various vendors. The agency purchased Light Detection and Ranging or “LiDAR” and high resolution photography to provide terrain and land cover information for the project area. Coal data and related information was obtained to assist in the preparation of a coal reserve model for the area. Contracts were secured and studies completed to assist OSMRE in the evaluation of the various resources in the area including socioeconomic, recreational, aquatic, and aesthetic. The evaluation included both viewshed modeling and soundscape (noise) analysis of the LUM petition area.

OSMRE entered into an Interagency Agreement with the Denver Service Center, which was to provide project management services to OSMRE for the life of the project. OSMRE also secured a contractor to prepare the draft PED/EIS.

### Competing Land Uses in the NCWMA and Emory River Tract

The State’s petition expresses the need to preserve the natural beauty and fragile nature of the NCWMA and Emory River Tract. The Cumberland Trail State Park passes through the NCWMA and represents part of a trail system that will extend from Tennessee’s southern border

with Georgia to the State's northern border with Kentucky. The State's petition indicated there are several threatened and endangered species of plants within the NCWMA.

The State implemented a multiple use wildlife management plan for the NCWMA and Emory River Tract. The primary uses for this land are hunting and off-road vehicle recreation, but other recreational activities, such as hiking, camping, mountain biking, rock climbing, and fishing, occur in the area.



**Image 4: View of the NCWMA from the Cumberland Trail.**

Uses of the area include natural resource extraction such as coal mining, oil and gas well drilling, and quarrying. Extensive logging activity, permitted by agreement as part of the original purchase, also occurs in the NCWMA and Emory River Tract. The agreement that allows logging on the Sundquist Unit and portions of the Royal Blue Unit of the NCWMA is set to expire in 2017, at which time, timber management reverts to the Tennessee Wildlife Resources Agency. OSMRE has conducted field tests to determine the impact of various types of land use, such as mining and logging, on the sediment loads to receiving streams. Examples of the past land use practices are evident in Image 4 above and Image 5 below.



**Image 5: Logging disturbance in the NCWMA.**

## Trust Funds

Trust funds or annuities guarantee treatment of long-term postmining pollutional discharges associated with sites permitted under the Tennessee Federal Program. The purpose of such trusts is to protect the environment and the health and welfare of the public. The trusts or annuities are invested and managed for the long-term operation of water control and treatment facilities associated with coal mine sites.

OSMRE currently has four treatment trust funds, which one company is responsible for maintaining. OSMRE conducted annual reviews of the four treatment trusts in FY 2016. The trusts experienced a positive growth year and remained ahead of projections. A total of \$10.8 million was invested in the trust funds at the end of August 2016.

The company responsible for the four sites was sold in FY 2012. The new owners acquired the assets and liabilities of the former owner. The new owners have maintained the four sites as required by existing settlement agreements and have met the yearly performance criteria. In FY 2016, KFO released \$400,000 in excess funds from two of the four accounts. After 3 years of stable treatment system performance, the alternative bonding agreement requires release of funds in excess of the target value.

In FY 2016, KFO reviewed the remaining sites on the Tennessee AMD list and sent letters to four companies concerning 11 sites with postmining water in need of treatment. Most of the sites are located in southern Tennessee and are older permits mined during the 1980's. All the sites have treatment systems and National Pollution Discharge Elimination System (NPDES) permits. They are also meeting NPDES requirements. KFO and Appalachian Region staff visited 9 of the 11 sites and began developing treatment trust accounts for the sites. KFO anticipates finalizing trust funds for the nine sites in FY 2017.

## Federal Regulatory Geographic Information System

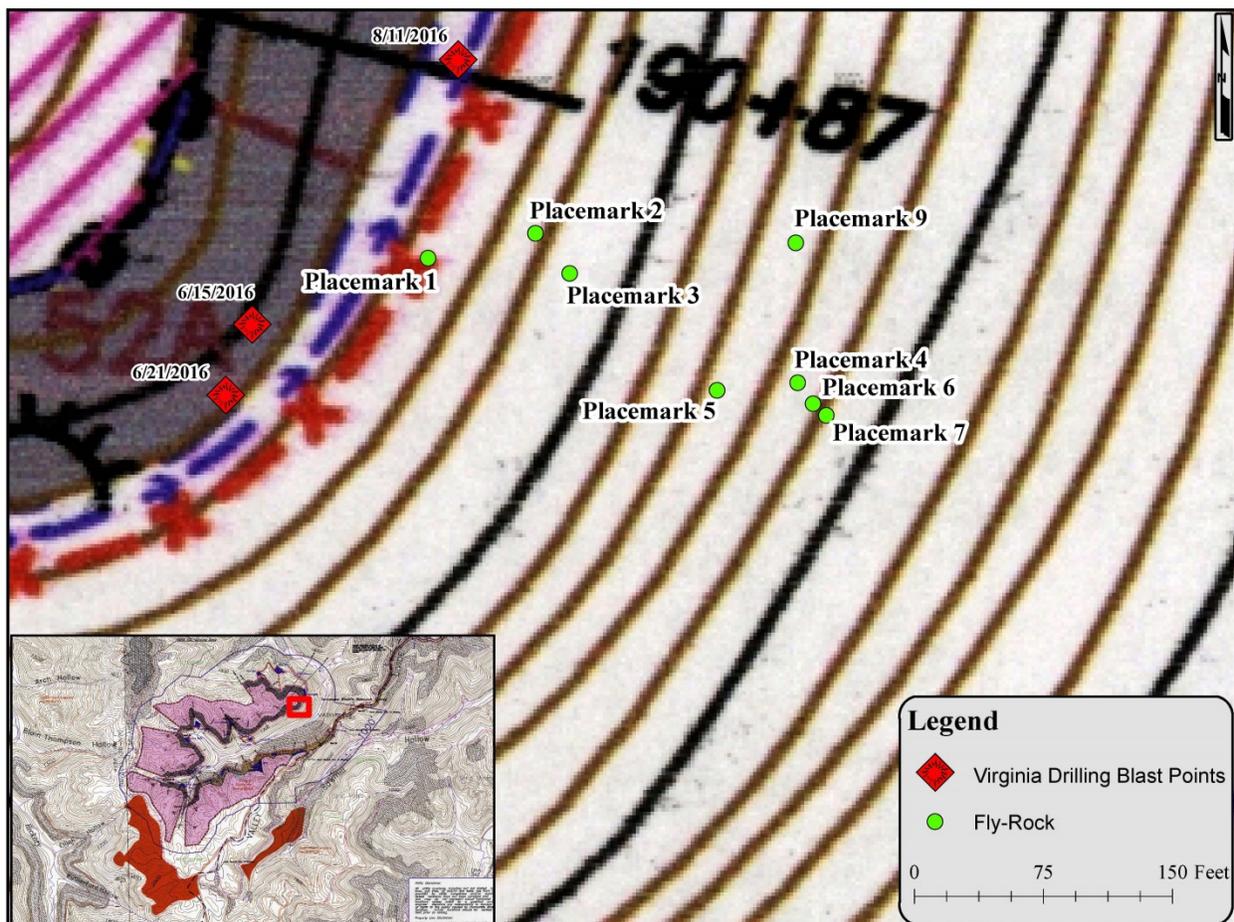
During FY 2016, KFO staff used the Geographic Information System (GIS) to:

- Analyze data relative to threatened and endangered species;
- Create an ArcGIS base map and Google Earth map to show NCWMA and Emory River Tracts Conservation Easement boundaries, alternative LUM boundaries, abandoned mine land highwalls, roads, wetlands, the Cumberland Trail, and other features;
- Analyze permitting actions related to the LUM petition area that have occurred since 1985;
- Provide KFO staff with data for premining site visits, midterm and permit renewal reviews, and mine site AMD treatment analysis;
- Assist the KFO Program Support Branch with technical investigations related to cumulative hydrologic impact reviews, terrestrial impact analyses, and other evaluations;
- Supply industry with data needed to prepare applications for coal mine permits;
- Provide KFO staff with spatial and tabular data associated with coal mine permits;
- Share datasets of surface coal mine boundaries, underground mine extents, and environmental resource locations with GeoMine, an interactive web-based digital map of coal mining and reclamation activities in the United States; and

- Implement a new mobile GIS application to collect field data and assign related attributes.

### Using Mobile GIS to Accurately Plot and Measure Flyrock Debris

PDF Maps is a mobile GIS application available for Android and iOS operating systems. KFO began using the application in FY 2016 and is running the application on a single Samsung Android tablet. However, the goal is for every inspector to have a tablet and access to the application. KFO's first real-world application of PDF Maps aided in the evaluation of a flyrock incident that occurred in June 2016. By definition, any rock off the permit area set in motion by the force of a blast is flyrock. The tablet allowed staff to quickly plot the debris field (Figure 4) and take action to address the violation.



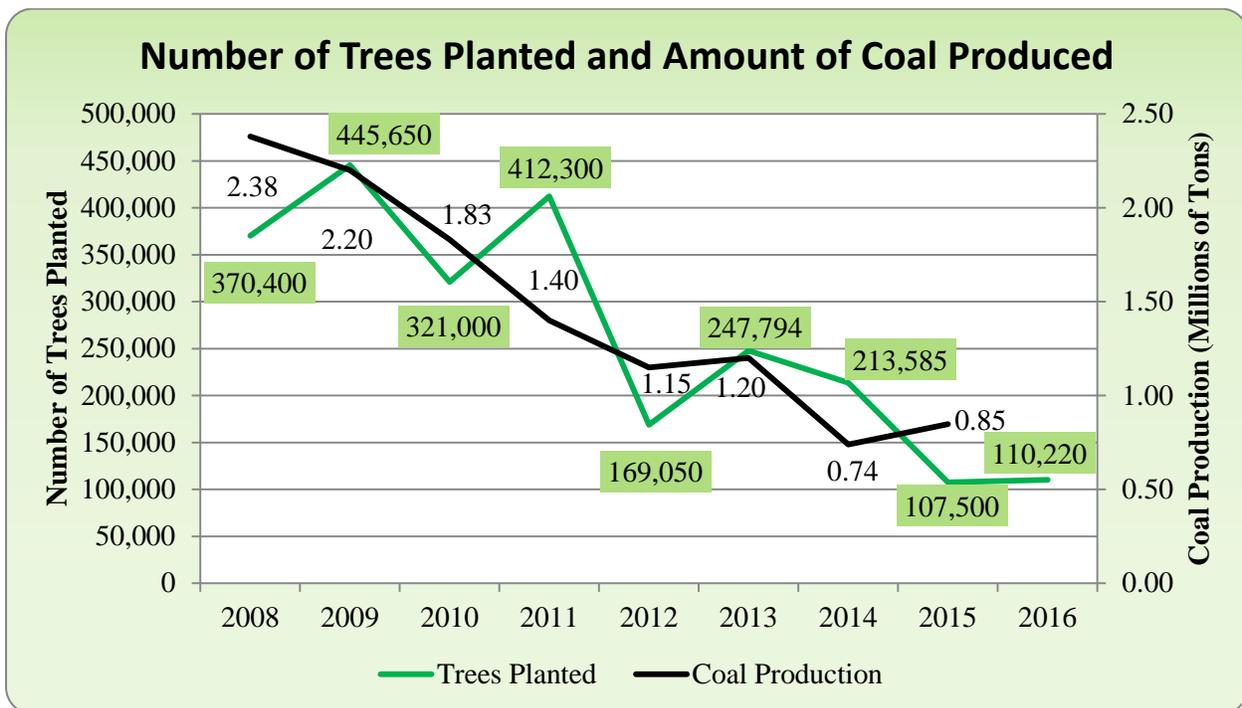
**Figure 4: Map showing location of field data collected using mobile GIS.**

### **Tennessee Reforestation Initiative**

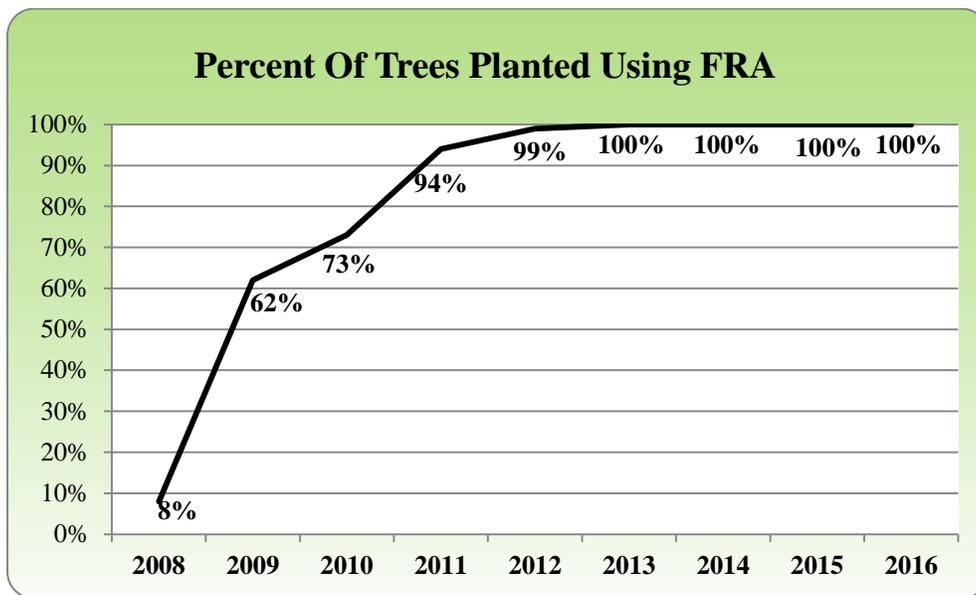
The Appalachian Regional Reforestation Initiative (ARRI) is a cooperative effort among OSMRE, state, and Federal agencies in the coal producing states of the Appalachian Region; the coal industry; environmental organizations; academia; and local citizens. The goals of the initiative are to plant more high value hardwood trees on reclaimed coal mines and increase the survival and growth rates of the planted trees by using the Forestry Reclamation Approach

(FRA). The FRA is a science based method designed to help restore native hardwood forest habitat and enhance natural succession of native forest plants on previously mined land. Additional information about the FRA is available on the ARRI website <http://arri.osmre.gov/>. Two KFO reclamation specialists serve as members of the ARRI Core Team and the ARRI Science Team. They promote the reestablishment of forestland on mine sites and provide leadership and active support to others in their efforts to achieve ARRI goals.

During FY 2016, industry planted 110,220 trees on 160 acres of reclaimed mined land in Tennessee. Due to decreased mining and reclamation activities in the state, the number of trees planted on mine sites in Tennessee has declined in recent years (Figure 5). However, the percent of trees planted in accordance with FRA guidelines has dramatically increased since 2008 (Figure 6 on page 29). This year marks the fourth consecutive year KFO achieved full FRA utilization, with 100 percent of all trees planted on FRA sites.



**Figure 5: Total number of trees planted and amount of coal produced per year in Tennessee. (Coal production data is not yet available for 2016.)**



**Figure 6: Percent of trees planted on Forestry Reclamation Approach prepared sites in Tennessee per year.**

#### ARRI Excellence in Reforestation Award

The ARRI Excellence in Reforestation Awards are presented annually to honor nominees from each state in the Appalachian Region for reclamation operations on active and abandoned coal mines that best exemplify the use of the FRA. Each year, states nominate one of their award winning projects for the Regional Award. This year, representatives from Crossville Coal, Inc. will receive the award at the 2016 Tennessee Mining Conference in Nashville, Tennessee. They were nominated for reclamation work they conducted at their Turner Surface Mine, a 390-acre surface mining operation located in Cumberland County, Tennessee. Extensive past logging in the area left dense stands of unusable small trees and shrubs but no species of saw timber quality.

After completing mining activities, Crossville Coal, Inc. began reclaiming the site. The company is currently reclaiming pits with available material on site (Image 6 on page 30). The FRA was not included in the original permit plans. However, after learning about the FRA through presentations by ARRI core team members, Crossville Coal began the process of revising their permit to include more acreage reclaimed according to the FRA. There are currently 18.14 acres approved to be reclaimed using the FRA and 22.6 acres pending. The company has already reclaimed numerous acres according to the FRA beyond what the permit currently requires.

The permittee also exceeded the permit requirements for the postmining land use plan, which was unmanaged and undeveloped land. By reclaiming the land under the guidelines of the FRA, the permittee will increase the productivity of the site. This reclamation approach will also increase wildlife habitat and benefit the Catoosa Wildlife Management Area, which is located adjacent to the site.



**Image 6: Forestry Reclamation Approach end-dump piles placed on Crossville Coal, Inc. Permit 3189.**

### FRA Community Involvement and Scientific Research

The KFO ARRI members continue to be very active in community outreach. Members of the ARRI Core Team gave a presentation about forestry as a profession with OSMRE to the University of Tennessee, FORS 100 undergraduate class. KFO Core Team members also accompanied 2016 Southeast Chapter for Society for Ecological Restoration participants on a field trip to a surface mine, which the permittee reclaimed using the FRA. Lastly, Core Team members continue to serve as educators for numerous university classroom field trips to Tennessee surface mines.

### 2016 ARRI – Mined Land Reforestation Conference

The KFO ARRI Core Team members and the University of Tennessee cohosted the 2016 ARRI – Mined Land Reforestation Conference. To celebrate the 10<sup>th</sup> anniversary of ARRI, the Core Team members considered the FRA from different perspectives. In doing so, they gained a unique understanding of different perspectives on the FRA held by industry, academics, citizens, and state and government officials. This gathering of participants, some new to ARRI and some, who helped pioneer it, converged in Knoxville, Tennessee during the first week of August 2016. Attendees learned how to apply the principles of ecology to establish forests on reclaimed mined land and how to tailor these practices for different sites in order to reestablish ecosystem functions.

OSMRE Director Joe Pizarchik provided the welcoming statement (Image 7 on page 31). Prior to his statement, he received the “Excellence in Reforestation – Champion Award” for his enthusiasm and support for ARRI’s mission over the years. He showed his support through his comments, by praising the work of those involved with the mission of ARRI and expressing his desire to see other regions pursue the FRA.



**Image 7: Director Joe Pizarchik delivers the welcoming statements at the 2016 ARRI Conference.**

Dr. Tammy Horn, Kentucky State Apiarist, presented the Keynote address (Image 8). Dr. Horn is an award-winning apiarist, author, and honey bee researcher. She is the director of Coal Country Beeworks, which is committed to re-establishing bees and beekeeping throughout the coalfields in the Appalachian Region. She explained colony collapse disorder and described how forest-based beekeeping on coal mines and the establishment of pollinator-friendly species can provide places of refuge for bees.



**Image 8: Dr. Tammy Horn presents the keynote address.**

The FRA is based on best available knowledge and science. As a result, the FRA is occasionally updated when new information emerges. The technical sessions of the conference are geared for new and old members of ARRI. During these sessions, speakers presented updates concerning the FRA process, reforestation efforts throughout the region, and the use of national service

programs to assist ARRI's mission. A representative from the USFWS also issued a call to action for forest management to improve habitat for federally listed bat species.

OSMRE Appalachian Regional Director Tom Shope hosted the awards luncheon (Image 9). During the luncheon, he acknowledged state winners throughout the region and presented the ARRI - Regional Award to representatives from Premier Elkhorn Coal Company.



**Image 9: Regional Director Tom Shope presents the ARRI Regional Award to representatives from Premier Elkhorn Coal Company.**

During the first day of the conference, a panel consisting of members of industry, the academic community, and various regulatory agencies convened. Fulfilling the theme of the conference, “Perspectives on the FRA”, they answered questions from the crowd regarding their experiences, difficulties, and successes with FRA practices.

Participants went on a field trip the second day of the conference. They first visited Zeb Mountain, Tennessee where they were able to examine a variety of FRA plots of different ages. The first stop was a 15-year old site with conventional reclamation, where arrested succession has taken place. On the next stop, participants examined a 10-year old operational plot with trees large enough to blend in to the surrounding unmined area (Image 10 on page 33). Next was a 9-year old research plot revegetated with various groundcover and fertilization rates. Native warm season grass was planted on this site. The native grass serves as noncompetitive vegetative cover for large oaks growing at the site. The last stop at Zeb Mountain was a site reclaimed with end-dumped overburden and planted with American chestnut seedlings in 2008. This site serves as a research plot, which will be evaluated to determine the best planting treatment for this ecologically important species. Unfortunately, the trees were large enough to develop furrowed bark that serves as a host site for the chestnut blight. Although these trees will die soon, their legacy will carry on through the information learned from this project.



**Image 10: Left - A 10-year old FRA site showing strong growth of hardwoods and pine. Right - An 8-year old FRA site with large American chestnut trees.**

Participants had lunch at Indian Mountain State Park, an abandoned surface mine that once had several open mine pits. The land was reclaimed and has been developed for recreational use. The final stop of the day was an active contour mine near Clairfield, Tennessee. This mine is an operational FRA site that was planted with trees this year. The participants examined two areas, the first was seeded in the fall and the second was seeded in the spring. At this stop, attendees were able to compare a recently revegetated FRA site with the older reforested sites they saw earlier in the day.

Throughout the conference, participants were asked to share their perspective on the FRA. The different viewpoints on numerous issues spurred constructive discussion. FRA techniques are constantly evolving, and more research on the methods of the FRA as science can prove beneficial. The ARRI conference definitely serves as a useful platform for OSMRE to spread new ideas and research findings, while gaining insight into the viewpoints of the industry, academic community, and citizens.

### Arbor Day 2016

On April 19, 2016, over 90 students and volunteers gathered on the highest point at the Kopper Glo Mining, LLC, Clear Fork Surface Mine. This was the eighth annual Arbor Day event organized by Tennessee ARRI Core Team members and the Coal Creek Watershed Foundation. It was also the third event hosted by Kopper Glo Mining, LLC. From the top of the mountain, students could see their school down in the valley below. It was not the first time many of the students participated in the annual Arbor Day event. When asked why they were on top of the mountain, they responded enthusiastically, “To plant trees and return the land to a forest.”

The fifth-grade through eighth-grade students from Clairfield and White Oak schools live in the middle of Tennessee’s coalfields, but many had never visited a coal mine prior to attending Arbor Day events. The schools are able to use the event as an opportunity for students to learn about the coal industry and environmental protection within their community. ARRI core team members taught the students and volunteers about reforestation and explained how proper tree-planting techniques influence seedling survival. Barry Thacker, founder of the Coal Creek

Watershed Foundation, instructed the students about the history of the American chestnut. He then provided them with 30 blight-resistant hybrid seedlings grown from seed on the back porch of his office. In addition to the chestnut seedlings, Kopper Glo Mining provided 1,000 mixed hardwood seedlings needed to reforest 1.5 acres of land on top of the mountain.

Although many of the students initially viewed the event as a chance to be outside and have fun with their friends, they quickly embraced the opportunity for hands-on learning. Students learned pine seedlings were easier to plant than oak seedlings because of the oak seedlings' sprawling taproots. They also learned to dig larger holes for chestnut seedlings than for oak seedlings, because the chestnut seedlings were grown in large containers with loose potting soil (Image 11). By the end of the event, students were correctly naming tree species and gently tugging the seedlings to ensure they had planted them correctly.



**Image 11: Students and volunteers planting seedlings at the 2016 Arbor Day site.**

### **Local Interagency Working Agreement**

Representatives from KFO, TDEC, U.S. Army Corps of Engineers, USFWS, and EPA established a Local Interagency Working Agreement (LIWA) on December 20, 2010. The purpose of the LIWA is to improve interagency communication and coordination during the coal mine permitting process in Tennessee under the respective State and Federal permitting, enforcement, and compliance reviews required by the Clean Water Act, SMCRA, and the Endangered Species Act (ESA).

The LIWA group held a joint meeting on several projects in October 2015. Representatives from all the LIWA agencies were present. Sequatchie Valley Coal Company proposed relocating Big He Creek located in Sequatchie County, in an effort to collect AMD, which is emanating from the company's adjacent mine sites and discharging into the creek. Sequatchie Valley Coal Company's proposal would isolate the AMD sources from the creek flow. The company would also develop a treatment system to treat the water before discharging it back into the creek. A consultant for the company is developing designs for both the creek relocation and treatment system.

Middlesboro Mining Operations gave presentations on a proposed surface mine in northeastern Tennessee. Concerns related to the proposed mine centered on endangered species in the area and the relocation of a small section of a county road to facilitate the

mining operation. Company consultants are developing the required SMCRA permit application. KFO expects to receive the permit application in FY 2017.

Meta Elkhorn LLC proposed an underground mine in Morgan County, Tennessee. The mine would include a small face-up area and have a small underground mining area. No known threatened or endangered aquatic species are present in the area; however, threatened and endangered bats are likely to be present. The company will incorporate a bat protection and enhancement plan in the permit application. KFO expects to receive this permit application in late FY 2017.

KFO held several other informal public hearings in response to requests by nongovernment entities during FY 2016. The majority of these hearings were in response to permit renewal or revision applications and were held due to the public comment opportunity available to potentially affected citizens.

### Cost Recovery

On March 26, 2013, OSMRE proposed a rule to revise the Federal and Indian Lands Program regulations. The purpose of the proposed rule is: (1) to adjust the existing permit fees and (2) to assess new fees to recover the actual costs for permit administration activities provided to the coal industry and for inspection activities (see March 26, 2013, Federal Register 78 FR 18429). In anticipation of implementing this Cost Recovery Rule, KFO instituted changes to better track all permitting costs and project hours. Changes to time keeping improved KFO estimates for the number of hours expended for major cost categories. The Cost Recovery Support Solution is an electronic tracking system developed to help track and monitor individual assignments as this process moves forward. OSMRE integrated the Cost Recovery Support Solution into the agency's Quicktime time accounting system in FY 2016. OSMRE anticipates implementing the final Cost Recovery Rule in January 2017.

### Endangered Species

The USFWS determined threatened species status under the ESA for the northern long-eared bat (*Myotis septentrionalis*). The final rule was effective May 4, 2015. At the same time, the agency published an interim rule under the authority of Section 4(d) of the ESA, providing measures the USFWS deemed necessary and advisable for the conservation of the northern long-eared bat. The USFWS accepted comments on the interim rule until July 1, 2015. The final rule was effective January 14, 2016. On April 27, 2016, USFWS found that a determination on designation of critical habitat was not prudent.

The USFWS completed its 5-year review of blackside dace (*Chrosomus cumberlandensis*, previously classified as *Phoxinus cumberlandensis*). The review document was signed on September 16, 2015, and awaits publication in the Federal Register. The USFWS first published the 5-year review in the Federal Register on July 29, 2008, and opened a 60-day comment period. The agency evaluated comments and information received during the comment period and incorporated them into the most recent document as appropriate. The review concluded that the species continues to meet the definition of threatened and should remain so classified. The

review also speculated the species is likely to become endangered in the foreseeable future throughout all or a significant portion of its range.

KFO continues to work with the USFWS to monitor mining impacts on federally listed threatened and endangered species and any designated critical habitat. KFO also works with applicants to formulate mining and reclamation plans that will benefit these threatened and endangered species.

### Youth Initiative

KFO employed six interns during FY 2016, including two Pathways Program participants and four AmeriCorps team members. They worked in the areas of geology, GIS, hydrology, inspection, and administration (Image 12 below and Image 13 on page 38). They assisted with projects related to the LUM petition, e-Records, Laserfische, GeoMine, SPOT Global Positioning System device setup, utility terrain vehicle training, and water quality database compilation. They also played an important role in assisting staff with various tasks such as entering data for hydrologic reviews and database development, scanning historical records, gathering information for Freedom of Information Act requests, and assisting Program Support Branch and Field Compliance Branch staff with data collection in the field. KFO hired one of the AmeriCorps team members as a full-time OSMRE employee.



**Image 12: Pathways participants and AmeriCorps team members conducting stream analysis, collecting GIS data, and performing administrative work.**

## L&N STEM Academy

KFO is using a unique approach to implement the Secretary's Youth Initiative, which would provide educational opportunities to the nation's K-12 student population. KFO developed and initiated a watershed science program designed for the high school level. This pilot program is being implemented at the L&N Stem Academy (a magnet high school focused on the disciplines of science, technology, engineering, and math located in downtown Knoxville). The program utilizes two AmeriCorps team members to deliver weekly 90-minute lessons to 93 high school students. KFO formed an Advisory Committee of 20 professionals and local leaders in water related sciences to validate the curriculum, provide support for field trips, and serve as mentors to the students. This is a joint initiative with OSMRE; Knox County Adopt-A-Watershed Program; and several other Federal, State, and local agencies. Local participants include the University of Tennessee, Tennessee Valley Authority, Tennessee Wildlife Resources Agency, Tennessee Department of Environment and Conservation, U.S. Fish and Wildlife Service, Knox County Schools, and the City of Knoxville.

The curriculum consists of a series of hydrology related lectures and multi-media materials. Additionally, the students adopt the local watershed to serve as their laboratory. Some examples from the lesson plans include watershed characterization; proper water sampling techniques and data interpretation, identification and assessment of watershed impacts, understanding water regulations, use of GIS and mapping tools, and introduction to geology and its role in the watershed. As the class lectures wrap up in December, the students will work in teams to develop science projects and service projects designed to remediate, preserve, and restore their local watershed. The final end of year project will be a watershed action plan that successive classes can modify from year to year.

The primary goals of this educational program include:

- Increasing environmental science educational opportunities for students,
- Introducing students to a science based approach to research and increase their awareness of real world situations,
- Emphasizing the critical role clean water plays in sustaining life on earth, and
- Exposing youth to various professional job opportunities in environmental related fields and provide them with mentors.

KFO plans to expand this pilot program to other schools in Tennessee and/or nationwide. All the lesson plans, lecture materials, field exercises, and media materials are available. KFO is currently developing a marketing plan to expand public awareness of the program and raise funds to offset costs associated with learning materials, supplies, and field trips. By expanding the program, OSMRE will be able to reach a wider demographic and increase awareness of hydrology and water quality issues in coalfield communities and across Tennessee.



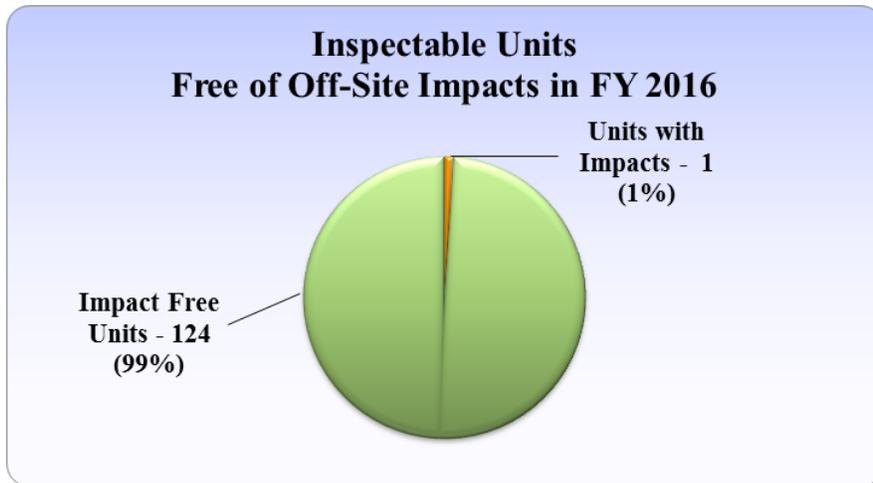
**Image 13: AmeriCorps team members at the Career Fair held at the University of Tennessee.**

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

One of KFO's goals is to further the success of reporting end results. As a part of that effort, KFO collects findings from performance standard evaluations related to the number and extent of observed off-site impacts, the number of mined and reclaimed acres that meet bond release requirements, and the effectiveness of KFO's customer service efforts. Comprehensive reports for the program elements evaluated during FY 2016 are available in OSMRE's Odocs database located at <http://odocs.osmre.gov/>. The reports are also available for review and duplication at the OSMRE Knoxville Field Office located at 710 Locust Street, Knoxville, Tennessee 37902. The KFO phone number is (865) 545-4103.

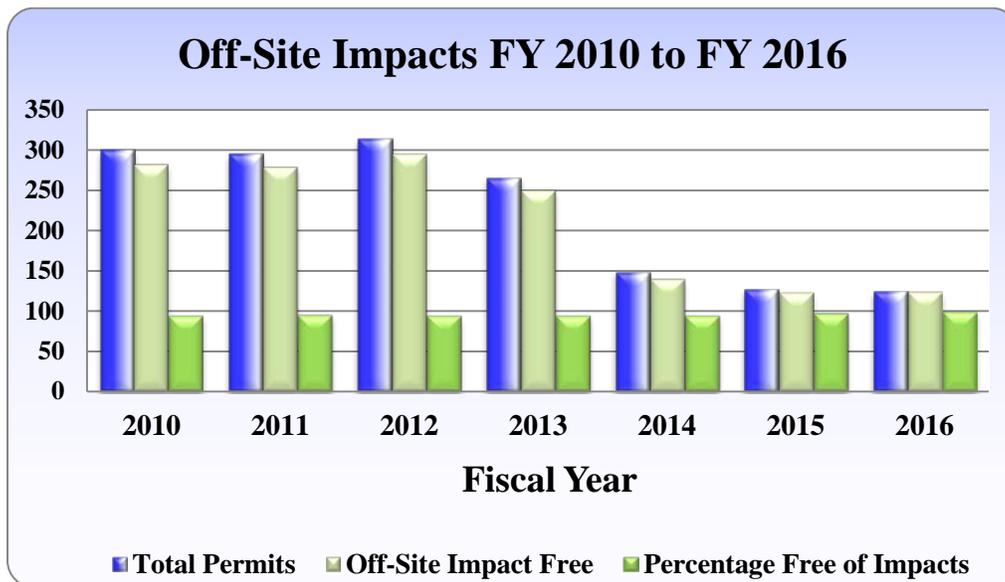
### **A. Off-Site Impacts**

One of the objectives of OSMRE is to minimize the occurrence of coal mining related adverse impacts to the public and to environmental resources. When conducting inspections, KFO reclamation specialists evaluate all active and abandoned mine sites and NOIs on the IUL to determine if off-site impacts have occurred. Reclamation specialists record off-site impacts resulting from SMCRA violations on an Inspection and Enforcement Tracking System, Mine Site Inspection form. KFO transfers this data to a database and develops a summary report for year-end reporting purposes. KFO personnel also evaluate citizen complaint files and interview reclamation specialists to determine if off-site impacts from other sources occurred. During FY 2016, KFO found 99 percent of inspectable units in Tennessee (124 units out of 125 units) were free of off-site impacts as illustrated in Figure 7 on page 39.



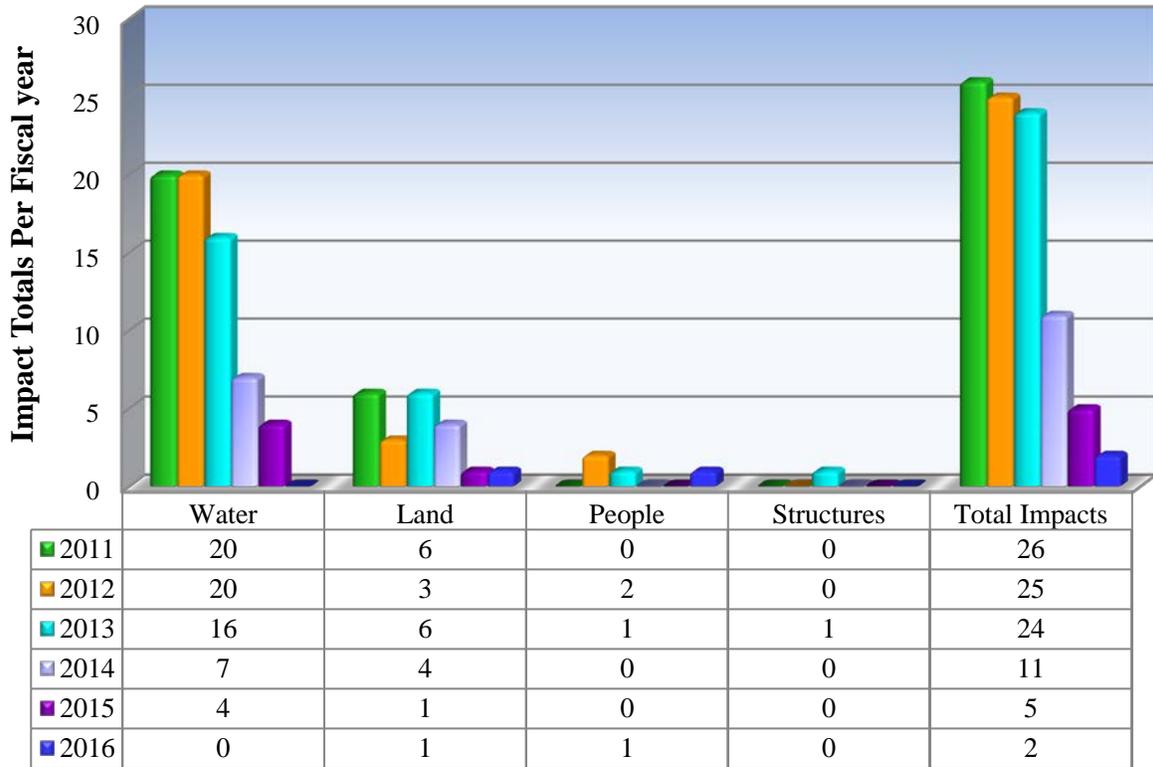
**Figure 7: Inspectable units free of off-site impacts in FY 2016.**

The occurrence of off-site impacts in Tennessee has significantly decreased in recent years as illustrated in Figure 8. KFO reclamation specialists observed one off-site impact at one Tennessee mine site in FY 2016. The impact affected two resources involving land and people (Figure 9 on page 40). The only impact reclamation specialists observed was at an active coal producing surface mine. A blast produced flyrock, which impacted the downslope area below the permit boundary. The blast damaged some trees on an area that measured approximately 0.5 acre. The uncontrolled flyrock did not harm any people; however, it is inherently dangerous. The reclamation specialist who cited the violation attributed the off-site impact to operator error. Reclamation specialists did not report any impacts to water or structures nor did they report any impacts related to NOIs, citizen complaints, or the only Georgia mine site on the IUL



**Figure 8: Off-site impacts FY 2010 to FY 2016.**

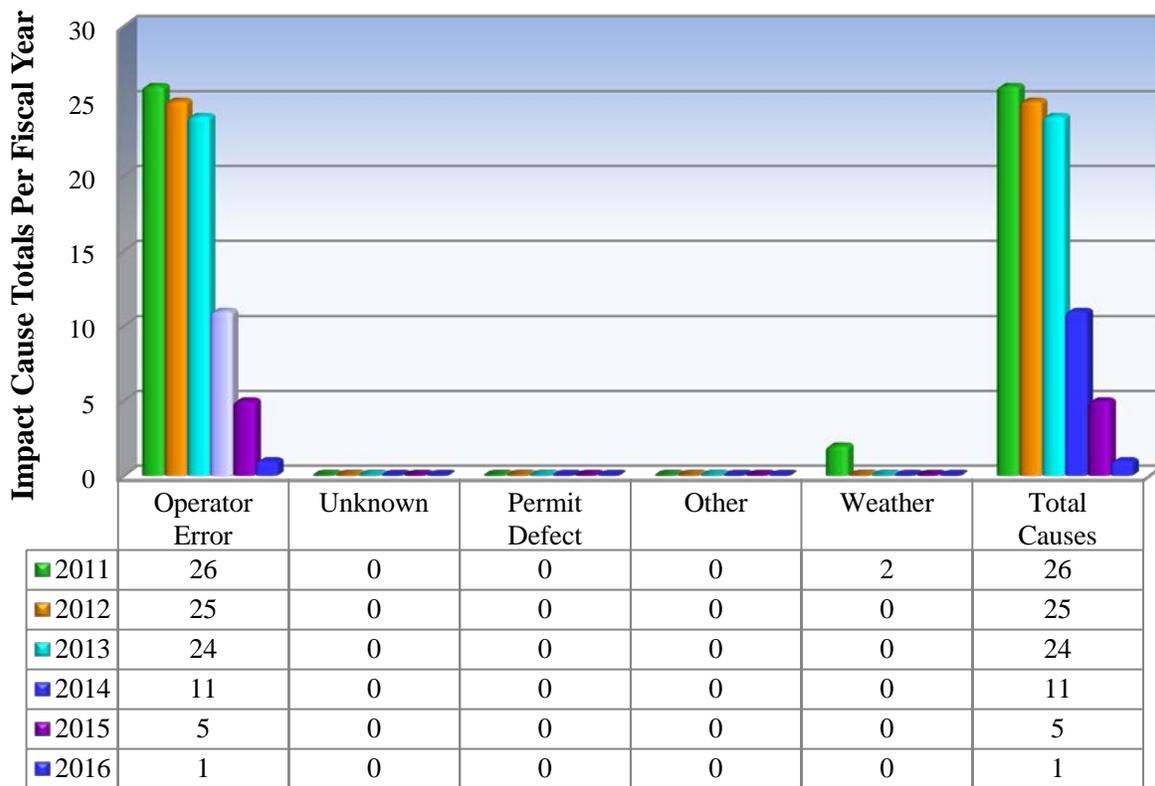
## Resources Affected By Off-Site Impacts in Tennessee FY 2011 to FY 2016



**Figure 9: Resources affected by off-site impacts in Tennessee FY 2011 to FY 2016.**

Reclamation specialists attributed all off-site impacts in FY 2016 to operator error. Although operator error has remained the primary cause of off-site impacts during the past 6 years, the number of off-site impacts caused by operators has significantly declined as illustrated in Figure 10. KFO has worked extensively with industry to reduce the number of off-site impacts and plans to continue the effort in the future.

## Off-Site Impact Causes in Tennessee



**Figure 10: Off-site impact causes in Tennessee during FY 2011 to FY 2016.**

### Bond Forfeiture Sites

Reclamation specialists did not observe any off-site impacts at bond forfeiture sites during FY 2016. KFO attributes the decline in off-site impacts at bond forfeiture sites primarily to: 1) continued efforts to reclaim sites with bond forfeiture and civil penalty funds and 2) increasing volunteer vegetative cover that is stabilizing the soil surface and reducing runoff. These factors in turn significantly reduce off-site pollution.

## B. Reclamation Success

Reclamation success under SMCRA is measured by the bond release process. The ultimate goal is Phase III bond release. KFO has implemented bond release policy and procedures to ensure all actions adhere to regulatory and permit requirements. At each phase of bond release, the permittee is required to submit a complete application, which must include a newspaper public notice, landowner notification letters, a permittee certification, and a bond release map. KFO personnel conduct a complete site evaluation and permit review at each phase of bond release. Mine sites must meet the following requirements:

- Phase I – Backfilling and grading have been completed, drainage control is in place, and temporary structures except ponds and roads have been removed.
- Phase II – Vegetation has been successfully established, all temporary structures have been removed, no contribution of suspended solids outside the permit area is occurring, and permanent ponds have been properly maintained.
- Phase III – All mining and reclamation activities have been successfully completed according to SMCRA, supporting regulations, and the permit. Vegetation has been established to support the approved postmining land use for the full liability period and this determination is supported by statistical analysis.

KFO policy concerning bond release procedures requires the bond release specialist and assigned reclamation specialist review the bond release application for deficiencies. They also determine if any further reclamation work is needed at the site and if bond is needed to complete any remaining work. Additionally, KFO staff members review hydrologic and biologic data to ensure the site is not causing, or is not likely to cause, material damage outside the permit area.

KFO processed six bond release applications during FY 2016 and approved six applications, resulting in one Phase I, three Phase II, and two Phase III bond releases (Image 14). KFO removed one permit from the IUL after granting Phase III bond release for the entire permit. These actions resulted in KFO returning all or a portion of the bond on 1,500 acres of reclaimed mine lands (Appendix 1, Table 6). KFO did not return or disapprove any applications, and permittees did not withdraw any applications.



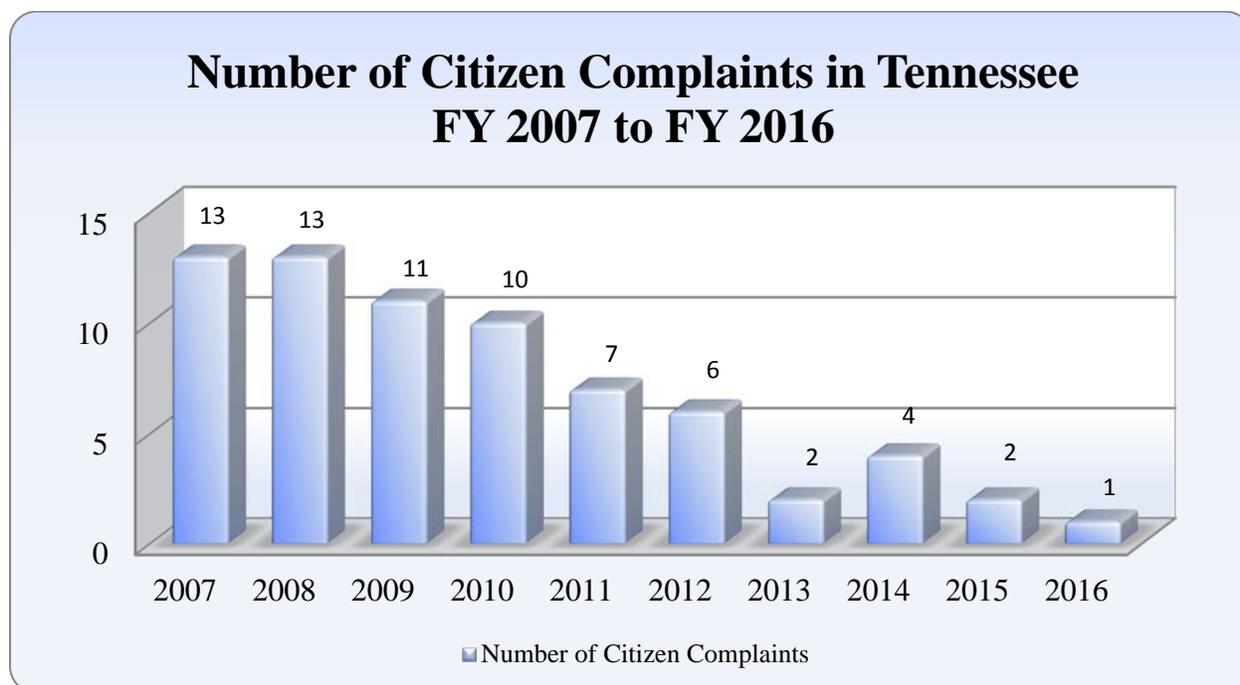
**Image 14: Reclaimed slopes (left) and wetland (right) at Phase III bond release sites.**

## C. Customer Service

### Citizen's Request for Inspection

The regulations provide citizens the opportunity to request a Federal inspection. A citizen may request a Federal inspection by providing a written statement or oral report giving OSMRE reason to believe an unauthorized condition, practice, or violation exists that: 1) creates an imminent danger to the health or safety of the public, or 2) is causing or could reasonably be expected to cause significant, imminent environmental harm to land, air, or water resources. OSMRE must investigate these reports and provide a response to the citizen regarding the investigation findings and any associated actions within 10 days of the investigation conclusion. The citizen providing the information may also request an informal review of the decision regarding the complaint.

The number of citizen requests for inspections (citizen complaints) KFO received in recent years declined as illustrated by Figure 11. KFO received only one request for inspection related to a permitted mine site during FY 2016, compared to six requests in FY 2012. This amounts to an 83 percent reduction in complaints during the past 5 years. KFO responded to all complaints received in FY 2015 in a timely manner as required by regulations.



**Figure 11: Number of citizen complaints in Tennessee FY 2007 to FY 2016.**

### Pending Litigation

#### **Endangered Species Act, Notice of Intent to Sue and Lawsuit**

On February 4, 2013, KFO received notice that three citizen groups intended to file a lawsuit against the U.S. Department of the Interior, OSMRE, USFWS, National Coal,

LLC, and Davis Creek Energy, LLC. The citizen groups alleged that high conductivity wastewater from two Tennessee surface mines (National Coal, LLC permit 3249 and Davis Creek Energy, LLC permit 3218) are harming the threatened blackside dace and the endangered Cumberland darter.

The groups filed a lawsuit on July 31, 2013, and amended the lawsuit on August 1, 2013. They alleged there were eight violations of the ESA. The lawsuit allegations can be grouped into two broad categories: 1) legality and validity of the USFWS's programmatic 1996 Biological Opinion on surface mining and 2) on-the-ground implementation of the 1996 Biological Opinion. The USFWS and OSMRE completed a joint response brief on December 9, 2013. Several response and reply rounds occurred in 2014 and 2015.

On January 28, 2015, the court dismissed four of eight counts related to the validity of the 1996 Biological Opinion but left the remaining four counts on the as-applied challenges to the ESA and 1996 Biological Opinion. In the fall of 2015, parties entered settlement negotiations to resolve both this case and the suit pertaining to Middlesboro Mining Operations, Inc. (discussed below). OSMRE agreed to two separate consent decrees on January 19, 2016, thus resolving the remaining four counts in this case and all counts in the other suit. In the settlement agreements, OSMRE and the USFWS agreed to conduct site-specific Section 7 consultations on three permits subject to the lawsuit and make best efforts to finish the consultation by May 1, 2016. The process has taken longer than expected but KFO anticipates completion during the fourth quarter of 2016. In return for the Section 7 consultation, the plaintiffs agreed to allow the judge to dismiss both cases with prejudice.

### **Defenders of Wildlife, Notice of Intent to Sue and Lawsuit**

On December 19, 2015, OSMRE Program Support in Washington, D.C. informed KFO that the Defenders of Wildlife, Sierra Club, Tennessee Clean Water Network, and Statewide Organizing for Community Empowerment had filed a Notice of Intent to Sue regarding Middlesboro Mining Operations, Inc. permit 3264. The Notice of Intent to Sue alleged violations of the ESA pertaining to failure to perform Section 7 consultation with USFWS and various related aspects of Section 7 consultation. Plaintiffs allege five violations of NEPA exist that are directly related to the issuance of permit 3264: there was no valid blackside dace baseline, best available scientific data was not used, dace habitat on an unnamed tributary was ignored, specific conductance limits were not set, and Section 7 consultation was not completed. Plaintiffs also claimed there were six violations of the ESA Section 7 consultation requirements. On February 18, 2015, OSMRE and USFWS sent a joint response to the plaintiffs concerning the lawsuit allegations. As noted above, the parties reached a settlement in this case and the case above on January 19, 2016. In the settlement agreement, OSMRE and the USFWS agreed to conduct site-specific Section 7 consultation on three permits subject to the lawsuit and make best efforts to finish by May 1, 2016. The process has taken longer than expected but is expected to be completed in the fourth quarter of 2016. In return for the Section 7 consultation, the plaintiffs agreed to allow the judge to dismiss both cases with prejudice.

## **Kopper Glo Mining, LLC, Permit 3231 Appeal**

On April 1, 2014, a resident living adjacent to the Kopper Glo Mining, LLC, Clear Fork Surface Mine, appealed the issuance of permit 3231. KFO received notice of the appeal on April 13, 2014. The citizen requested the U.S. Office of Hearings and Appeals review KFO's 2014 permit approval decision. The plaintiff alleged OSMRE failed to address landslide potential, water supply sampling, receiving stream impacts, and the existence of mining on the ridge above his residence.

OSMRE's subsequent investigation required Kopper Glo Mining, LLC to document an additional spring supplying water to the plaintiff's residence and found no merit in the other three allegations.

In June 2016, after nearly 2 years of discussion between the parties, the administrative law judge assigned to the case ordered both sides to enter into mediated settlement discussions on the issues. The citizen was not satisfied with the resolution of his water supply complaint and offered several new complaints related to a nearby state highway intersection and related to road dust along the county road on which he lives. KFO met with the county road superintendent, TDEC, and Kopper Glo in an attempt to resolve the citizen's outstanding road concerns. KFO expects to resolve all outstanding issues in the fourth quarter of 2016 either through settlement or through judicial proceedings.

## **VI. Technical Assistance**

A number of KFO employees, primarily Program Support Branch staff, work on projects and assignments that are of common interest to the Appalachian Region and to all of OSMRE. Several of these technical assistance activities are cooperative efforts with the Appalachian Region, Program Support Division. During FY 2016, the Program Support Branch spent approximately 53 percent of their time on permitting activities with 51 percent of this time considered cost recoverable under the proposed Cost Recovery Rule. KFO staff also spent 13 percent of their total time working on the NCWMA LUM petition review. During the current year, KFO employees:

- Participated in the OSMRE National Blasting Work Group;
- Served as instructors for National Technical Training Program courses and for Technical Innovation and Professional Services Training Program courses;
- Participated in ARRI activities;
- Reviewed and provided guidance and expertise on the Stream Protection Rule and the associated Regulatory Impact Analysis and EIS;
- Provided technical support to the OSMRE KFO Field Oversight Branch, Lexington Field Office, and the Appalachian Regional Office concerning Appalachian Regional Management Council oversight and regional projects;
- Participated in and conducted evaluations for the Appalachian Region, Slurry Impoundment breakthrough initiative;
- Participated in various interagency activities related to the NCWMA LUM petition;

- Provided substantive guidance on the Cost Recovery Rule and associated implementation;
- Provided guidance and expertise for the electronic permitting initiative;
- Conducted stream surveys in several Tennessee watersheds as part of an interagency ESA review;
- Provided guidance to students from a Knoxville, Tennessee STEM academy (a magnet high school focused on the disciplines of science, technology, engineering, and math);
- Participated on and provided guidance on the Clean Water Act and SMCRA joint agency development of a large AMD treatment system in southern Tennessee; and
- Began developing treatment trusts for 11 mine sites in Tennessee.

## **ABANDONED MINE LAND RECLAMATION**

### **I. General**

#### **A. Introduction**

The Tennessee Abandoned Mine Land (AML) program receives Federal funding under the 2006 Surface Mining Control and Reclamation Act of 1977 (SMCRA) amendment. On December 20, 2006, SMCRA was amended to extend fee collections until 2021. Concurrent with the fee extension, Congress made revisions to Title IV (state AML reclamation) that added sources of program funding. The Tennessee Reclamation Plan was proposed to be suspended on November 5, 1984, after approval of the Tennessee regulatory program was withdrawn. However, the Plan was never suspended; therefore, the 2006 amendment authorized the state of Tennessee to receive minimum program funding for its approved state reclamation program. The Tennessee Department of Environment and Conservation (TDEC), Land Reclamation Section is the state agency responsible for receiving such AML funds and implementing the approved Tennessee AML Reclamation Plan. Tennessee’s AML program is “uncertified” in that TDEC has not certified under Section 411(a) of SMCRA that reclamation of all eligible coal mine problems has been completed. Since Tennessee has the authority to manage the AML program, the primary role of the Office of Surface Mining Reclamation and Enforcement (OSMRE) is to:

- Monitor TDEC’s compliance with the requirements of its approved AML Reclamation Plan, SMCRA, applicable 30 CFR requirements, grant requirements, applicable 43 CFR requirements, and applicable Office of Management and Budget circulars governing financial management;
- Assess TDEC’s progress in addressing problems identified in its Electronic Abandoned Mine Land Inventory System (e-AMLIS);
- Ensure TDEC maintains its capability to fulfill SMCRA responsibilities;
- Assist TDEC in implementing its responsibilities;
- Report on the evaluation of TDEC’s program;
- Work with TDEC to resolve, in a reasonable and timely manner, program and implementation issues identified through oversight; and

- Pursue corrective actions provided by SMCRA, Federal rules, and OSMRE policy if TDEC is not meeting program National Environmental Policy Act (NEPA) compliance requirements.

The following acronyms are used in the AML section of this report:

AMD	Acid Mine Drainage
AML	Abandoned Mine Land
e-AMLIS	Electronic Abandoned Mine Land Inventory System
ATP	Authorization to Proceed
FY	Fiscal Year
GIS	Geographic Information System
KFO	Knoxville Field Office
NEPA	National Environmental Policy Act
OSMRE	Office of Surface Mining Reclamation and Enforcement
SMCRA	Surface Mining Control and Reclamation Act of 1977
TDEC	Tennessee Department of Environment and Conservation

## B. Program Administration

Based on 2006 SMCRA amendments, Tennessee was required to amend its AML program to reflect statutory, regulatory, policy, procedural, and organizational changes that have occurred since 1984. TDEC submitted a new program amendment to OSMRE on April 5, 2011. The amendment was included in the Federal Register (“Tennessee Abandoned Mine Land Program, Proposed Rule,” 77 FR 5740, February 6, 2012) and published in the Federal Register in February 2013. The amendment reflects the 2006 SMCRA amendment mentioned above.

For each proposed AML construction project, TDEC submits to OSMRE an environmental document package that includes either an environmental assessment, categorical exclusion document request, or potential environmental impact statement; AML eligibility statement; applicable supplemental information; NEPA consultation correspondence; and a new or updated Problem Area Description, if needed. TDEC also submits an e-AMLIS printout showing the AML features as “unfunded” and the estimated budget for the project. Additional details concerning OSMRE’s e-AMLIS are in Section III of this report.

TDEC manages its program in a cost effective and efficient way. All projects comply with applicable laws and regulations, and are well designed and constructed using the best technology available. Projects are completed with minimal disturbance to the environment. The Knoxville Field Office (KFO) monitors all projects to ensure they meet contract specifications, project objectives, and program goals.

## II. Noteworthy Accomplishments

In Fiscal Year (FY) 2016, TDEC reclaimed AML features through construction contracts and joint ventures with landowners in accordance with State and Federal law. By reclaiming safety hazards, TDEC achieved beneficial land reclamation for the landowner as well as the

community. TDEC worked with other government agencies and private organizations to leverage additional funding for abatement of pollution from mine drainage. Although small in comparison to surrounding states, Tennessee has a diverse and effective AML program. TDEC's AML reclamation program has expended approximately \$22 million in reclaiming over 7,700 Government Performance and Results Act acres while reducing the number at risk by AML hazards by approximately 6,730 people according to e-AMLIS.

#### **A. Overall Performance for Fiscal Year 2016**

##### **Completed AML Program Projects:**

- Wooldridge Waterline Replacement Project, completed April 19, 2016, provided potable water to 25 households/128 residences (\$78,000).
- Adams Hollow Waterline Extension Project, completed September 2, 2016, provided potable water to 23 households/82 residences (\$510,864).
- Rocky River Phase II Reclamation Project (Image 15), completed October 12, 2015, achieved reclamation of 69 acres (\$857,080).

##### **Ongoing AML Program Projects:**

- Tennessee Hollow Waterline Replacement Project will provide potable water to four households and one church (approximately \$185,000 - Authorization to Proceed [ATP] issued July 15, 2016).
- Mossy Grove Reclamation Project will mitigate 4,250 linear feet of Priority 2 dangerous highwalls and six Priority 2 hazardous water bodies (approximately \$460,250 - ATP issued July 22, 2016).
- Perry Simmons Reclamation Project will reclaim three Priority 2 problems: 10,610 linear feet of dangerous highwall, eight hazardous water bodies, and one vertical opening (approximately \$999,600 - ATP issued December 22, 2015).



**Image 15: Rocky River Phase II Reclamation Project (before and after reclamation).**

### **III. Utilization of OSMRE Technological Assistance**

The OSMRE Technical Innovation and Professional Services provided TDEC with a Getac Tablet to use for fieldwork. The Getac Tablet enables TDEC to locate AML sites in the field, which improves accuracy of the AML Geographic Information System (GIS) database shared with the KFO GIS.

### **IV. Public Participation and Outreach**

OSMRE's March 28, 2013, Directive AML-22, "Evaluation of State/Tribe AML Programs", establishes policies, procedures, and responsibilities for monitoring, assisting, and evaluating state and tribe AML Programs. OSMRE's monitoring or oversight of state and tribe AML Programs serves to provide information, assistance, and feedback to states and tribes, OSMRE, and the public to ensure the purposes and goals of the AML program are responsibly, efficiently, and effectively met.

OSMRE continues to improve oversight of state programs, maximize opportunities for public participation, and make oversight-related information more available to the public. OSMRE's website, located at <http://www.arcc.osmre.gov/about/states/tn.shtm>, contains information for public use and a link to TDEC. In addition to contact information, there is general information on the website about OSMRE's and TDEC's mission and program. The website gives the public immediate information regarding TDEC's AML program.

OSMRE solicited comments from Federal and state agencies concerning the FY 2016 State/Federal Performance Agreement and Reclamation Plan. OSMRE placed a copy of the agreement on the agency's webpage and a 30-day comment period began. All comments were considered during finalization of the plan and performance agreement. The Tennessee Historical Commission requested OSMRE and TDEC take into consideration the proposed project's effect on historic properties and archaeological sites through a NEPA cultural resources review and Section 106 compliance of the National Historic Preservation Act. TDEC and OSMRE assured the Commission that OSMRE followed the NEPA process as part of standard procedures. The Commission had no further concerns. Through the FY 2016 Performance Agreement, signed November 30, 2016, OSMRE and TDEC will continue to provide outreach to industry and citizens concerned about abandoned mine lands. A signed copy of the agreement is located at <http://www.arcc.osmre.gov/about/states/tn.shtm>.

### **V. Result of Fiscal Year 2016 Reviews**

OSMRE reviewed all projects seeking ATPs for FY 2016 and concluded that TDEC managed federally funded AML projects in accordance with Tennessee's approved AML program and the approved plan.

The TDEC Land Reclamation Section was awarded an AML grant for the period April 1, 2016, to March 31, 2019, in the amount of \$2,796,000 with subaccounts for non-emergency administrative costs of \$333,545; \$1,394,916 in non-water supply project costs; \$635,000 in water supply project costs; and \$432,539 in acid mine drainage (AMD) set-aside costs.

As a result of Tennessee AML's hard work and dedication, a total of 421 Government Performance and Results Act acres were reclaimed, 58 households received potable water, and 1,074 people are no longer exposed to potential safety risks from abandoned mine lands.

OSMRE will conduct a review of TDEC drawdowns and disbursements of OSMRE grant funding in early 2017. The review will include drawdowns occurring for FY 2016.

### ***AML Program Management***

KFO reviewed TDEC's completed projects for FY 2016 and concluded that TDEC:

- Obtained construction rights of entry from all known property owners;
- Conducted required OSMRE Applicant Violator System checks prior to issuing the contract in all sampled cases to verify contractors are not barred from receiving contracts;
- Obtained completed contractor affidavits certifying all materials used in construction met the technical specification standards before they approved payment for performed work;
- Initiated and completed the NEPA consultation process;
- Obtained required permits pursuant to NEPA consultation and ensured all permits were obtained prior to project construction;
- Obtained OSMRE approval to add AML features to the project work scope;
- Documented AML project construction in inspection reports from project start through project release;
- Abated all AML hazard features included in the construction contracts;
- Required use of non-invasive revegetation species included on the list agreed upon by State and Federal agencies for use on all AML projects;
- Entered AML feature units and costs data into the e-AMLIS in a timely manner; and
- Tracked administrative processes from start through their completion (such as the bid process, realty work, and e-AMLIS data entry), and captured data to support OSMRE data reporting (e.g., recording people no longer at risk).

The revised December 12, 2012, Directive AML-1, "Abandoned Mine Land Inventory," establishes that OSMRE approval is required to add any new Priority 1, 2, or 3 coal problem to e-AMLIS or to elevate a Priority 3 coal problem to a higher priority. TDEC's AML Manager notified AML staff to be aware of the new requirements in the revised OSMRE Directive AML-1 when preparing AML project documents. OSMRE also requires a signed eligibility statement for OSMRE approval. States and tribes must enter approved features into e-AMLIS prior to site reclamation for additional features found during project construction.

### ***AMD Set-Aside***

SMCRA authorizes AML funds to address remediation of AMD emanating from eligible abandoned mine sites and to pay for costs associated with program administration, planning, design, construction, and construction monitoring. The total amount of grant funds Tennessee transferred to its state AMD set-aside program account is \$432,539.00 for the FY 2016 grant.

The set-aside funding will be used to leverage matching funds from other agencies whenever possible in order to address abandoned mine land AMD emanating from the Tennessee

coalfields. The funds are maintained in a separate interest bearing Tennessee Surface Mine Reclamation Fund account established under Tennessee Code 59-8-326, which is dedicated to receive AMD set-aside funds in accordance with SMCRA Section 402 (g)(1)(D) and 30 CFR 876.12, and are used solely for AMD reclamation.

### ***AML Water Supply Projects***

TDEC provides AML funding for water supply projects that local county government public service authorities administer. AML funds are combined with funding from other Federal and State sources in order to generate sufficient funding to establish efficient, safe, and potable water supplies to households in various coalfield communities. The projects provide municipal domestic water supplies to areas where pre-SMCRA coal mining operations impacted private domestic water supplies, such as dug or drilled wells or springs. Other Federal, State, and local governmental funding is used to fund non-AML impacted areas of larger water supply projects. AML funds a portion of the cost of these water replacement projects based on the mining impacts found in ground-water quality studies. The funds are most commonly used to install water storage tanks and booster pump stations and to extend or enhance existing water trunk lines and water facilities serving AML impacted areas.

The projects improve the overall quality of life and welfare of persons living in coalfield communities. Safe and reliable water services, provided by the public service authority system extensions, replace failed or contaminated water sources and wells. The projects are compatible with comprehensive area-wide development plans. The waterlines also provide fire protection to all areas along the distribution lines and all residences in the involved communities. During FY 2016, TDEC requested ATP on one waterline project, the Tennessee Hollow Waterline Extension Project.

The Tennessee Hollow Waterline Extension Project is located in the Briceville Community in Anderson County, Tennessee where domestic water supplies have been adversely impacted by past coal mining. The project involves the extension of the public system in order to provide safe potable, reliable water to four residences and one church. This project was funded from the FY 2016 AML grant and proposes to expend \$185,000. KFO's AML GIS layer shows permitted mining occurring in the project area. The area, which lies in the Coal Creek Watershed of the Clinch River, has been subject to pre-law surface and underground coal mining. Project construction in the area is ongoing.

### ***Non-Water Supply Projects***

During this fiscal year, TDEC submitted to OSMRE two non-water project seeking ATPs, the Mossy Grove Reclamation Project and Perry Simmons Reclamation Project.

### ***Electronic AML Inventory System***

OSMRE's e-AMLIS nationally tracks all AML inventory and accomplishments. TDEC has direct access to the e-AMLIS, which allows them to update AML problem data in the system. OSMRE's Directive AML-1, "Abandoned Mine Land Inventory," revised December 12, 2012, implements program changes and modifications brought about by the Tax Relief and Health Care Act of 2006, which included the 2006 SMCRA amendments. The revised directive also

reflects changes to the OSMRE e-AMLIS. States and tribes are responsible for implementing procedures consistent with OSMRE's Directive AML-1 in order to maintain the Inventory for their state or tribe.

Because OSMRE's Directive AML-1 eliminated the use of paper forms, TDEC must enter all required supporting documentation to meet the requirements for completing a Program Area Description into the e-AMLIS. A complete submission includes the information entered into the e-AMLIS data fields, Priority Documentation Forms, cost information, maps, and any supporting narratives. The revised Directive establishes that OSMRE's approval is required to add any new Priority 1, 2, or 3 coal problem feature to e-AMLIS or to elevate a Priority 3 coal problem to a higher priority. It also establishes that a signed eligibility statement for OSMRE approval is required, and the approved features must be entered into e-AMLIS prior to reclamation for additional features found during project construction. TDEC advised its AML staff of the requirements of the revised Directive. The e-AMLIS allows TDEC and local OSMRE management to process new AML problems and update existing problems in a quicker and more streamlined manner, promoting accuracy and facilitating OSMRE's ATP approval process.

**Knoxville Field Office  
Annual Evaluation Report  
Fiscal Year 2016**

**APPENDIX 1**

**Summary of Core Data to Characterize the Regulatory Program**

The following tables and charts present data pertinent to mining operations and Federal regulatory activities within Tennessee and Georgia. Unless otherwise specified, the reporting period for the data contained in the tables is October 1, 2015, through September 30, 2016. Additional data used by KFO in its evaluation of performance is available for review in the evaluation files maintained by KFO.

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Table 2A	Number of Initial Program Sites and Permanent Program Permits in Tennessee (2013-2016)
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Table 12B	Lands Unsuitable Acres Declared Unsuitable (2013-2016)

TABLE 1

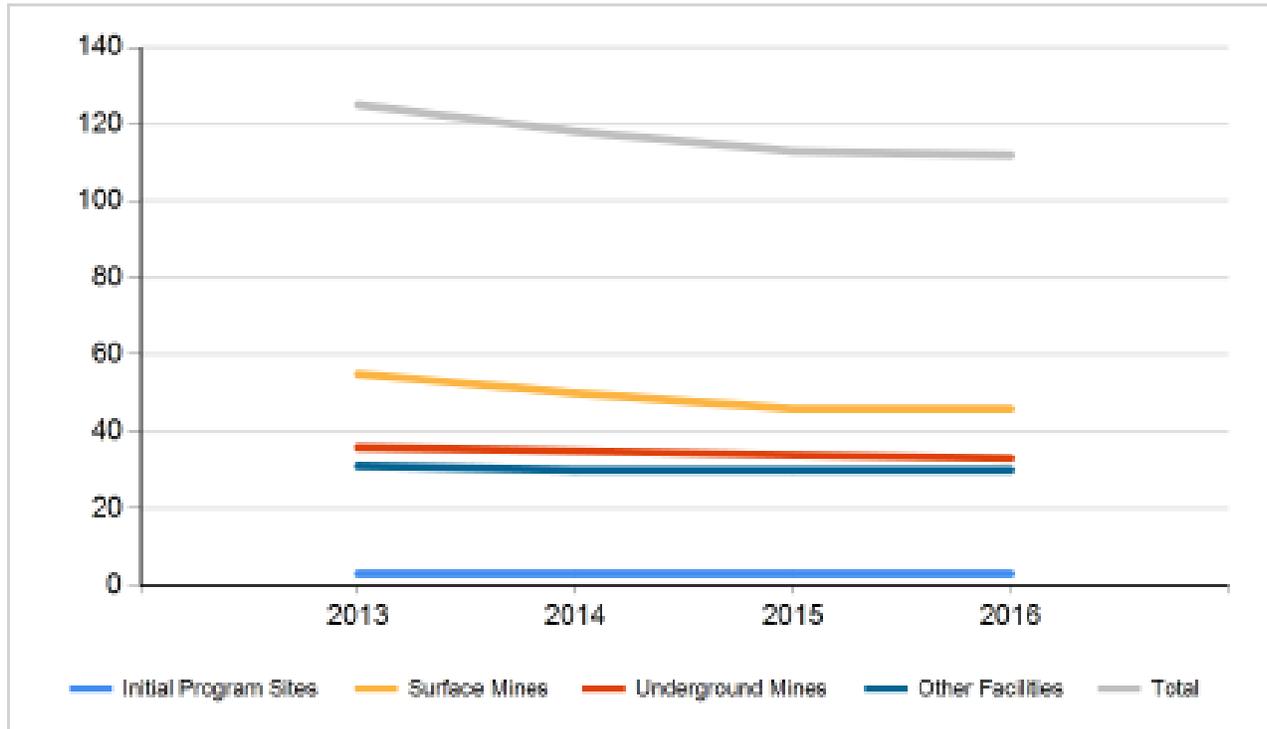
COAL PRODUCED FOR SALE , TRANSFER, OR USE <sup>A</sup>			
(Millions of short tons)			
Calendar Year	Surface Mines	Underground Mines	Total
2012	0.6	0.6	1.2
2013	0.5	0.7	1.2
2014	0.1	0.6	0.7
2015	0.3	0.5	0.8

<sup>A</sup> 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 2

PERMANENT PROGRAM PERMITS, INITIAL PROGRAM SITES, INSPECTABLE UNITS, AND EXPLORATION															
Mines and Other Facilities	Numbers of Permanent Program Permits and Initial Program Sites									Area in Acres <sup>e</sup>					
	Permanent Program Permits				Initial Program Sites					Insp. Units <sup>d</sup>	Permanent Program Permits (Permit Area)		Initial Program Sites		Total Area
	Active	Inactive	Abandoned	Total	Active	Inactive	Abandoned	Total	Federal Lands		State/Tribal and Private Lands	Federal Lands	State/Tribal and Private Lands		
	Surface Mines	32	9	5	46	2	0	0	2	48	201	22,939	0	138	23,278
Underground Mines	14	14	5	33	0	0	0	0	33	144	838	0	0	982	
Other Facilities	18	11	1	30	1	0	0	1	31	0	1,575	0	0	1,575	
<b>Total</b>	<b>64</b>	<b>34</b>	<b>11</b>	<b>109</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>119</b>	<b>345</b>	<b>25,352</b>	<b>0</b>	<b>138</b>	<b>25,835</b>	
Permanent Program Permits and Initial Program Sites (Number on Federal Lands: 4)				Total Number:		112			Average Acres per Site:				230.67		
Average Number of Permanent Program Permits and Initial Program Sites per Inspectable Unit (IU):				Total Number:		1.00			Average Acres per IU:				230.67		
Permanent Program Permits in Temporary Cessation:				Total Number:		20			Number More than 3 Years:				17		
<b>EXPLORATION SITES</b>				Total Number of Sites		Sites on Federal Lands <sup>f</sup>			Exploration Inspectable Units						
Exploration Sites with Permits:				0		0			0						
Exploration Sites with Notices:				7		0			7						
<sup>d</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>e</sup> Total Inspectable Units calculation includes Exploration Sites Inspectable Units <sup>f</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>g</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															

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



**TABLE 2A**

<b>NUMBER OF INITIAL PROGRAM SITES AND PERMANENT PROGRAM PERMITS</b>					
<b>Year</b>	<b>Initial Program Sites</b>	<b>Permanent Program Permits</b>			<b>Total</b>
		<b>Surface Mines</b>	<b>Underground Mines</b>	<b>Other Facilities</b>	
2013	3	55	36	31	125
2014	3	50	35	30	118
2015	3	46	34	30	113
2016	3	46	33	30	112

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									Area in Acres <sup>1</sup>				
	Permanent Program Permits				Initial Program Sites					Permanent Program Permits (Permit Area)		Initial Program Sites		
	Active	Inactive	Aban- doned	Total	Active	Inactive	Aban- doned	Total	Insp. Units <sup>1, 2</sup>	Federal Lands	State/ Tribal and Private Lands	Federal Lands	State/ Tribal and Private Lands	Total Area
Surface Mines	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Underground Mines	0	0	0	0	0	0	1	1	1	0	0	0	10	10
Other Facilities	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>10</b>
Permanent Program Permits and Initial Program Sites (Number on Federal Lands: 0)				Total Number:		1			Average Acres per Site:				10.00	
Average Number of Permanent Program Permits and Initial Program Sites per Inspectable Unit (IU):				Total Number:		1.00			Average Acres per IU:				10.00	
Permanent Program Permits in Temporary Cessation:				Total Number:		0			Number More than 3 Years:				0	
<b>EXPLORATION SITES</b>				Total Number of Sites				Sites on Federal Lands <sup>4</sup>			Exploration Inspectable Units			
Exploration Sites with Permits:				0				0			0			
Exploration Sites with Notices:				0				0			0			

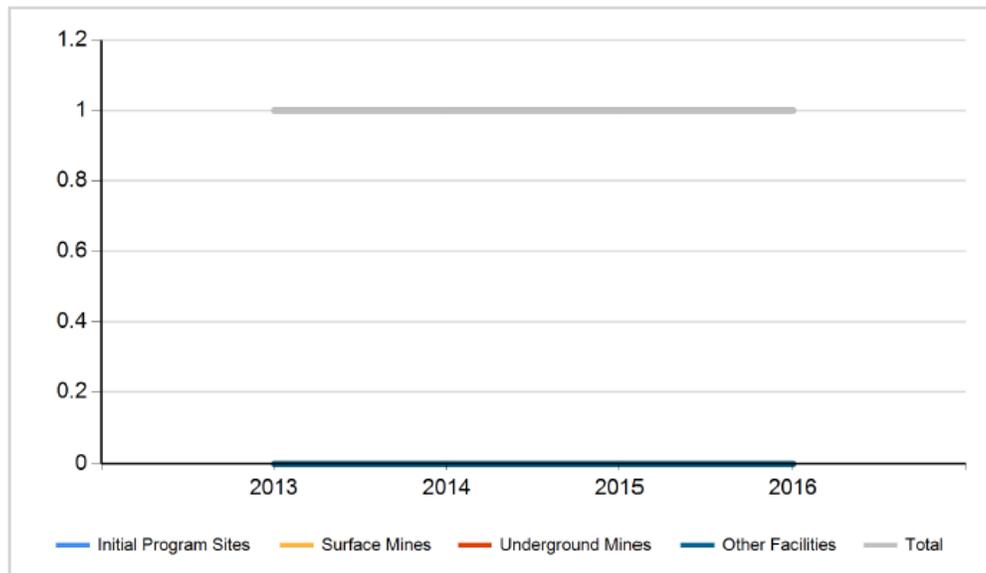
<sup>1</sup>An Inspectable Unit may include multiple small and neighboring Permanent Program Permits or Initial Program Sites that have been grouped together as one Inspectable Unit, or conversely, an Inspectable Unit may be one of multiple Inspectable Units within a Permanent Program Permit.

<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

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



**TABLE 2A**

<b>NUMBER OF INITIAL PROGRAM SITES AND PERMANENT PROGRAM PERMITS</b>					
<b>Year</b>	<b>Initial Program Sites</b>	<b>Permanent Program Permits</b>			<b>Total</b>
		<b>Surface Mines</b>	<b>Underground Mines</b>	<b>Other Facilities</b>	
2013	1	0	0	0	1
2014	1	0	0	0	1
2015	1	0	0	0	1
2016	1	0	0	0	1

Tennessee

EY 2016, ending September 30, 2016

**TABLE 3**

<b>PERMITS ALLOWING SPECIAL CATEGORIES OF MINING</b>			
<b>Special Category of Mining</b>	<b>30 CFR Citation Defining Permits Allowing Special Mining Practices</b>	<b>Numbers of Permits</b>	
		<b>Issued During EY</b>	<b>Total Active and Inactive Permits</b>
Experimental Practice	785.13(d)	0	0
Mountaintop Removal Mining	785.14(c)(5)	0	0
Steep Slope Mining	785.15(c)	0	0
AOC Variances for Steep Slope Mining	785.16(b)(2)	0	0
Prime Farmlands Historically Used for Cropland	785.17(e)	0	0
Contemporaneous Reclamation Variances	785.18(c)(9)	0	0
Mining on or Adjacent to Alluvial Valley Floors	785.19(e)(2)	0	0
Auger Mining	785.20(c)	0	0
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	0
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	0

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	1	0	0	0	0	0	0	0	0	1	0	0
Renewals	3	0		1	0		11	4		15	4	
Transfers, sales, and assignments of permit rights	0	0		1	0		3	0		4	0	
Small operator assistance	0	0		0	0		0	0		0	0	
Exploration permits										0	0	
Exploration notices <sup>2</sup>											0	
Revisions that do not add acreage to the permit area	22	24		2	2		4	4		28	30	
Revisions that add acreage to the permit area but are not incidental boundary revisions	0	0	0	0	0	0	0	0	0	0	0	0
Incidental boundary revisions	3	3	11	0	1	0	1	0	0	4	4	11
<b>Totals</b>	<b>29</b>	<b>27</b>	<b>11</b>	<b>4</b>	<b>3</b>	<b>0</b>	<b>19</b>	<b>8</b>	<b>0</b>	<b>52</b>	<b>38</b>	<b>11</b>
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:	648.0	
Permits in temporary cessation							Notices received:	1		Terminations:	1	
Midterm permit reviews completed							Number:	0				
<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.												

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	1	1	0	0	1	0	0	0	0	0	0	0	0				
Land Stability	0	0	0	0	0	0	0	0	0	0	0	0	0				
Hydrology	0	0	0	0	0	0	0	0	0	0	0	0	0				
Encroachment	0	0	0	0	0	0	0	0	0	0	0	0	0				
Other	0	0	0	0	0	0	0	0	0	0	0	0	0				
<b>Total</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>				
Total Number of Inspectable Units <sup>4</sup> :				121													
Inspectable Units with one or more off-site impacts:				1													
Exploration Inspectable Units with one or more off-site impacts <sup>2</sup> :				0													
Inspectable Units free of off-site impacts:				120					% of Inspectable Units free of off-site impacts <sup>4</sup> :				99				
<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	0	0	0	0	0	0	0	0	0	0	0	0	0				
Hydrology	0	0	0	0	0	0	0	0	0	0	0	0	0				
Encroachment	0	0	0	0	0	0	0	0	0	0	0	0	0				
Other	0	0	0	0	0	0	0	0	0	0	0	0	0				
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>				
Total Number of Inspectable Units <sup>3</sup> :				4													
Inspectable Units with one or more off-site impacts:				0													
Inspectable Units free of off-site impacts:				4					% of Inspectable Units free of off-site impacts <sup>4</sup> :				100				
<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																	

TABLE 5  
(Continued)

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	1	1	0	0	1	0	0	0	0	0	0	0	0
Land Stability	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydrology	0	0	0	0	0	0	0	0	0	0	0	0	0
Encroachment	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Total Number of Inspectable Units <sup>5</sup> :				125									
Inspectable Units with one or more off-site impacts:				1									
Exploration Inspectable Units with one or more off-site impacts:				0									
Inspectable Units free of off-site impacts:				124									
										% of Inspectable Units free of off-site impacts <sup>4</sup> :			99
<sup>4</sup> % of Inspectable Units free of off-site impacts is based on the number of Inspectable Units during the Evaluation Year. The number of Inspectable Units may vary during the Evaluation Year.													
<sup>5</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 and (3) the number bond forfeiture sites that were reclaimed during the Evaluation Year and (4) the number of bond forfeiture sites that were unreclaimed at the end of the Evaluation Year.													

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	0	0	0	0	0	0	0	0	0	0	0	0	0
Land Stability	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydrology	0	0	0	0	0	0	0	0	0	0	0	0	0
Encroachment	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Total Number of Inspectable Units <sup>1</sup> :				1									
Inspectable Units with one or more off-site impacts:				0									
Exploration Inspectable Units with one or more off-site impacts <sup>2</sup> :				0									
Inspectable Units free of off-site impacts:				1									
										% of Inspectable Units free of off-site impacts <sup>4</sup> :		100	
<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													
<b>OFF-SITE IMPACTS AT BOND FORFEITURE SITES</b>													
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	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydrology	0	0	0	0	0	0	0	0	0	0	0	0	0
Encroachment	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Total Number of Inspectable Units <sup>3</sup> :				0									
Inspectable Units with one or more off-site impacts:				0									
Inspectable Units free of off-site impacts:				0									
										% of Inspectable Units free of off-site impacts <sup>4</sup> :		0	
<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													

TABLE 5  
(Continued)

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	0	0	0	0	0	0	0	0	0	0	0	0	0
Land Stability	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydrology	0	0	0	0	0	0	0	0	0	0	0	0	0
Encroachment	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Total Number of Inspectable Units <sup>5</sup> :				1									
Inspectable Units with one or more off-site impacts:				0									
Exploration Inspectable Units with one or more off-site impacts:				0									
Inspectable Units free of off-site impacts:				1									
				% of Inspectable Units free of off-site impacts <sup>6</sup> :									100
<sup>4</sup> % of Inspectable Units free of off-site impacts is based on the number of Inspectable Units during the Evaluation Year. The number of Inspectable Units may vary during the Evaluation Year.													
<sup>5</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 and (3) the number bond forfeiture sites that were reclaimed during the Evaluation Year and (4) the number of bond forfeiture sites that were unreclaimed at the end of the Evaluation Year.													

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  Total Acres Released in Approved Phase I Releases	Phase II Releases		Phase III Releases			Total Acres Released During the EY	
	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		
191		0			0	Phase I	191
	204			457		Phase II	661
			648			Phase III	648
Number of Permanent Program Permits with Jurisdiction Terminated Under Phase III Bond Release During the Evaluation Year					1	Other Releases - Acres	
Initial Program Sites with Jurisdiction Terminated During the Evaluation Year					0	Administrative Adjustments	0
Number of Inspectable Units Removed					6	Bond Forfeiture	0
Areas of Permits Bonded for Disturbance by Surface Coal Mining and Reclamation Operations							

	Total Acres at Start of EY	Total Acres at End of EY	Change in Acres During EY
New Area Bonded for Disturbance			11
Total Area Bonded for Disturbance	19,832	19,183	(649)
Area Bonded for Disturbance without Phase I Bond Release	16,706	16,706	0
Area Bonded for Disturbance for which Phase I Bond Release Has Been Approved	5,213	4,756	(457)
Area Bonded for Disturbance for which Phase II Bond Release Has Been Approved	2,471	2,458	(13)
Area Bonded for Disturbance with Bonds Forfeited During Evaluation Year			12
Area Bonded for Remining	0	0	0
Areas of Permits Disturbed by Surface Coal Mining and Reclamation Operations			
Disturbed Area	13,508	12,792	N/A

**TABLE 7**

<b>BOND FORFEITURE ACTIVITY (Permanent Program Permits)</b>			
Bond Forfeiture and Reclamation Activity	Number of Sites	Dollars	Acres
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>	2		738
Sites with bonds forfeited and collected during the current Evaluation Year	2	17,900	12
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	0		0
Sites with bonds forfeited and collected that were un-reclaimed at the end of the current Evaluation Year <sup>2</sup>	4		750
Sites with bonds forfeited but un-collected at the end of the current Evaluation Year	0		0
<b>Forfeiture Sites with Long-Term Water Pollution</b>			
Bonds forfeited, lands reclaimed, but water pollution is still occurring	2		
Bonds forfeited, lands reclaimed, and water treatment is ongoing	1		
<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>	0		0
Sites where surety/other party agreed during the current Evaluation Year to do reclamation	0		0
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>	0		0
<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.			

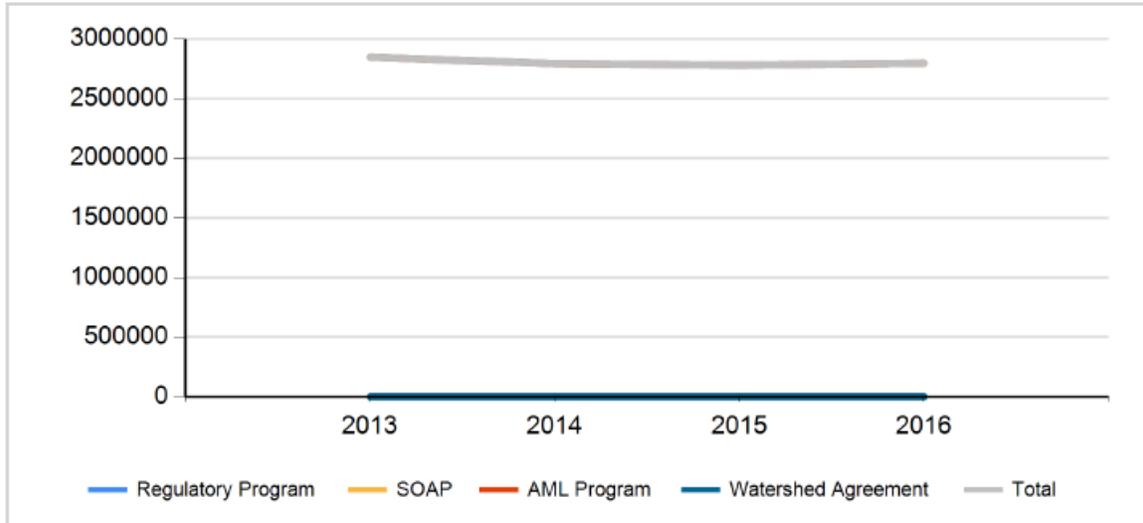
**TABLE 8**

<b>REGULATORY AND AML PROGRAMS STAFFING</b>	
<b>Function</b>	<b>Number of FTEs</b>
<b>Regulatory Program</b>	
Permit Review and Maintenance	13.00
Inspection	8.00
Other (supervisory, clerical, administrative, fiscal, personnel, etc.)	7.00
<b>Regulatory Program Total</b>	28.00
<b>AML Program Total</b>	1.00
<b>TOTAL</b>	29.00

**TABLE 9**

<b>FUNDS GRANTED TO STATE OR TRIBE BY OSM (Actual Dollars Rounded to the Nearest Dollar)</b>			
<b>Type of Funding</b>	<b>Federal Funds Awarded</b>	<b>Total Program Cost</b>	<b>Federal Funds Awarded as a Percentage of Total Program Costs</b>
<b>Regulatory Funding</b>			
Administration and Enforcement Grant	0		
Other Regulatory Funding, if applicable	0		
<b>Subtotal (Regulatory Funding)</b>	0	0	
<b>Small Operator Assistance Program Grant Funding</b>	0	0	
<b>Abandoned Mine Land Reclamation Funding</b>	2,796,000	2,796,000	100
<b>Watershed Cooperative Agreement Program</b>	0	0	
<b>TOTAL</b>	2,796,000		

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



**TABLE 9A**

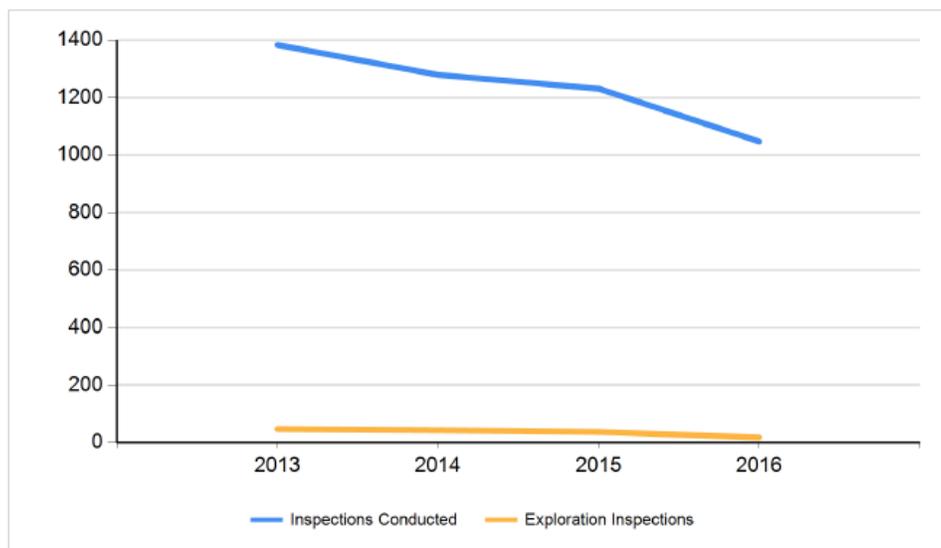
<b>FUNDS GRANTED TO STATE OR TRIBE BY OSM</b>				
<b>Year</b>	<b>Regulatory Program</b>	<b>SOAP</b>	<b>AML Program</b>	<b>Total</b>
2013	0	0	2,847,000	2,847,000
2014	0	0	2,792,597	2,792,597
2015	0	0	2,781,000	2,781,000
2016	0	0	2,796,000	2,796,000

TABLE 10

STATE INSPECTION ACTIVITY INSPECTABLE UNITS FOR WHICH STATE MET REQUIRED INSPECTION FREQUENCY ON AN INSPECTABLE UNIT-BY-INSPECTABLE UNIT BASIS <sup>4</sup>												
Inspectible 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
<b>COAL MINES AND FACILITIES</b>												
Active	67	268	536	270	568	67	100	67	100	67	67	100
Inactive	34	136	0	138	25	34	100	34	100	34	34	100
Abandoned	11	11	0	20	26	11	100	11	100	11	11	100
<b>TOTALS <sup>3</sup></b>	<b>112</b>	<b>415</b>	<b>536</b>	<b>428</b>	<b>619</b>	<b>112</b>	<b>100</b>	<b>112</b>	<b>100</b>	<b>112</b>	<b>112</b>	<b>100</b>
<b>Coal Exploration Activities <sup>4</sup></b>		<b>Complete Inspections</b>					<b>Partial Inspections</b>					
Exploration sites with permits		0					0					
Exploration sites with notices		12					6					

<sup>4</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

CHART 10A HISTORICAL TRENDS  
STATE OR TRIBAL INSPECTION ACTIVITY



**TABLE 10A**

STATE OR TRIBAL INSPECTION ACTIVITY		
Year	Inspections Conducted	Exploration Inspections
2013	1383	47
2014	1279	43
2015	1231	37
2016	1047	18

Georgia

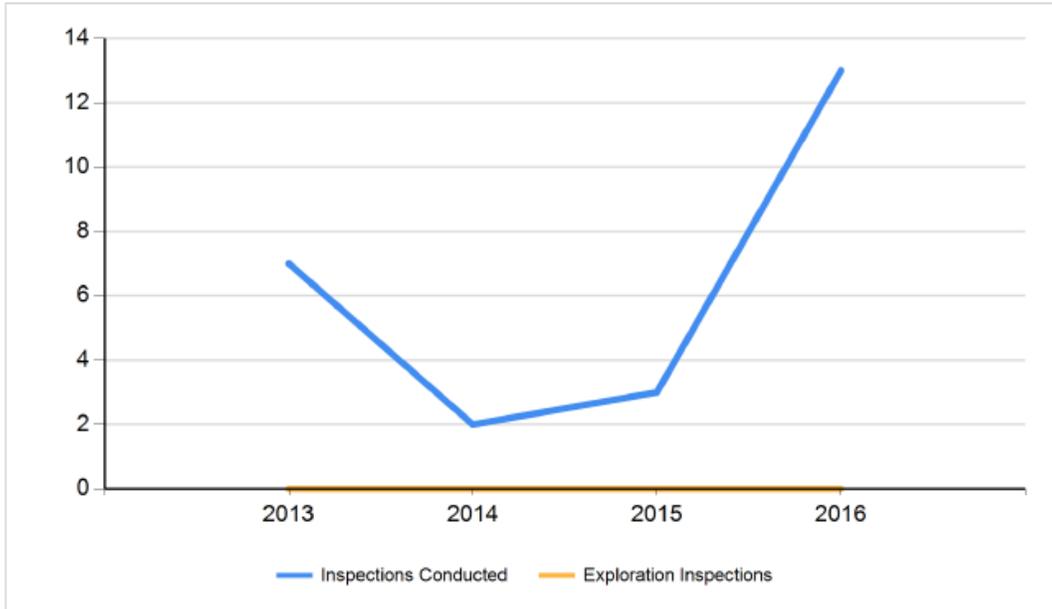
EY 2016, ending September 30, 2016

**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
<b>COAL MINES AND FACILITIES</b>												
Active	0	0	0	0	0	0	0	0	0	0	0	0
Inactive	0	0	0	0	0	0	0	0	0	0	0	0
Abandoned	1	1	0	4	9	1	100	1	100	1	1	100
<b>TOTALS <sup>3</sup></b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>4</b>	<b>9</b>	<b>1</b>	<b>100</b>	<b>1</b>	<b>100</b>	<b>1</b>	<b>1</b>	<b>100</b>
<b>Coal Exploration Activities <sup>4</sup></b>		<b>Complete Inspections</b>					<b>Partial Inspections</b>					
Exploration sites with permits		0					0					
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

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



**TABLE 10A**

<b>STATE OR TRIBAL INSPECTION ACTIVITY</b>		
<b>Year</b>	<b>Inspections Conducted</b>	<b>Exploration Inspections</b>
2013	7	0
2014	2	0
2015	3	0
2016	13	0

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	9	10
Failure-to-Abate Cessation Order	0	0
Imminent Harm Cessation Order	1	1

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

EY 2016, ending September 30, 2016

CHART 11A HISTORICAL TRENDS  
 STATE OR TRIBAL ENFORCEMENT ACTIVITY

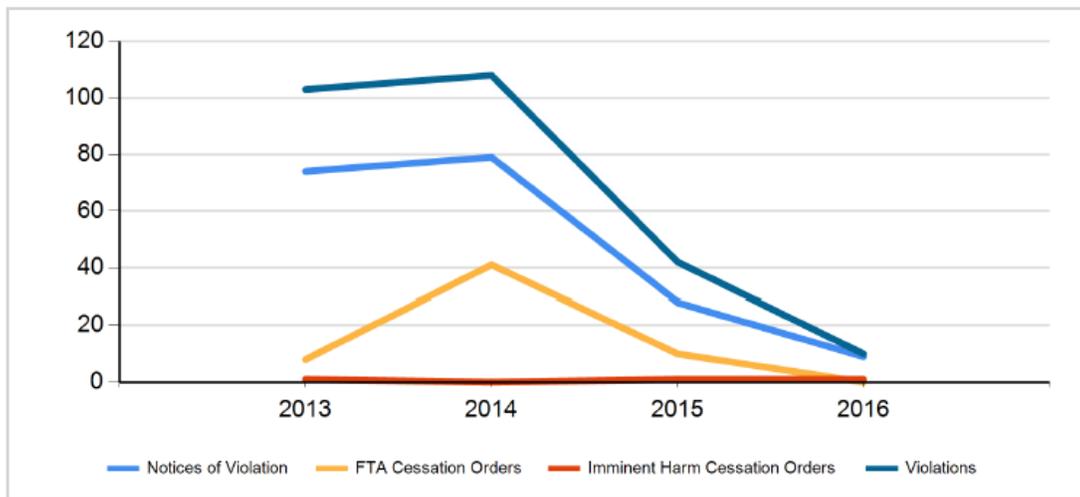


TABLE 11A

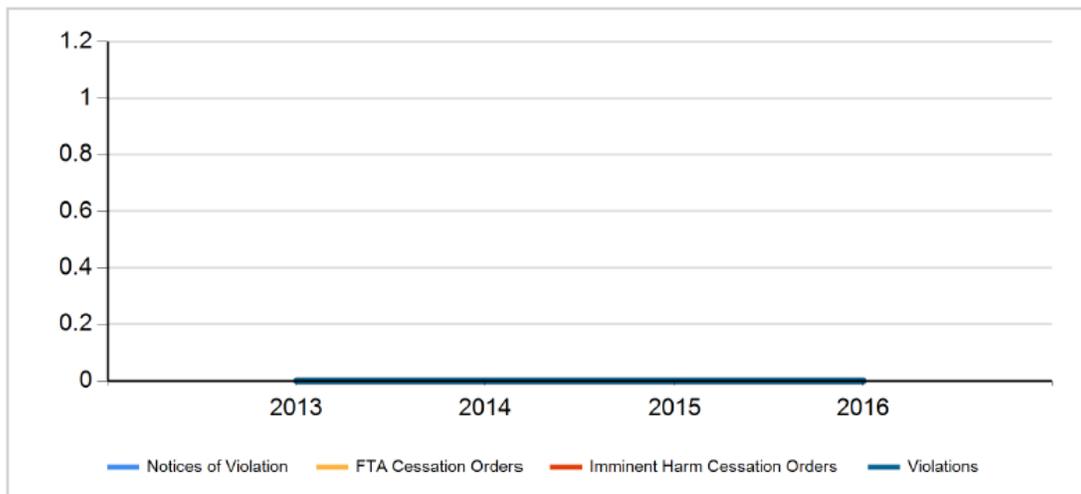
STATE OR TRIBAL ENFORCEMENT ACTIVITY				
Year	Notices of Violation	Violations	FTA Cessation Orders	Imminent Harm Cessation Orders
2013	74	103	8	1
2014	79	108	41	0
2015	28	42	10	1
2016	9	10	0	1

**TABLE 11**

<b>STATE OR TRIBAL ENFORCEMENT ACTIVITY</b>		
Type of Enforcement Action	Number of Actions <sup>1</sup>	Number of Violations <sup>1</sup>
Notice of Violation	0	0
Failure-to-Abate Cessation Order	0	0
Imminent Harm Cessation Order	0	0

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

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



**TABLE 11A**

<b>STATE OR TRIBAL ENFORCEMENT ACTIVITY</b>				
Year	Notices of Violation	Violations	FTA Cessation Orders	Imminent Harm Cessation Orders
2013	0	0	0	0
2014	0	0	0	0
2015	0	0	0	0
2016	0	0	0	0

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

CHART 12A HISTORICAL TRENDS  
 LANDS UNSUITABLE ACTIVITY

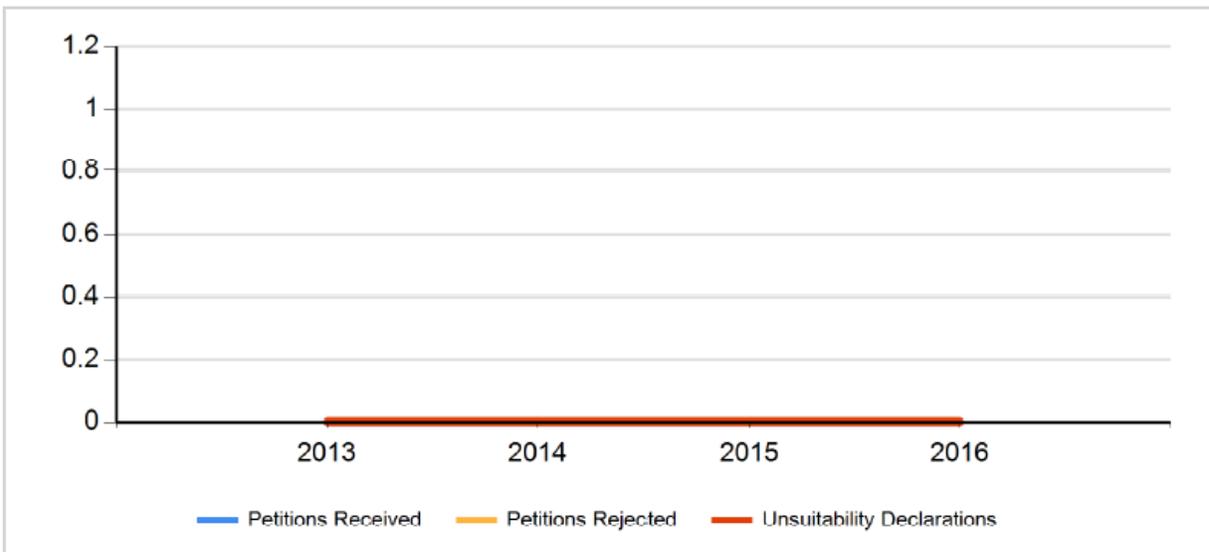
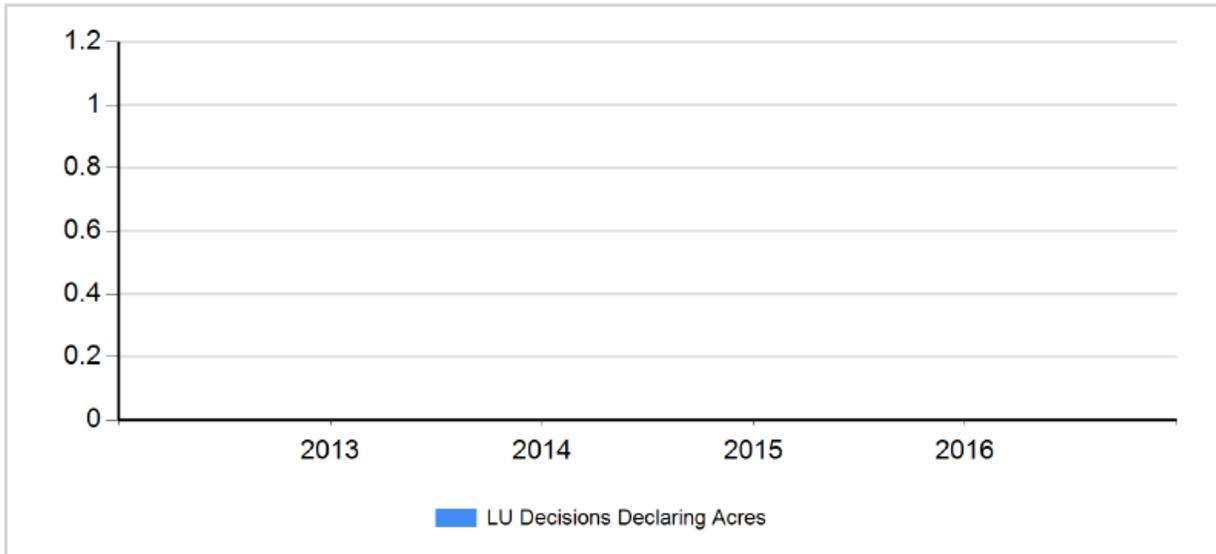


TABLE 12A

LANDS UNSUITABLE ACTIVITY			
Year	Petitions Received	Petitions Rejected	Unsuitability Declarations
2013	0	0	0
2014	0	0	0
2015	0	0	0
2016	0	0	0

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



**TABLE 12B**

<b>ACRES DECLARED UNSUITABLE</b>	
<b>Year</b>	<b>Acres Declared Unsuitable</b>
2013	0.0
2014	0.0
2015	0.0
2016	0.0

**Knoxville Field Office  
Annual Evaluation Report  
Fiscal Year 2016**

**APPENDIX 2**

**Summary of Core Data to Characterize the AML Program**

The following tables present summary data pertinent to mining operations and regulatory activities under the Tennessee regulatory program. Unless otherwise specified, the reporting period for the data contained in the tables is the Fiscal Year. Other data and information used by OSMRE in its evaluation of Tennessee's performance is available for review in the evaluation file maintained by KFO.

Because of the enormous variations from state to state and tribe to tribe in the number, size, and type of coal mining operations and the differences between state and tribal programs, the summary data should not be used to compare one state or tribe to another.

List of Tables

Table 1	Tennessee Status of AML Inventory
Table 2	Tennessee Accomplishments in Eliminating Health and Safety Hazards Related to Past Mining
Table 3	Tennessee Accomplishments in Eliminating Environmental Problems Related to Past Mining
Table 4	Tennessee Accomplishments in Public Well-Being Enhancement
Table 5	Tennessee Partnership Financial Resources Dedicated to Protecting the Public from Adverse Effects of Past Mining
Table 6	Tennessee Reclamation Projects
Table 7	Tennessee AML Program Grant Awards and Staffing

**Table 1 – (State/Tribe) Status of AML Inventory**  
 (All Priority 1, 2, and 3 Hazards as of September 30, 2016)

	High Priority		Elevated Priority 3	Stand Alone Priority 3 (not adjacent or in conjunction w/ P1&P3)	Total
	Priority 1	Priority 2			
<b>UNFUNDED</b>					
<b>GPR Acres</b>	1.00	1,101.22	7.00	8,156.30	9,265.52
<b>Dollars</b>	300,000.00	9,947,759.00	105,000.00	27,051,255.00	37,404,014.00
<b>FUNDED</b>					
<b>GPR Acres</b>	0	312.40	34.70	0	347.10
<b>Dollars</b>	0.00	1,531,150.00	133,700.00	0.00	1,664,850.00
<b>COMPLETED</b>					
<b>GPR Acres</b>	265.23	3,497.10	379.41	1,715.90	5,857.64
<b>Dollars</b>	4,448,574.30	20,899,487.82	1,725,748.17	8,982,576.00	32,056,386.29

**Table 2 – (State/Tribe)**  
**Accomplishments in Eliminating Health and Safety Hazards Related to Past Mining**  
**Priority 1 and 2 Hazards**  
(As of September 30, 2016)

Unfunded			Funded			Completed			Total		
Units	GPRA	Cost	Unit	GPRA	Costs	Unit	GPRA	Costs	Unit	GPRA	Costs
<b>Clogged Stream Lands (Acres)</b>											
0.00	0.00	0.00	0.00	0.00	0.00	147.00	147.00	91,214.00	147.00	147.00	91,214.00
<b>Clogged Streams (Miles)</b>											
7.00	35.00	370,000.00	0.00	0.00	0.00	1.80	9.00	404,082.00	8.80	44.00	774,082.00
<b>Dangerous Highwalls (Feet)</b>											
19,758.00	282.22	1,183,950.00	14,861.00	212.30	1,176,225.00	88,712.90	1,267.53	6,898,344.68	123,331.90	1,762.05	9,258,519.68
<b>Dangerous Impoundments (Count)</b>											
1.00	5.00	1,000.00	0.00	0.00	0.00	3.00	15.00	48,000.00	4.00	20.00	49,000.00
<b>Dangerous Piles &amp; Embankments (Acres)</b>											
82.50	82.50	570,000.00	0.00	0.00	0.00	534.30	534.30	4,056,039.00	616.80	616.80	4,626,039.00
<b>Dangerous Slides (Acres)</b>											
72.00	72.00	3,450,000.00	0.00	0.00	0.00	49.50	49.50	1,696,784.30	121.50	121.50	5,146,784.30
<b>Hazardous Equip &amp; Facilities (Count)</b>											
30.00	3.00	529,000.00	0.00	0.00	0.00	31.00	3.10	318,767.00	61.00	6.10	847,767.00
<b>Hazardous Water Bodies (Count)</b>											
22.00	110.00	783,100.00	14.00	70.00	145,925.00	121.00	605.00	3,605,838.49	157.00	785.00	4,534,863.49
<b>Industrial/Residential Waste (Acres)</b>											
3.00	3.00	15,000.00	0.00	0.00	0.00	17.00	17.00	161,972.00	20.00	20.00	176,972.00
<b>Polluted Water: Agricultural &amp; Industrial (Count)</b>											
9.00	45.00	585,000.00	0.00	0.00	0.00	7.00	35.00	783,347.00	16.00	80.00	1,368,347.00
<b>Polluted Water: Human Consumption (Count)</b>											
86.00	430.00	1,455,029.00	6.00	30.00	205,000.00	204.00	1,020.00	4,882,594.65	296.00	1,480.00	6,542,623.65
<b>Portals (Count)</b>											
323.00	32.30	944,680.00	0.00	0.00	0.00	193.00	19.30	621,479.00	516.00	51.60	1,566,159.00
<b>Subsidence (Acres)</b>											
0.00	0.00	0.00	0.00	0.00	0.00	6.00	6.00	120,783.00	6.00	6.00	120,783.00
<b>Surface Burning (Acres)</b>											
1.00	1.00	300,000.00	0.00	0.00	0.00	27.50	27.50	1,507,095.00	28.50	28.50	1,807,095.00
<b>Vertical Openings (Count)</b>											
12.00	1.20	61,000.00	1.00	0.10	4,000.00	11.00	1.10	151,722.00	24.00	2.40	216,722.00
<b>Total</b>	<b>1,102.22</b>	<b>10,247,759.00</b>		<b>312.40</b>	<b>1,531,150.00</b>		<b>3,756.33</b>	<b>25,348,062.12</b>		<b>5,170.95</b>	<b>37,126,971.12</b>

**Table 3 – (State/Tribe)**  
**Accomplishments in Eliminating Environmental Problems Related to Past Mining**  
**Priority 3 and SMCRA section 403(b) Hazards**  
(As of September 30, 2016)

Unfunded			Funded			Completed			Total		
Unit	GPRA	Cost	Unit	GPRA	Costs	Unit	GPRA	Costs	Unit	GPRA	Costs
<b>Bench (Acres)</b>											
1,839.00	1,839.00	4,411,719.00	0.00	0.00	0.00	76.00	76.00	359,275.00	1,915.00	1,915.00	4,770,994.00
<b>Equipment Facility (Count)</b>											
20.00	2.00	158,500.00	0.00	0.00	0.00	15.00	1.50	56,055.00	35.00	3.50	214,555.00
<b>Gobs (Acres)</b>											
118.50	118.00	344,603.00	0.00	0.00	0.00	68.50	69.00	471,931.00	187.00	187.00	816,534.00
<b>Haul Road (Acres)</b>											
461.00	461.00	749,057.00	0.00	0.00	0.00	8.00	8.00	48,403.00	469.00	469.00	797,460.00
<b>High Wall (Feet)</b>											
13,858.00	198.00	2,369,000.00	2,405.00	34.40	128,000.00	39,888.30	569.74	1,717,258.00	56,151.30	802.14	4,214,258.00
<b>Industrial/Residential Waste (Acres)</b>											
2.00	2.00	5,000.00	0.00	0.00	0.00	6.20	6.20	6,017.63	8.20	8.20	11,017.63
<b>Mine Opening (Count)</b>											
43.00	4.30	124,001.00	0.00	0.00	0.00	3.00	0.30	9,500.00	46.00	4.60	133,501.00
<b>Other ()</b>											
6.00	0.00	73,501.00	0.00	0.00	0.00	1.00	0.00	48,025.00	7.00	0.00	121,526.00
<b>Pits (Acres)</b>											
1,153.50	1,153.50	4,879,353.00	0.30	0.30	5,700.00	191.07	190.27	1,419,803.00	1,344.87	1,344.07	6,304,856.00
<b>Slump (Acres)</b>											
0.00	0.00	0.00	0.00	0.00	0.00	4.00	4.00	136,870.00	4.00	4.00	136,870.00
<b>Slurry (Acres)</b>											
1.00	1.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	1.00	1,500.00
<b>Spoil Area (Acres)</b>											
4,379.50	4,379.50	12,315,156.00	0.00	0.00	0.00	1,169.20	1,169.30	6,027,169.54	5,548.70	5,548.80	18,342,325.54
<b>Water Problems (Gallons)</b>											
1,739.00	5.00	1,724,865.00	0.00	0.00	0.00	361.00	1.00	408,017.00	2,100.00	6.00	2,132,882.00
<b>Total</b>											
	8,163.30	27,156,255.00		34.70	133,700.00		2,095.31	10,708,324.17		10,293.31	37,998,279.17

**Table 4 – (State/Tribe) Public Well-Being Enhancement**  
(All Priority 1, 2, 3 AML projects completed during FY 2016)

PAD Number	Problem Type(s) Reclaimed	Project Name	Cost	GPRA Acres	Number of People with Reduced Exposure Potential
TN000045	SA	Rocky River 2	\$13,608.00	4	54
TN000045	H	Rocky River 2	\$60,040.00	21.2	54
TN000045	HWB	Rocky River 2	\$6,995.00	10	54
TN000045	DH	Rocky River 2	\$16,630.00	4.4	54
TN000045	H	Rocky River 2	\$34,365.00	12.1	54
TN000045	PI	Rocky River 2	\$2,875.00	0.15	54
TN000045	SA	Rocky River 2	\$20,412.00	6	54
TN000045	DP	Rocky River 2	\$1,002.63	1	54
TN000046	H	Rocky River 2	\$109,652.00	38.6	54
TN000046	PI	Rocky River 2	\$31,054.00	3.42	54
TN000046	SA	Rocky River 2	\$23,403.00	9	54
TN000046	DH	Rocky River 2	\$272,079.00	31.2	54
TN000046	HWB	Rocky River 2	\$103,529.60	45	54
TN000046	H	Rocky River 2	\$64,508.00	5.7	54
TN000046	PI	Rocky River 2	\$23,630.00	1	54
TN000046	SA	Rocky River 2	\$73,294.97	28	54
TN000097	PWHC	Wooldridge Waterline Extension	\$78,000.00	85	128
TN000166	PWHC	Adams Hollow Waterline Extension	\$510,864.00	115	82

**Table 5 – (State/Tribe) – Partnership Financial Resources Dedicated to Protecting the Public from Adverse Effects of Past Mining**  
(AML projects completed during FY 2016)

PAD Number	Project Name	SMCRA Program Funding Source	Total SMCRA Funding	Alternate Non-SMCRA Funding Source	Total Alternate Non-Funding
TN000045	Rocky River 2	SGA	\$13,608.00	Program	\$0.00
TN000045	Rocky River 2	SGA	\$60,040.00	Program	\$0.00
TN000045	Rocky River 2	SGA	\$6,995.00	Program	\$0.00
TN000045	Rocky River 2	SGA	\$16,630.00	Program	\$0.00
TN000045	Rocky River 2	SGA	\$34,365.00	Program	\$0.00
TN000045	Rocky River 2	SGA	\$2,875.00	Program	\$0.00
TN000045	Rocky River 2	SGA	\$20,412.00	Program	\$0.00
TN000045	Rocky River 2	SGA	\$1,002.63	Program	\$0.00
TN000046	Rocky River 2	SGA	\$109,652.00	Program	\$0.00
TN000046	Rocky River 2	SGA	\$31,054.00	Program	\$0.00
TN000046	Rocky River 2	SGA	\$23,403.00	Program	\$0.00
TN000046	Rocky River 2	SGA	\$272,079.00	Program	\$0.00
TN000046	Rocky River 2	SGA	\$103,529.60	Program	\$0.00
TN000046	Rocky River 2	SGA	\$64,508.00	Program	\$0.00
TN000046	Rocky River 2	SGA	\$23,630.00	Program	\$0.00
TN000046	Rocky River 2	SGA	\$73,294.97	Program	\$0.00
TN000097	Wooldridge Waterline Extension	SGA	\$78,000.00	Program	\$0.00
TN000166	Adams Hollow Waterline Extension	SGA	\$510,864.00	Program	\$0.00

**Table 6 – (State/Tribe) – Reclamation Projects Started and/or Completed**  
(During FY 2016)

Project Type	Projects Started	Projects Completed
State/Tribe (FY 2016)	3	3
Federal (FY 2015)	0	0
Total (FY 2015)	3	3

**Table 7 – (State/Tribe) – AML Program Grant Awards and Staffing**  
(During FY 2016)

<b>AML Program Costs</b>	
Administration	\$333,545.00
Non –Water Supply Construction	\$1,394,916
Water Supply Construction	\$635,000.00
AMD Set-Aside	\$432,539.00
Other(s)	\$0.00
<b>Total AML Funding</b>	\$2,796,000.00
<b>AML Program Staffing</b> (full-time equivalents on September 30, 2016)	3