

Office of Surface Mining Reclamation and Enforcement Knoxville Field Office



Annual Report Fiscal Year 2012

**OFFICE OF SURFACE MINING
RECLAMATION AND ENFORCEMENT**

Annual Evaluation Summary Report

for the

Regulatory and Abandoned Mine Land Programs

Administered by the Knoxville Field Office

of

TENNESSEE and GEORGIA

**Fiscal Year 2012
October 1, 2011 to September 30, 2012**

TABLE OF CONTENTS

EXECUTIVE SUMMARY	5
I. INTRODUCTION.....	7
II. OVERVIEW OF THE TENNESSEE COAL MINING INDUSTRY	7
III. OVERVIEW OF THE PUBLIC PARTICIPATION OPPORTUNITIES IN THE TENNESSEE FEDERAL PROGRAM.....	9
• Public/Citizen Participation in the Regulatory Process	9
• Agency Participation in the Regulatory Process.....	10
• Industry Meetings	10
• Outreach Efforts with Customers and Stakeholders	11
IV. MAJOR ACCOMPLISHMENTS/ISSUES/INNOVATIONS IN THE TENNESSEE FEDERAL PROGRAM	11
• Inspection Frequency	11
• North Cumberland Wildlife Management Area (NCWMA) Land Unsuitable for Mining (LUM):.....	13
• Next Steps in LUM Petition Evaluation	17
• Off-Site Impact Study	17
• Acid Mine Drainage Mitigation Projects	20
• Trust Funds	21
• Electronic Permitting	21
• Federal Regulatory GIS	21
• Tennessee Reforestation Initiative	23
• Local Interagency Working Agreement (LIWA)	27
• Work Breakdown Structure	27
• Endangered Species	27
• Youth Initiative	28

V.	SUCCESS IN ACHIEVING THE PURPOSES OF SMCRA AS MEASURED BY THE NUMBER OF OBSERVED OFF-SITE IMPACTS AND THE NUMBER OF ACRES MEETING THE PERFORMANCE STANDARDS AT THE TIME OF BOND RELEASE	29
•	Off-Site Impacts.....	29
•	Reclamation Success (I&E)	32
•	Customer Service	33
VI.	ABANDONED MINE LANDS IN TENNESSEE	35
•	Title IV of SMCRA: Abandoned Mine Land (AML) Reclamation	35
•	FY 2012 Grant	36
•	Acid Mine Drainage Set-Aside	36
•	Drawdown Analysis Review.....	37
•	Public Outreach.....	37
•	Electronic AML Inventory System (e-AMLIS).....	37
•	AML Emergency Program.....	38
•	Title IV Reclamation Projects for FY 2012.....	38
•	National Environmental Policy Act (NEPA) Compliance Reviews.....	41
•	AML Non-Emergency Construction Review	43
•	Title IV Reclamation Proposed Projects for FY 2013.....	43
•	GIS and AML	43
VII.	TECHNICAL ASSISTANCE	44

APPENDICES:

A - Acronyms Used in this Report

B - Tabular Summary of Core Data to Characterize the Program

COVER PHOTOGRAPHS: North Cumberland Wildlife Management Area Land Unsuitable for Mining Petition Area.

EXECUTIVE SUMMARY

Tennessee Federal Program

The Surface Mining Control and Reclamation Act of 1977 (SMCRA) provides authority for the Office of Surface Mining Reclamation and Enforcement (OSM) to implement a Federal regulatory program in the states without approved regulatory programs. In Tennessee, OSM implemented the Federal regulatory program in October 1984 when the state repealed its surface mining law. OSM 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 since they have never adopted an approved state program under SMCRA.

Accomplishments

The following listed items highlight KFO's major accomplishments during Fiscal Year (FY) 2012:

- Lands Unsuitable for Mining Petition - On October 1, 2010, the State of Tennessee submitted a Lands Unsuitable for Mining (LUM) petition for the North Cumberland Wildlife Management Area (NCWMA) and Emory River Tracts Conservation Easement. The petition requests that OSM 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". OSM determined in November 2010 that the State of Tennessee's petition is complete. During 2012, KFO conducted a number of studies to obtain information needed to fully evaluate the petition. KFO is preparing a Petition Evaluation Document/Environmental Impact Statement (PED/EIS) regarding the petition.
- Reforestation - During 2012, a total of 169,050 trees were planted on reclaimed mine sites in Tennessee and 167,650 (99%) of those trees were planted on sites prepared using the Forestry Reclamation Approach (FRA). Some of this success is due to KFO's role in maintaining active outreach through FRA workshops. These workshops are used to educate the mining industry, regulatory authorities, and citizen groups about the FRA technology.
- Interagency Coordination - In FY 2012, the Local Interagency Working Group (LIWA) held its first joint hearing on a large underground mine application in southern Tennessee in the community of Dayton, Tennessee. The application is for a 3000 acre underground mine with an associated 133-acre surface disturbance for coal refuse processing and storage facility. The meeting was attended by 200 people and lasted two hours. Representatives from the Tennessee Department of Environment and Conservation (TDEC), the Nashville District U.S. Army Corps of Engineers (USACE), the Cookeville U.S. Fish and Wildlife Service (USFWS) Field Office, and Region 4 of the Environmental Protection Agency (EPA) were present.
- Youth Initiative - KFO employed a total of eight interns during FY 2012. Three interns were placed at TDEC. The interns worked in areas of inspection, geology, Geographic Information System (GIS), hydrology, and administration. Two interns served under the

AmeriCorps program that places youth in positions designed to offer mentoring, experience, and the opportunity to work side by side with experts in the field.

National Measurements

- Coal Production - Tennessee currently ranks twenty-first in production of coal among the 26 coal-producing states. Tennessee was ranked twenty-fourth in FY 2011. Over the past 10-year period, coal production has declined from 3.165 million tons in calendar year 2002 to 1.4 million tons in calendar year 2011 (the last year data was available). This is an overall decrease of 56 percent. There has been a corresponding decrease in active coal producing permits from 15 (five underground and 10 surface mines) in FY 2011, to nine active coal producing permits (four underground and five surface mines) in FY 2012. There has been no active coal production in the state of Georgia for several years.
- Inspections - KFO inspectors conducted 1,456 inspections at 281 inspectable units in Tennessee. During these inspections, KFO issued 142 violations that resulted in 25 measurable off-site impacts at 18 permits. Ninety-four percent of mine sites inspected by KFO were free of off-site impacts compared to 95 percent in FY 2011.
- Bond Releases - KFO granted bond releases on 2,802 acres for Phase I reclamation, 971 acres for Phase II reclamation, and 1,463 acres for Phase III reclamation.

Customer Service / Stakeholder Outreach

- In recent years, KFO has experienced a steady decrease in the number of citizen's complaints received. In FY 2007, 13 complaints were received. During FY 2012, KFO only received six citizen's complaints, for an overall decrease of 54 percent over the last five years. All of the complaints received during FY 2012 were investigated and responses were provided to the complainant within 10 days of concluding the investigations.
- The KFO ensures that citizens, environmental groups, and industry representatives have access to all regulatory program files including permitting, inspection and enforcement, and bonding. Managers and staff have open-door policies for any segment of the public to discuss issues that may arise.
- Just as with public participation in the SMCRA regulatory process, KFO solicits input from numerous local, State, and Federal agencies that may have an interest in a proposed permitting action. KFO maintains a mailing/contact list including 11 different State or Federal agencies that receive notification of proposed permitting actions.
- The Abandoned Mine Land (AML) Emergency program was transferred to TDEC, Land Reclamation Section on October 1, 2010, as proposed in the FY 2011 Presidential budget. Tennessee agreed to implement the program in accordance with the provisions of the Federal Assistance Manual (FAM). Tennessee had no emergency projects during FY 2012.
- During FY 2012, TDEC's Land Reclamation Section completed three waterline extension projects, two reclamation projects, and one landslide project for a total of 379 Government Performance and Results Act (GPRA) acres. Prior to construction, the water quality in all

waterline project areas exceeded secondary drinking standards in iron and manganese. As a result, 111 people received potable water and 290 people are no longer exposed to potential safety risks from abandoned mine lands.

Outstanding Issues

- In 2012, five fish species were listed as endangered in the Federal Register (August 9, 2011), two of which, the laurel dace (*Chrosomus saylori*) and the Cumberland darter (*Etheostoma susanae*), have been collected in watersheds receiving drainage from Tennessee surface mining operations.

Technical Assistance and Grants

- The KFO GIS provided valuable assistance to the permitting staff by acquiring and processing essential digital data and creating data bases for analysis of the North Cumberland Wildlife Management Area LUM petition analysis.
- KFO continues to have a number of staff members serving on various projects, teams, and assignments that are of common interest to the Appalachian Region and to all of OSM. During FY 2012, the Technical Group spent 830 hours working on OSM initiatives.

I. INTRODUCTION

The Surface Mining Control and Reclamation Act of 1977 (SMCRA) created the Office of Surface Mining Reclamation and Enforcement (OSM) in the Department of the Interior. SMCRA provides authority to OSM to oversee the implementation of and provide Federal funding for State regulatory programs that have been approved by OSM as meeting the minimum standards specified by SMCRA. The Act provides authority for OSM to implement a Federal regulatory program in the States without approved regulatory programs. In Tennessee, OSM implemented the Federal regulatory program in October 1984 when the State repealed its surface mining law. OSM also has regulatory authority responsibilities for surface coal mining activities in the State of Georgia since they have never adopted an approved State program under SMCRA. This report contains summary information regarding the Tennessee and Georgia Federal program and the effectiveness of the Federal program in meeting the applicable purposes of SMCRA as specified in Section 102. This report covers the period of October 1, 2011, to September 30, 2012. Detailed background information and comprehensive reports for the program elements evaluated during the period are available for review and copying at the Knoxville, Tennessee OSM Office. You can also view this report on the OSM website at <http://odocs.osmre.gov/>.

II. OVERVIEW OF THE TENNESSEE COAL MINING INDUSTRY

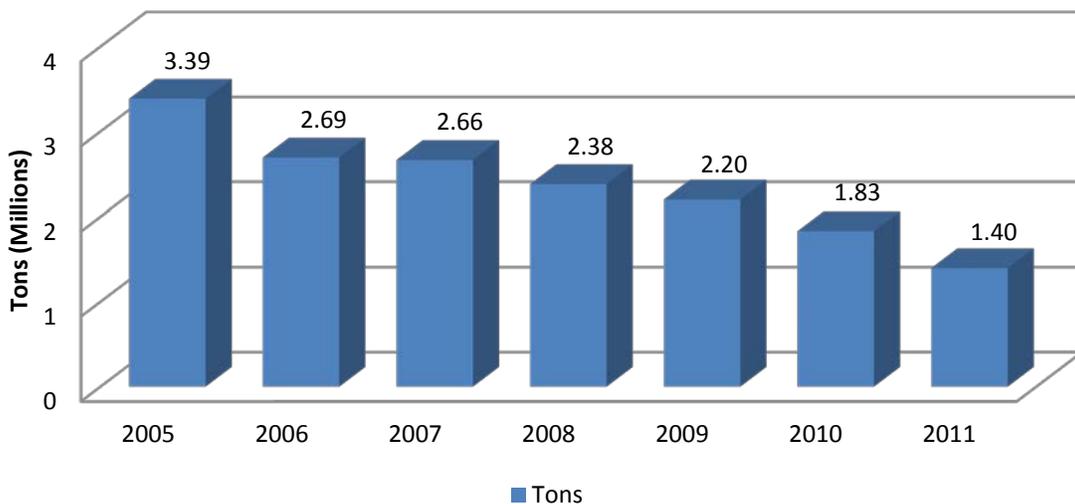
Tennessee's coal resources are found in 22 counties and they extend from the Kentucky border to the Alabama border in the east central portion of Tennessee. Mining in the northern counties is primarily in the steep slope areas of the Cumberland Mountain range. Mining in the southern counties is generally confined to area-type operations due to the relatively flat terrain associated with the Cumberland Plateau.



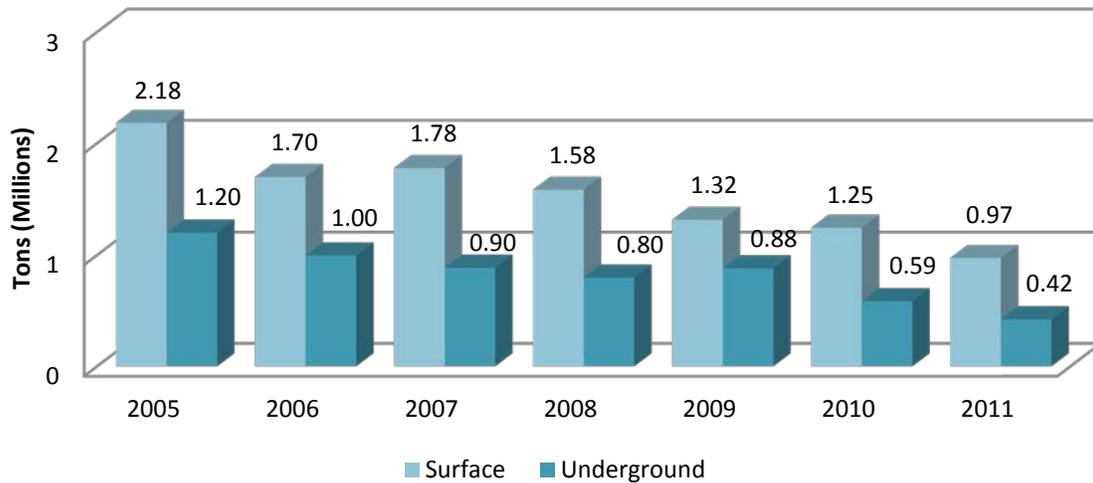
Tennessee’s recoverable coal reserves of 0.5 billion short tons exist in bituminous coal beds that range from less than 28 inches to 42 inches in thickness at depths of up to 1,000 feet. Tennessee coal is used primarily for generating electric power.

Tennessee ranked twenty-first in production of coal among the 26 coal-producing states in FY 2011. Coal production declined from a high of approximately 11.260 million tons in 1972 to 1.396 million tons reported during calendar year 2011. Currently, there are a total of nine active coal-producing mines that have permitted 2,657 acres. As of September 30, 2012, underground mines have permitted 127 acres, excluding shadow areas (footprint of the underground disturbance transposed to the surface area above) at four active mines. Surface operations have permitted 2,530 acres at five active mines.

Total Tennessee Coal Production 2005-2011



Tennessee Surface and Underground Mine Coal Production 2005-2011



Currently, there are six abandoned surface mine sites located in Dade and Walker Counties of Northern Georgia which total 141 disturbed acres. There has been no coal production or permitting activity in Georgia for several years.

III. OVERVIEW OF THE PUBLIC PARTICIPATION OPPORTUNITIES IN THE TENNESSEE FEDERAL PROGRAM

The Tennessee Federal Program provides numerous public participation opportunities in its program activities. Efforts are made to encourage participation and to inform the public of the avenues to participate in the regulatory program.

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

Citizens, environmental groups, and industry representatives have access to all regulatory program files including permitting, inspection and enforcement, and bonding. Managers and staff have open-door policies for any segment of the public to discuss issues that may arise.

During the permitting process, KFO is available to meet informally with individual citizens or organizations that have expressed 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 the concerns and to provide information and/or explanations with respect to the permitting actions at issue. As a part of this informal public participation process, KFO maintains a contact list of individuals and organizations that have expressed an interest in being notified of permitting actions under

consideration by KFO. In FY 2012, KFO met with individual citizens or representatives of environmental groups on at least five different occasions, and discussed numerous individual issues during telephone conversations and inquiries.

Formal public participation opportunities are also afforded on all applications for new permits, significant revisions, and renewals reviewed in KFO. In FY 2012, public conferences and associated input were requested on three new permits and one renewal application that were being processed by KFO. A total of three public conferences were conducted in FY 2012. The public conference on the remaining request is anticipated to occur during the 2013 fiscal year timeframes.

- **Agency Participation in the Regulatory Process**

Just as with public participation in the SMCRA regulatory process, KFO solicits input from numerous local, State, and Federal agencies that may have an interest in a proposed permitting action. KFO maintains a mailing/contact list including 11 different State or Federal agencies that receive notification of proposed permitting actions. Local or county-specific mailing/contact lists are also maintained for each of the 20 historical coal producing counties in Tennessee. Each of these county-specific lists generally include from eight to 10 local agencies or officials that are also notified of proposed permitting actions. In addition to providing written notification to these agencies, KFO continues to participate in periodic meetings with agencies such as TDEC, USFWS, FWS, EPA, USACE and National Park Service (NPS) to discuss issues related to coal mining in Tennessee. In FY 2012, numerous interagency meetings occurred in response to individual proposed permitting actions or concerns, issues, and clarification of existing policies. In addition to these inter-agency meetings, numerous phone conversations with other agencies were held that further facilitated their participation in the SMCRA regulatory process.

- **Industry Meetings**

Pre-Permit Application Meetings - KFO continues to meet with individual coal companies or their consultant(s) prior to submittal of a permit application. The purpose of these meetings is to discuss potential issues that might arise during the permitting process and to seek resolution of concerns/problems that address regulatory requirements. KFO instituted a pre-application process within the LIWA whereby the applicant meets with OSM, USACE, EPA, USFWS, and TDEC while the SMCRA application is being developed for submittal to OSM. The purpose of this meeting is to ensure all agencies with regulatory responsibilities review the proposed application and request information before the application is finalized for submittal. In 2012, five LIWA pre-permit application meetings were held.

Stakeholder Meetings - In implementing the regulatory program in Tennessee, KFO holds stakeholder meetings to discuss programmatic issues affecting the coal industry in Tennessee. These meetings are designed to solicit input from the industry for consideration by KFO. KFO held one stakeholder meeting in 2012.

- **Outreach Efforts with Customers and Stakeholders**

KFO continues to improve its relationships with its customers and stakeholders by providing increased opportunities for participation in the regulatory functions of the Field Office and by meeting with State and Federal agencies, citizens, landowners, and industry to discuss concerns and to foster better working relationships. The results have produced enhancements in compliance with respect to operators anticipating and addressing potential problems before they develop into violations. There have also been enhancements in communications with operators and landowners, based on industry feedback since the outreach efforts began. This feedback has consisted of improved oral communications as well as input into development of field office policies, procedures, and guidance documents.

IV. MAJOR ACCOMPLISHMENTS/ISSUES/INNOVATIONS IN THE TENNESSEE FEDERAL PROGRAM

- **Inspection Frequency**

Active Sites

KFO is responsible for conducting complete and partial inspections of surface coal mining and reclamation operations in Tennessee and Georgia in accordance with 30 CFR 842.11(c). This requirement (inspection mandate) includes 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 surface coal mining and reclamation operation. With respect to inactive surface coal mining and reclamation operations, OSM 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.

During FY 2012, KFO successfully conducted the required inspection mandate in accordance with 30 CFR 842.11 at all active and inactive surface coal mining and reclamation operations in Tennessee.

Coal Mines	Number of Complete Inspections Required	Number of Complete Inspections Conducted	Number of Partial Inspections Required	Number of Partial Inspections Conducted
Active	333	333	657	836
Inactive	153	153	45	45
Abandoned	172	12	62	4
Total	658	498	764	885

The totals for required inspections are approximations because during the evaluation year some sites changed activity status or became eliminated because final Phase III bond release was approved. Likewise, as new permits are issued throughout the evaluation year, the number of Permanent Program permits increased, but only some of the “Inspections Required per Site Annually” were required for those sites. It should also be noted that extra complete inspections conducted for active permits and inactive sites were converted to partial inspections in accordance with the Table 10 instructions to provide the final “Complete Inspections Conducted” and “Partial Inspections Conducted” data in the above table and in Table 10 of Appendix B.

Frequency Calculations	
Number of Permits Requiring Inspections	281
Number of Inspections Conducted	1,456
Number of Permits meeting Frequency	136
Percentage of Permits Meeting Frequency	48%
* All permits not meeting inspection frequency were abandoned mine sites.	

The data used to derive the number of permits requiring inspections emanates from Table 2 of Appendix B and does not include inspections that received Phase III bond release during the course of the year and that were removed from the Inspectable Units List (IUL).

Abandoned Sites

Abandoned sites in Tennessee and Georgia are required to be inspected by KFO on a site specific inspection frequency in accordance with the criteria and determination established in 30 CFR 842.11 (e) and (f) (known as the abandoned site rule). These sites have had some reclamation, but it is insufficient to satisfy regulatory requirements for complete reclamation. The majority of these sites have inspection frequencies of one complete inspection per calendar year. Due to a shortage of field inspectors, KFO has found it necessary to prioritize its workload to ensure sites with the greatest potential for adverse impacts (active sites) receive adequate inspections. The majority of the abandoned sites have existed longer than 20 years, are covered to a large extent with naturally occurring vegetation, and have become stabilized. Due to the workload and resulting prioritization, KFO was unable to inspect the majority of abandoned sites during FY 2012. Twelve complete inspections and four partial inspections were conducted on the 165 abandoned sites during FY 2012. During FY 2013 KFO will develop and implement a plan to improve inspection frequency on abandoned sites.

Bond Forfeited Sites

Bond forfeited sites in Tennessee and Georgia are required to be inspected by KFO on a site specific inspection frequency in accordance with the criteria and determination established in 30 CFR 842.11 (e) and (f) (the abandoned site rule). The majority of these sites have established inspection frequencies of one complete inspection per calendar year. Most of the bond forfeiture sites in Tennessee have had substantial reclamation efforts utilizing forfeited bond funds but several remain on the IUL due to deficiencies in

reclamation. During FY 2012, the KFO did not have any bond forfeited sites where reclamation efforts were underway.

Notice of Intent to Explore (NOI) Sites

KFO inspectors also conducted 53 complete inspections and 20 partial inspections on NOI sites. SMCRA does not require a minimum inspection frequency for NOI sites.

- **North Cumberland Wildlife Management Area (NCWMA) Land Unsuitable for Mining (LUM):**

Background

On October 1, 2010, the State of Tennessee filed a petition with OSM to designate the ridgelines within the NCWMA and the Emory River Tracts Conservation Easement area 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 (TWRA) and TDEC under OSM's Federal program to regulate surface mining operations within Tennessee. As described at 30 CFR Part 942, the State alleges that the NCWMA may be adversely affected by surface coal mining operations in the following ways:

- (a) Surface mining is incompatible with their existing land use plans or programs; and,
- (b) 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.

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

On three different occasions during 2012, OSM met with the petitioner. These meetings were intended 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. All additional information and clarifications obtained have been documented and placed in the LUM administrative record for public review.

Public Outreach

OSM proceeded to process the petition by mailing notices on January 14, 2011, to the petitioner, interested State and Federal agencies, landowners, and other interested parties that the petition has been accepted for processing. The parties were also notified that the action on the petition is a major Federal action and would require OSM to prepare a combined Petition Evaluation Document/Environmental Impact Statement (PED/EIS). OSM announced the acceptance of the petition to the public through legal notices in the local newspapers. In addition, the petition was made available for review at the OSM KFO; the Anderson County Planning and Zoning Office in Clinton, TN; the Morgan

County Clerk's Office in Wartburg, TN; the Campbell County Mayor's Office in Jacksboro, TN; and the Scott County Assessor of Property Office in Huntsville, TN.

During March 2011, KFO conducted three scoping meetings at various locations in proximity to the proposed LUM petition area. These meetings were intended to be a "fact finding forum" where both the public and industry could learn about the proposed unsuitability petition and could present to OSM their issues and concerns related to the LUM petition.

Agency Participation

OSM invited Federal agencies to participate as cooperating agencies in the development of the LUM PED/EIS document. Three agencies, the National Park Service, the U.S. Fish and Wildlife Service, and the Environmental Protection Agency accepted this invitation. Each of these agencies has been participating fully in the development of the PED/EIS document.

Technical Evaluation

The petition area is part of the NCWMA, comprised of the Royal Blue, Sundquist, and New River Units, and part of the Emory River Tracts Conservation Easement. The total acreage impacted by the LUM petition for the combined NCWMA and the Emory River Tract Easement 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 the environmental impacts of the proposed action and each of the alternatives on the existing environment for the entire NCWMA and Emory River Tract boundaries.

OSM contracted for data and technical services to characterize the existing environmental conditions and uses within the NCWMA and Emory River Tract. To establish the hydrologic regime within the NCWMA and Emory River Tract, OSM purchased equipment, undertook field data collection, and sought analytical services from various vendors. LiDAR (Light Detection And Ranging) and high resolution photography was also purchased to provide a good terrain and land cover model for the project area. Coal data and related information was obtained to assist in the preparation of the coal reserve model for the area. Contracts were secured to evaluate the socioeconomics, recreation, aquatic resources, viewshed modeling, and soundscape affected by the LUM petition.

Currently, the PED/EIS is being drafted in-house with assistance from an outside contractor. Internally drafting the EIS has significantly impacted KFO resources. KFO professionals spending most of their time on the process include: a hydrogeologist, a civil engineer, a terrestrial biologist, an aquatic biologist, several GIS specialists, a National Environmental Policy Act (NEPA) coordinator, and others as special high intensity tasks warrant. In addition, KFO has sought assistance from the OSM Appalachian Region and the Mid Continent Regional offices for a geologist to do the coal reserve model and engineers and hydrologists to provide hydrologic field assistance.

The GIS staff have been significantly involved in the LUM and prepared numerous datasets including but not limited to:

- Land ownership within and adjacent to the NCWMA and Emory River Tracts.
- Revised petition boundaries to objectively identify ridgelines and buffer zones.
- Identify the extent of past surface and underground mining from all sources.
- Identify past logging, mining disturbances, and land uses from aerial photography.
- Establish datasets for coal seam information to provide to geologic modeler.
- Provide necessary data and information to watershed modeling contractor.
- Establish the footprint of the Cumberland Trail State Park.

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 (Figure 1). The Cumberland Trail State Park passes through the NCWMA and represents part of a trail system that will extend from the southern border with Georgia to the northern border with Kentucky. The State's petition has indicated that there are several threatened and endangered species of plants within the NCWMA.

The State owns the surface rights within the NCWMA and Emory River Tract and has implemented a multiple use wildlife management plan. The primary usage for this land is for hunting and off road vehicle (ORV) but other recreational activities such as hiking, camping, mountain biking, rock climbing, fishing etc. are also permitted.



Figure 1: Scenic view in the NCWMA.

The land has also been used for natural resource extraction such as coal mining, oil and gas well drilling, quarrying, and logging. Examples of the past and recent practices are evident in Figures 2 and 3.



Figure 2: View of previously mined area in the NCWMA.

Logging activity permitted by agreements as part of the original purchase is also being extensively conducted on the NCWMA and Emory River Tract. OSM is conducting some field tests to determine the impact of various types of land use such as mining and logging on the sediment loads to receiving streams. The agreement that allows logging on the Sundquist Unit of the NCWMA is set to expire in 2017, at which time, timber management reverts to TWRA.



Figure 3: View of recent logging activities in the NCWMA.

- **Next Steps in LUM Petition Evaluation**

With the conclusion of data collection and the associated peer review process, KFO initiated development of the draft PED/EIS document. In FY 2013, KFO anticipates that the alternatives to be evaluated in the draft PED/EIS document will be finalized. Once finalized, document preparation will continue. The aforementioned cooperating agencies will review and comment on the preliminary draft document. KFO anticipates significant progress in development of the draft PED/EIS document occurring in FY 2013.

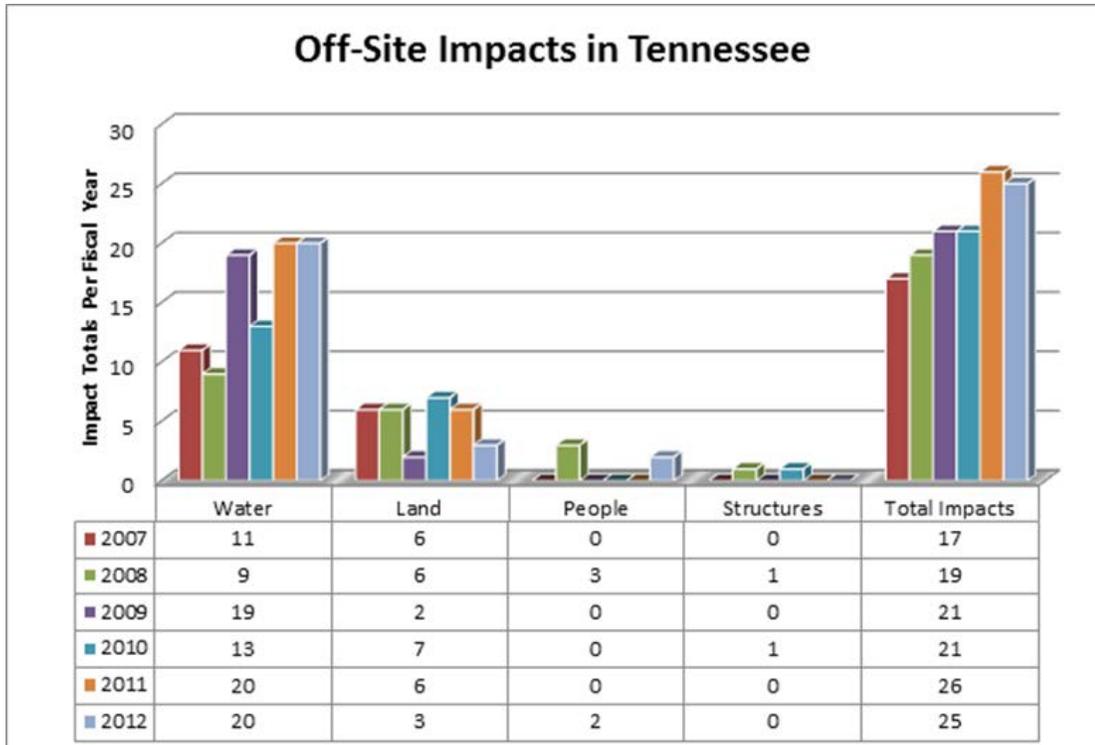
- **Off-Site Impact Study**

During FY 2012, KFO continued a study of new off-site impacts in Tennessee. This study evaluates off-site impacts over a six-year period. Off-site impact data is routinely collected and reported in conjunction with enforcement actions issued as a result of SMCRA mandated mine site inspections.

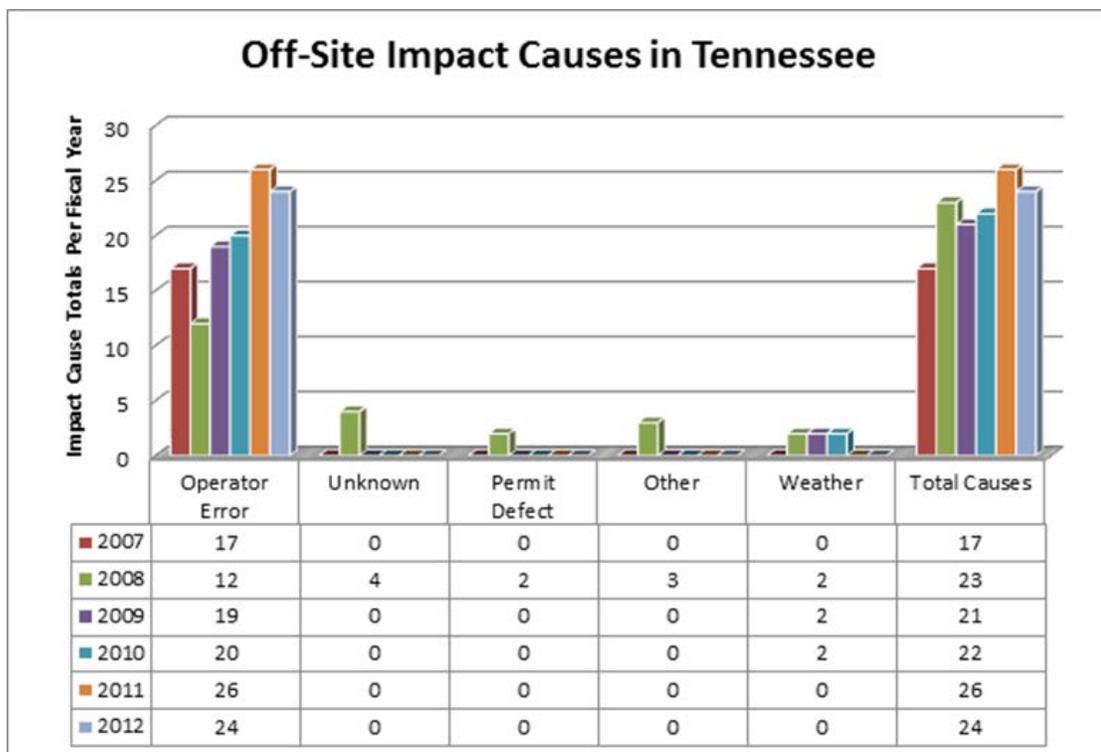
In order to evaluate sufficient off-site impact data to determine trends and causes, data from the past six-year period (FY 2007, 2008, 2009, 2010, 2011, and 2012) were used. KFO enforcement files were reviewed and interviews were conducted with reclamation specialists having knowledge of field decisions and circumstances prior to impact occurrence. Differences among minor, moderate, and major off-site impacts were not examined since all are counted in reporting the performance measurement regardless of impact severity.

During this six-year study period, a total of 129 off-site impacts to people, land, water, and structures were identified. The study revealed the vast majority of impacts during this period occurred to water, followed in order by land, people, and structures.

Off-site impacts to water most often occurred when sediment iron laden, or low pH runoff left sites and entered receiving streams. Many of the impacts to land resulted from landslides, encroachment off permits, and from blast fly rock. People and structures were adversely affected when public roads were impacted by mining operations. Adverse impacts to people also resulted from blast vibrations.



The study also found the overwhelming majority of Tennessee off-site impacts during this period were caused by operator error.



In FY 2010, KFO developed and implemented a plan based on the study findings for further reducing occurrences of off-site impacts in Tennessee. The major steps in the plan were:

1. Meet with KFO reclamation specialists to discuss uniform methods and consistency in reporting off-site impacts and strategies for helping operators reduce off-site impacts.
2. Meet with KFO technical staff to discuss the observed permit defects that contributed to off-site impacts and consider options to avoid them in the future.
3. Develop an off-site impact study PowerPoint presentation illustrating the study method and findings to be used to inform and educate the coal industry.

During FY 2010, KFO completed steps 1, 2, and 3 as discussed above. The study findings revealed the majority of off-site impacts occurred at sites where active coal production had occurred. For this reason, KFO scheduled and presented a Power Point presentation to the companies responsible for the majority of Tennessee coal production during FY 2010. Upon review, KFO has concluded the data collected during FY 2012 remains consistent with the previous findings. The majority of impacts continue to occur to water and land and the overwhelming majority of impact causes are attributed to operator error. The study also reveals an increase in total impacts over the six-year study period although there was a slight decrease in FY 2012. KFO believes this trend is due to increased rainfall over the past two-year period. Additionally, one operator has had difficulty employing enough resources to prevent off-site impacts. KFO is working with the operator in various ways to reduce the number of violations and related impacts on the company's sites. KFO will continue to collect and study data for possible improvements in reducing off-site impacts.

- **Acid Mine Drainage Mitigation Projects**

The Federal Program in Tennessee participates as a facilitator with local watershed efforts to mitigate the effects of acid mine drainage (AMD) being discharged into watersheds from abandoned coal mines. The field office has six designated watersheds: North Chickamauga Creek, Bear Creek, Big Laurel Creek, Coal Creek, Thompson/Big Creek, and Clear Fork. Due to budget restrictions and higher priority work projects, OSM has reduced the activities with the watershed groups.

During the year, the field office staff performed the following activities in the watersheds:

North Chickamauga Creek - The North Chickamauga Creek Conservancy is the partnership leader in the watershed. The watershed group sponsored an OSM/VISTA (Volunteers in Service to America) person in FY 2012, with the objective to continue education of the local public on watershed conditions and issues. The VISTA volunteer generated \$16,155.00 in in-kind donations and logged 30 hours of volunteer service.

Coal Creek - The Coal Creek Watershed Foundation continues to work with the local citizenry to improve the quality of life in the watershed. The KFO staff participated in the Coal Creek Health Day at the Briceville Elementary School. Staff members assisted the elementary students to assess the health of Coal Creek which flows adjacent to the school. Staff from the Tennessee Valley Authority (TVA), the University of Tennessee, Trout Unlimited, and TDEC participated with local volunteers. The students learned, via annual stream monitoring that as the quality of water in the stream improves, so does the quality of life in the stream.



Briceville Elementary students learn about the aquatic life found in Coal Creek and ways to keep the creek clean.

Clear Fork - The Woodlands Community Land Trust is the partnership leader in the watershed. The Field Office staff provided quarterly water monitoring assistance to TDEC staff and members of the watershed group. The data collected will assist the partnership in the development of a watershed improvement plan. The Trust is working to train local residents in proper tree planting techniques with the hope of preparing them for job opportunities in the area.

- **Trust Funds**

Trust funds or annuities are intended to guarantee treatment of long-term postmining pollutional discharges associated with sites permitted under the Tennessee Federal Program. The primary purpose of such trusts is to protect the environment; and the health and welfare of the public while providing an economical way through which the trust or annuity will be invested and managed for the long-term operation of water control and treatment facilities associated with coal mine sites.

During FY 2012, OSM conducted annual reviews of the Lexington Coal Company (LCC) trust funds for the Gladly Fork, Energy Wash Facility, Big Brush II, and Pine Ridge East treatment trusts. A total of \$8.5 million is invested in these four trust funds to provide long term treatment of pollutional discharges emanating from LCC sites.

LCC was sold in FY 2012 and became Lexington Coal Company, LLC. The new owners acquired the assets and liabilities of the former owner and have maintained the sites as required by existing settlement agreements.

- **Electronic Permitting**

KFO continues to promote new technology in implementing SMCRA by creating the first federal electronic permitting process. The Electronic Permit Application Control Solution (EPACS) is the coal mine application in electronic form which encompasses all permitting requirements required by KFO. In FY 2012, KFO began to modify the system to add enhancements and develop a project tracking system to help track work products and enhance workflow. KFO also began to redesign the Field Office Comprehensive Information System (FOCIS) which tracks the workflow through the office. This redesign effort will synergistically work with the EPACS system to offer more internal controls that support current business practices and technologies.

- **Federal Regulatory GIS**

In FY 2012, KFO continued its review of the LUM petition submitted by the State of Tennessee on October 1, 2010, for the NCWMA and Emory River Tracts Conservation Easement. KFO GIS has provided critical support to the processing and review of the petition in many areas while continuing to support the Federal Program for Tennessee and provide assistance to parties outside KFO:

LUM:

- Conducted analyses of alternative petition boundaries, non-petition areas rendered non-mineable, viewsheds, probable mining scenarios, potential impacts to the Cumberland Trail, mineral ownership, and coal reserves
- Created datasets of surface mining disturbance, highwalls, underground mine workings, logging areas, roads and trails, and geologic sampling locations
- Developed maps of sensitive wetlands, study areas for biological studies, high quality waters, and recreational use
- Prepared presentations and maps for use by the Field Office Director in meetings with the OSM Director and Assistant Secretary for Land and Minerals Management.

Supporting the Federal Program for Tennessee:

- Provided assistance to KFO staff working on pre-mining site visits, permit review technical investigations including cumulative hydrologic impacts and terrestrial impact analysis, mid-term permit reviews, mine site inspections, bond releases, and AMD mine site treatment needs as well as presentations for use by KFO managers
- Maintained KFO GIS datasets relative to permitted mine sites (new permits, permit boundary revisions, bonded areas, legacy permit reclamation status, and data entry of geologic, surface-water, groundwater and discharge monitoring data)
- Provided GIS technical support to Forestry Reclamation Approach (FRA) projects
- Continued pursuit of automated GIS data sharing possibilities between TDEC and OSM, and also provided cartographic assistance on KFO Annual Report

Assistance to outside parties:

- Responded to mining industry consultants requesting mining data for preparing coal mining permit applications, TDEC for surface- and ground-water quality data, and to citizens under Freedom of Information Act (FOIA) requests for coal mining data
- Responded to OSM Appalachian Region Pittsburgh technical staff working on Tennessee coal mining issues
- Coordinated with GeoMine multiple times and contributed GIS datasets. Shared datasets included surface coal mine boundaries, underground mine extents, bond status, LUM petition and designated areas, excess spoil and valley fills, coal refuse impoundments, coal preparation plants, and environmental resource locations.



Mine site as it would appear if backfilled, graded, and reclaimed with grasses only.



Mine site as it would appear later with 25-year old hardwood trees.

- **Tennessee Reforestation Initiative**

The Appalachian Regional Reforestation Initiative (ARRI) is a cooperative effort among OSM, State and Federal agencies in the coal-producing states of the Appalachian Region, industry, environmental organizations, academia, and local citizenry. The goals of the initiative are to plant more high-value hardwood trees on reclaimed coal mined lands in Appalachia and to increase the survival rates and growth rates of the planted trees by using the Forestry Reclamation Approach (FRA). The FRA is a science-based technology 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/>. KFO staff serve as members of the ARRI Core Team and the ARRI Science Team, and continue to provide leadership and active support in promoting and achieving the goals of ARRI.

During 2012, a total of 169,050 trees were planted on reclaimed mine sites in Tennessee and 167,650 (99%) of those trees were planted on sites prepared using the FRA.

Excellence in Reforestation Award

KFO annually recognizes exemplary performance and execution of the FRA for the previous calendar year. This year, Triple-H Coal, LLC permit number 3205 was the Tennessee State ARRI Excellence in Reforestation Regional Award winner for implementation of FRA techniques. Triple H Coal, in Campbell County, Tennessee, is a small operator that exemplified the five steps of the FRA this past year. Loosely graded material with ample organic material is present throughout the permitted area. The permittee also used an annual cover to provide initial soil stabilization and facilitate the movement of elk herds in the area. This annual cover quickly gives way to tree-compatible covers of native warm-season grasses. The tree planting crew consisted of Triple-H Coal employees, who were trained in proper tree planting techniques by OSM KFO staff. In 2011, 11 steep-slope acres of this contour-mine were planted with native hardwood species according to the FRA.



Triple H Coal constructed a good uncompacted tree growth medium including topsoil and organic material, brown weathered sandstone, and shale.



Vic Davis, OSM KFO, conducted training on proper tree planting techniques with Triple H Coal employees.



Inspector George Gunn, OSM KFO, discusses FRA implementation at Triple H Coal with OSM Director Pizarchik and others.

Forestry Reclamation Approach Workshops, Outreach, and Publications

KFO ARRI members played a major role in community and industry outreach this year.

In the first quarter 2012, FRA workshops were given to the U.S. Fish and Wildlife Service in Cookeville, TN, and to a more diverse crowd of citizens, industry, and state officials in LaFollette, TN. These workshops are used to educate the mining industry, regulatory authorities, and citizen groups about the FRA technology.

KFO ARRI members continue to be very active in community outreach. At the request of a University of Tennessee (UT) professor and ARRI science member, KFO staff spoke to UT students in an Environmental Impacts class about surface mining, SMCRA, and how the FRA can be used to fulfill OSM's mission. ARRI core team members from KFO also reached out to concerned citizens at a Tennessee coalfield community institute. The Clearfork Community Institute held an Earth Day event that KFO staff attended to answer questions about general aspects of OSM, the permitting process, and the FRA. One initiative of this institute is to obtain gainful employment for unemployed miners within the immediate community. KFO staff advised the institute on proper tree planting techniques and provided comments on their initiative of forming a tree planting business for unemployed miners. KFO continues to provide support to the OSM Mid-Continent Region through site visits to experimental FRA plots in Alabama and comments on the state's FRA initiatives. Staff from KFO also provided assistance to the Mid-Continent Region by leading a post-conference tour of Alabama's progress and success with the FRA after the 29th annual meeting of the American Society of Mining and Reclamation.



Vic Davis, OSM KFO (middle), speaks with Sherry Wilson, OSM Birmingham Field Office, and Brad Brasfield, Taft Coal, about Alabama's efforts in the FRA.

Along with others, ARRI science team members from KFO co-authored the Forest Reclamation Advisory No. 9 "Selecting Tree Species for Reforestation of Appalachian Mined Land." This is the newest publication in a series of advisories from the ARRI science team. This advisory can aid industry in selecting tree species most suitable for

their sites, depending on site-specific conditions. Attached to the publication is a manipulative table developed by KFO that allows users to input site characteristics, then view a list of species best suited for their site. ARRI publications can be found at <http://arri.osmre.gov/Publications/Publications.shtm>.

Arbor Day 2012

The 2012 Tennessee Arbor Day tree-planting event was held on May 4, 2012. The event was organized by the Coal Creek Watershed Foundation, Inc. (CCWF) and OSM KFO, and held at a Dalco Coal Company deep mine in Morgan County, TN. Prior to the event, approximately 1.5 acres of compacted backfill were ripped according to FRA methods. Around 115 people attended the event. Fifteen adult volunteers representing the Tennessee General Assembly, Tennessee Mining Association, Geo/Environmental Associates, Inc., Clinch River Trout Unlimited, the CCWF, and OSM participated in the event, along with 100 students from Lake City and Norwood Middle Schools. The students had each grown their own American chestnut seedlings at school during the winter in preparation for the event. Along with the 100 chestnuts, 600 seedlings of northern red oak, yellow-poplar, green ash, flowering dogwood, and white pine were planted at the event.



Clockwise from top left: Duane's Trucking and Excavating ripping the site, Earl Bandy (OSM KFO) with students, Dick Geiger (Clinch River Trout Unlimited) with students, a planted American chestnut.

- **Local Interagency Working Agreement (LIWA)**

On December 20, 2010, the KFO OSM, TDEC, USACE, USFWS, and EPA (Region 4) established a LIWA 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 CWA, SMCRA, and the Endangered Species Act (ESA). During FY 2012, the LIWA group held its first joint hearing on the Iron Properties Liberty and Security Underground Mine on April 26. Personnel from TDEC, EPA, USACE, and OSM attended the meeting. Approximately 200 residents attended the two-hour hearing and provided testimony on various subjects ranging from support for the proposed operation to concerns about the impacts on property values, roads, environment, and the local economy. KFO is still reviewing both applications for the mines and expects to make a decision in FY 2013.

- **Work Breakdown Structure**

The Cost Recovery initiative was implemented within OSM in 2010. Taking a lead role, KFO began tracking costs associated with each permit in April 2010. This initiative required adding permit numbers to the OSM Activity Based Cost Structure to capture costs associated with each permitting action. This new structure allows KFO to track hours and costs during the term of the permit for all programmatic activities, including inspections, associated with each permit. To date, KFO has added numerous codes to our Work Breakdown Structure (WBS) system. These codes will help KFO track specific permit numbers and will be instrumental in determining the actual cost associated with each permit.

- **Endangered Species**

In 2012, KFO continued to require the use of the documents Coal Mining in Tennessee, Minimum Guidelines for Development of Protection and Enhancement Plans for the Blackside Dace (*Phoxinus cumberlandensis*) and Guidelines for the Development of Protection and Enhancement Plans for the Indiana Bat (*Myotis sodalis*) when preparing mining applications in areas where the USFWS identified historical occurrences of either species. As has been the case for the last several years, the majority of permitting activities in 2012 either took place or were proposed to take place in areas where these species had been identified. The use of these guidelines and associated evaluations provide valuable vertebrate, water quality, fish, and macro-invertebrate data for the Tennessee coalfields.

During 2012, the USFWS announced a status review of the golden-winged warbler (*Vermivora chrysoptera*) to assess adding the species to their list of federal endangered and threatened wildlife. The golden-winged warbler has been observed on proposed and previously mined areas within the Tennessee coalfields. The species is known to nest in areas that were previously disturbed by natural fires, storms, or other events (i.e. mining) that result in early succession growth. Although not listed as threatened or endangered, another bird species of conservation concern, the Cerulean warbler (*Dendrocia cerulean*),

typically nests in mature forest trees and has been observed in or near disturbed areas in early successional stages of regeneration. KFO continues to work with the USFWS to monitor mining impacts to these species and to work with applicants to formulate reclamation plans that will benefit both species.

- **Youth Initiative**

KFO employed a total of eight interns during FY 2012. These interns worked in areas of inspection, geology, GIS, hydrology, and administration. The interns assisted with projects at KFO such as the: LUM Petition, Laserfische, GeoMine, and Water Quality Database. The interns also played an important role in assisting staff with various tasks such as: data entry for hydrological reviews and database development, scanning all historical records for active permits, gathering information for the FOIA requests, and assisting the Technical and Inspection staffs in the field with data collection.

Two interns were part of the AmeriCorps program that places youth in positions designed to offer mentoring, experience, and the opportunity to work side by side with experts in the field. One AmeriCorps intern worked on reviewing and reconciling the Tennessee acid mine drainage (AMD) database; helping to develop an AMD database. The second intern worked exclusively on the GeoMine project and played a vital role in improving the integration between KFO GIS and the GeoMine Appalachian Pilot Project.

The KFO interns resided in the Knoxville area during the summer months. During their internships, the interns were able to experience the culture and diversity of the region, as well as, the vast outdoor opportunities available in the area.



Intern assisting with administrative duties at KFO.



Intern testing pond discharges.



Intern measuring stream flow.

V. SUCCESS IN ACHIEVING THE PURPOSES OF SMCRA AS MEASURED BY THE NUMBER OF OBSERVED OFF-SITE IMPACTS AND THE NUMBER OF ACRES MEETING THE PERFORMANCE STANDARDS AT THE TIME OF BOND RELEASE

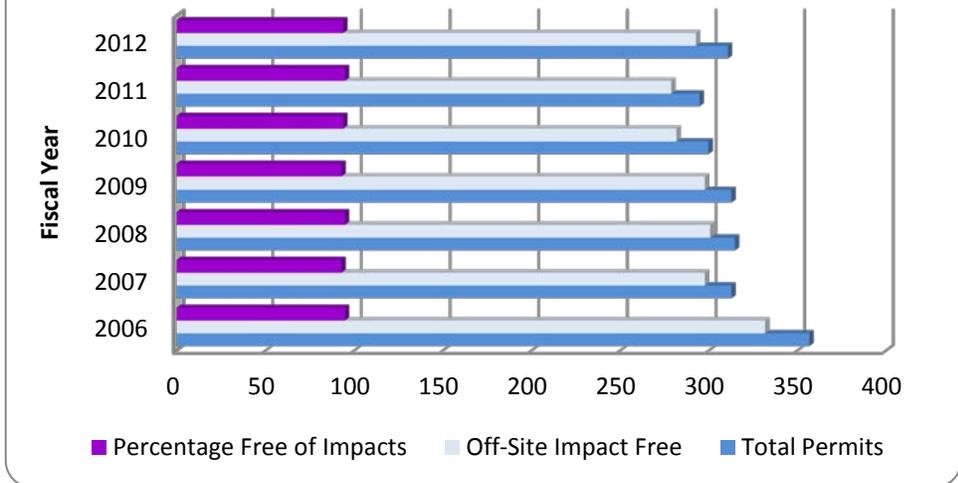
To further the concept of reporting end results, the findings from performance standard evaluations are being collected for a national perspective in terms of the number and extent of observed off-site impacts and the number of acres that have been mined and reclaimed that meet the bond release requirements for the various phases of reclamation.

- **Off-Site Impacts**

Active Sites

One of the intents of SMCRA is to prevent adverse affects to the public and to environmental resources adjacent to permitted coal mining operations. While conducting complete and partial inspections during FY 2012, KFO reclamation specialists evaluated all active mine sites for off-site impacts. Reclamation specialists previously reported off-site impacts resulting from SMCRA violations via the Mine Site Evaluation Inspection Report (MEIR). However, with the development of the Inspection and Enforcement (INE) Tracking System, reclamation specialists began reporting off-site impacts via the INE Mine Site Inspection (MSI) form. The MSI data was then transferred to a database and a summary report was developed for year-end reporting purposes. In addition to MSI data collection, citizen's complaint files were evaluated and interviews with reclamation specialists were conducted to determine if off-site impacts from other sources had occurred. During FY 2012, 94 percent of all inspectable units (or 294 of 312 inspectable units) were free of off-site impacts compared to 95 percent during FY 2011.

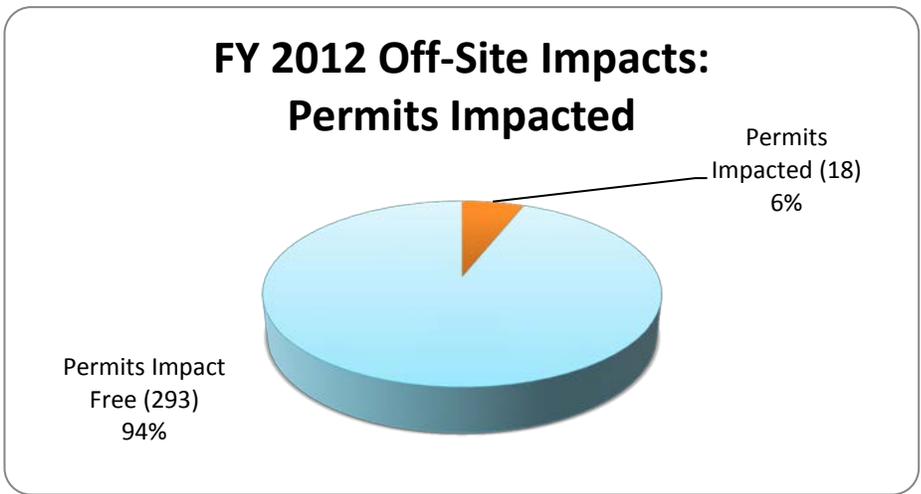
KFO Off-Site Impacts



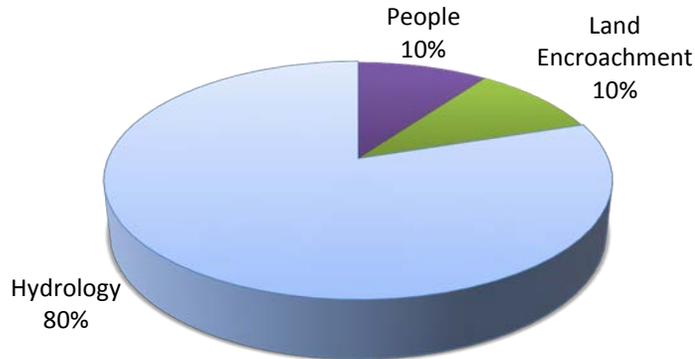
Eighteen permits were identified as having 30 events that impacted 31 resources (people, land, water, and structures). Twenty five off-site impacts to water occurred. Fifteen minor and eight moderate impacts resulted from sediment laden run-off leaving the sites or changes to water chemistry during mining. Two major impacts to water also occurred. One of the major impacts occurred when two basin embankments failed. Material from the embankments slid downslope and outside the permit area. As a result, mud filled an entire section of a streambed. The other major impact to water occurred when a permittee did not properly maintain a slurry impoundment and slurry, fines, and polluted water were discharged into a river. Severe damage to the river occurred as a result.

Two minor impacts and one moderate impact to land resulted from mining disturbance, sedimentation, or erosion occurring outside the approved permit boundaries. Three minor impacts to people occurred when trucks hauling refuse caused muddy road conditions or heavy dust concentrations along public roads. There were no impacts to structures reported during FY 2012.

FY 2012 Off-Site Impacts: Permits Impacted



FY 2012 Off-Site Impacts: Types of Impacts



The majority of the violations were considered to be permittee negligence. For this reason, improvements in the regulatory functions or processes are being reviewed.

During FY 2012, KFO continued an off-site impact study to determine trends and causes of impacts occurring during the previous six years (FY 2007, 2008, 2009, 2010, 2011, and 2012). This study is discussed in detail in Section IV of this report.

Bond Forfeiture Sites

KFO forfeited and collected the bond for three permanent program permits during FY 2012. The total acreage for the sites is 175 and the total disturbed acreage is 102.5. Reclamation efforts at all three sites are expected to begin in early 2013. Field inspections will be conducted while the sites are being reclaimed in order to evaluate and report on success in achieving contracted reclamation work. One of the bond forfeiture sites had one continuing impact to land stability. The related violation was cited in an enforcement action.



Off-site impact at a bond forfeiture site.

- **Reclamation Success (I&E)**

Reclamation success under SMCRA is measured by the bond release process with the ultimate goal of Phase III bond release. KFO has implemented bond release policy and procedures to ensure that all regulatory and permit requirements are completed. At each phase of bond release, a complete application is required, including a newspaper public notice, landowner notification letters, permittee certification, and bond release map. A complete bond release site evaluation and permit review is conducted at each phase of bond release with the following requirements:

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

KFO policy includes a complete review of the bond release application by the assigned inspector to identify deficiencies in the application or needed reclamation work on site. A hydrologic and biologic review occurs to ensure the site isn't causing, or is likely to cause, material damage outside the permit boundary. A bond review occurs to ensure the remaining bond will be sufficient for any remaining reclamation.

During the period October 1, 2011, through September 30, 2012, KFO processed 54 bond release applications. A total of 47 release actions were approved, consisting of nine Phase I, 15 Phase II, and 23 Phase III releases. These actions resulted in returning all or a portion of the bond on 5,236 acres of reclaimed mine lands (Appendix B, Table 6).

Following the review process outlined above, six applications were returned as incomplete, one bond release application was withdrawn, and there were no bond release applications disapproved this year.



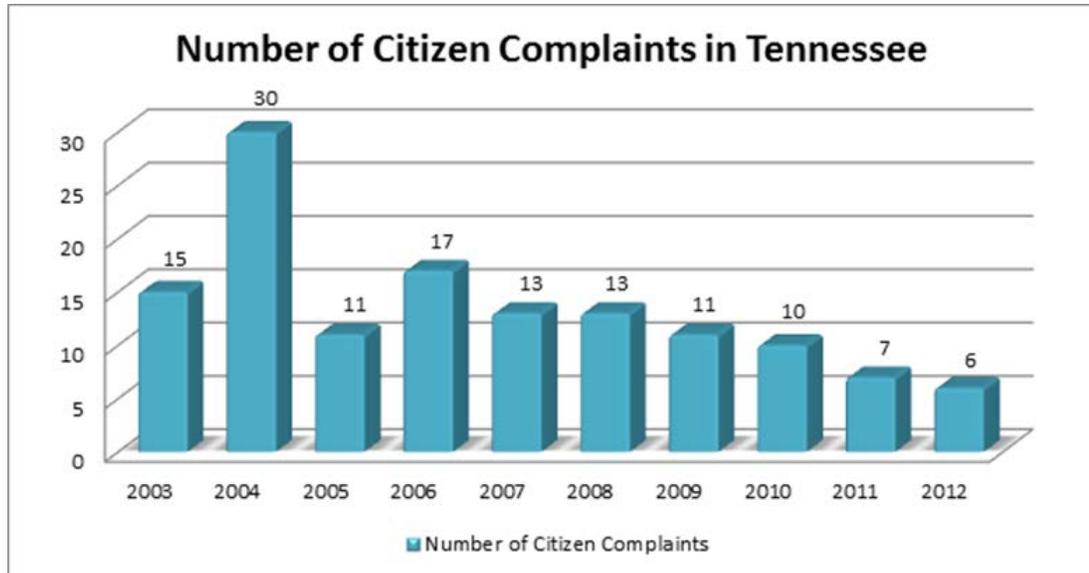
Elk on a reclaimed mining area that was revegetated with a seed mixture designed to provide forage for wildlife.

- **Customer Service**

Citizen's Request for Inspection

The regulations provide citizens the opportunity to request a Federal inspection when the citizen provides a written or oral report giving OSM reason to believe an unauthorized condition, practice, or violation exists which creates an imminent danger to the health or safety of the public, or is causing or could reasonably be expected to cause a significant, imminent environmental harm to land, air, or water resources. KFO is required to investigate these reports and respond to the citizen regarding the OSM investigation findings and associated actions within 10 days of concluding the investigation. The citizen providing the information may also request an informal review of KFO's decisions.

KFO has experienced a steady decline in the numbers of citizen's request for inspections (citizen's complaints) in recent years. During FY 2007, KFO received 13 requests for inspections compared to only six requests received during FY 2012 or an overall reduction of 54 percent (see chart below).



The six complaints received during FY 2012, were oral complaints. Two of these complaints alleged adverse impacts to water. The reclamation specialists investigating the two complaints determined they were valid. However, it was determined that the muddy condition of the stream that was the subject of one of these complaints was likely caused by loggers. A second complaint concerned muddy stream conditions that resulted when the permittee did not maintain a slurry impoundment decant pipe and coal slurry was discharged into the receiving stream. Enforcement action was taken by the reclamation specialist investigating the complaint. The enforcement action required that corrective actions be implemented to protect the stream.

Four complaints alleged dust or mud impacts to a public road. Reclamation specialists conducted investigations but the complaints could not be verified as valid because no significant mining related impacts to the public road were observed.

KFO has provided responses to all complaints received during FY 2012 in accordance with the required timeframes. KFO did not receive any requests for informal review of actions or inaction.

Notice of Intent to Sue (NOI)

Three environmental groups filed NOIs with TDEC on August 22, 2011, and with KFO on October 6, 2011, alleging that National Coal, LLC (National) permits 3148, 3154, and TN-019 have violated and continue to violate, "an effluent standard or limitation" under Section 505(a)(1)(A) of the Act, 33 USC § 1365(a)(1)(A), by failing to comply with the terms of Tennessee Pollution Discharge Elimination System (NPDES) permits for these sites. Plaintiffs contend National is in ongoing and continuing violation of section 301 of

the Act, 33 USC§ 1311, as a result of its discharge of pollutants into Tennessee's waters in excess of the final effluent limits specified in their NPDES permits. Plaintiffs also allege that National is in violation of several conditions of its permits related to the monitoring and reporting of pollutants being discharged from the National mines. In addition, they allege pursuant to SMCRA and as a result of pollution discharges from these mines, National is in violation of 30 CFR §§ 817.41(a) and 817.42 and will continue to violate these provisions in the future. Plaintiffs demand that National come into compliance or provide remedial steps within 60 days as outlined in the NOIs. If National does neither, they will assume the violations will continue and will file a citizen suit under section 505(a)1 of the Clean Water Act (CWA) and under section 520(a)(1) of SMCRA seeking civil penalties, injunctive relief, and a court order compelling National to come into compliance with the law. The same groups filed an additional NOI on February 9, 2012, essentially repeating the above allegations, stating significant new data points and adding new allegations that 1) OSM failed to carry out a non-discretionary duty to adjust performance bonds to account for necessary long-term treatment of selenium discharges, 2) OSM failed to carry out its non-discretionary duty to adequately inspect permitted operations for selenium discharges prior to bond release, and 3) OSM failed to carry out its non-discretionary duties relating to selenium and the SMCRA permitting process. OSM met with the citizen groups on April 12, 2012. The parties agreed to allow Dr. John Tyner, a University of Tennessee professor, to review the existing selenium data. He issued a report on May 17, 2012, finding that the public agencies measure selenium at different locations (based on different interpretations as to where a regulated stream reach begins) and this difference is the primary reason the issue attracted the attention of environmental groups. There has been no further action and it appears the environmental groups have no immediate plans to initiate litigation.

VI. ABANDONED MINE LANDS IN TENNESSEE

- **Title IV of SMCRA: Abandoned Mine Land (AML) Reclamation**

The Tennessee AML program receives Federal funding under the 2006 SMCRA amendment dated December 20, 2006. These changes authorized the State of Tennessee to receive minimum program funding for their 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 implementation of the approved Tennessee Abandoned Mine Land Reclamation (AMLR) Plan.

Based on 2006 SMCRA amendments, Tennessee was required to amend their AML program to reflect statutory, regulatory, policy, procedural, and organizational changes that have occurred since 1984, when the State's AML program amendment was withdrawn. A new program amendment was submitted to OSM by TDEC on April 5, 2011, and included in the Federal Register (FR), ("Tennessee Abandoned Mine Land Program, Proposed Rule", 77 FR 5740, February 6, 2012.). A 30-day public comment period commenced. The amendment was sent to all Federal and State agencies in Tennessee with an interest in the Tennessee AML program. The ARO modified the amendment to reflect comments received, surnamed the document with KFO, and sent it

to headquarters for final review. The final program amendment will be published in the Federal Register.

TDEC manages its program in a cost effective and efficient way. All projects comply with applicable laws and regulations, are well designed and constructed using the best technology available, and are completed with minimal disturbance to the environment. All projects are monitored to ensure projects meet contract specifications, project objectives, and program goals.

In FY 2012, TDEC reclaimed AML features through construction contracts and joint ventures with land owners in accordance with State and Federal law. TDEC reclaimed safety hazards that provided beneficial land reclamation to the community as well as the landowner. TDEC worked with other government agencies and private organizations to leverage additional funding for pollution abatement from mine drainage. Although small in comparison to surrounding states, Tennessee has a diverse and effective AML program. Since 1984, TDEC's AML reclamation program has reclaimed:

- 5,638.5 acres of spoil area,
- 136.8 acres of dangerous slides,
- 1,811 acres of dangerous piles and embankments,
- 1,354.9 acres of dangerous impoundments,
- 64,444 feet of dangerous highwalls,
- 168 hazardous water bodies,
- 57 mine openings; 31 vertical openings; 799 portals. See more information at (<https://eamlis.osmre.gov>)

- **FY 2012 Grant**

The Land Reclamation Section of TDEC was awarded an AML grant for the period March 1, 2012, to February 28, 2015, in the amount of \$3,395,924.94 with subaccounts for \$10,000 administrative costs; \$2,058,456.94 in non-water supply project costs; \$700,000 in water supply project costs; and \$627,468 in AMD set-aside costs.

TDEC requested the reallocation of funds from the administrative costs subaccount to non-water supply projects subaccount for the FY 2009 (\$10,000) and FY 2010 (\$8,792) grants. These amounts were approved and added to their respective grant subaccounts.

- **Acid Mine Drainage Set-Aside**

TDEC set aside \$627,468 in AMD funds on March 1, 2012. The set-aside funding will be used to leverage matching funds from other agencies whenever possible in order to address abandoned mine land AMD problems 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 402 (g)(1)(D) of the Act and 30 CFR 876.12 and are used solely for AMD reclamation.

- **Drawdown Analysis Review**

The Department of Treasury requires that Federal funds be requested, drawn, and expended in an administratively feasible time frame and that funds are used for authorized purposes only. A review of TDEC drawdowns and disbursements of OSM grant funding was included under the FY 2012 OSM/TDEC Performance Agreement. The review is to determine whether the drawdowns and disbursements of Federal funds are in conformity with the Grants Management Common Rule 43 CFR Part 12. The analysis concluded:

- Drawdowns were limited to the minimum amount needed and timed to correspond with the actual, immediate cash requirements of TDEC in order to carry out the approved Tennessee AML Program and cooperative agreements.
- Drawdown timing and amounts were as close as administratively feasible to actual disbursement by TDEC for direct program costs and the proportionate share of any allowable indirect costs.
- Drawdowns were properly accounted for and in accordance with Federal grant and cooperative agreement funding requirements.

- **Public Outreach**

OSM solicited comments from the public and Federal and State agencies on the FY 2012 State/Federal Performance Agreement and Reclamation Plan. A copy of the agreement was placed on the OSM 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 that OSM and TDEC take into consideration the proposed project's affect on historic properties and archaeological sites through a NEPA cultural resources review and Section 106 compliance of the National Historic Preservation Act. TDEC and OSM assured the Commission that OSM followed the NEPA process as part of standard procedure. They had no further concerns. Through the FY 2013 Performance Agreement, signed September 27, 2012, OSM and TDEC will continue to provide outreach to industry and citizens concerned about abandoned mine lands. A signed copy of the agreement can be found at <http://www.arcc.osmre.gov/>.

- **Electronic AML Inventory System (e-AMLIS)**

OSM will maintain the Tennessee AML inventory and associated e-AMLIS system as required by AML – 1. KFO is currently approving all changes made to existing Problem Area Description (PAD) forms as well as new PADs. TDEC provides comments on each action taken within the PAD being amended. TDEC agrees to follow the provisions of OSM Directive AML-1 Abandoned Mine Land Inventory System (AMLIS) which governs implementation and maintenance of the AML Inventory.

- **AML Emergency Program**

The AML Emergency program was transferred to Tennessee on October 1, 2010, as proposed in the FY 2011 Presidential budget. Tennessee agreed to implement the program in accordance with the provisions of the Federal Assistance Manual (FAM). Tennessee had no emergency projects during FY 2012.

- **Title IV Reclamation Projects for FY 2012**

During FY 2012, TDEC completed the following AML projects:

Cherry Branch 2 Reclamation Project in Grundy and Sequatchie Counties, TN: ATP issued on November 18, 2011, and reclamation was complete July 5, 2012. TDEC utilized \$845,611 from the Non-Water Supply cost category of the 2009 AML grant. Reclamation of this site consisted of the elimination of two Priority 2 (P2) hazardous water bodies, 10 P3 pits, 2,200 linear feet of P2 dangerous highwall, and 1,710 linear feet of P3 highwall for a total of 86.9 GPRA acres. The completion of this project reduced the number of people at risk by 63.



Pit 1 - Pre-Reclamation



Pit 1 - Post-Reclamation

Highway 111 Reclamation Project in Van Buren County, TN: ATP issued on March 4, 2011, and reclamation was complete April 16, 2012. TDEC utilized \$805,529 from the Non-Water Supply cost category of the 2009 AML grant. Reclamation of this site consisted of the elimination of two P2 hazardous water bodies, 4.5 acres of P3 water filled pits, 1,700 linear feet of P2 dangerous highwall, 6,300 linear feet of P3 highwall, and 30 acres of P3 spoil area for a total of 89.2 GPRA acres. The completion of this project reduced the number of people at risk by 141.



Pit 2 – Pre-Reclamation



Pit 2 – Post-Reclamation

New River III Waterline Extension Project in Anderson County, TN: Authorization to Proceed (ATP) issued September 23, 2010, and reclamation complete on June 14, 2012 with a total cost of \$305,100 for one GPRA acre. Of the total cost, \$43,000 was funded by the Anderson County Water Authority for inspection cost, project legal fees, permits and advertising, and administration. The impurities found in the tested wells created a public health and potential water quality problem for all persons exposed to the affected water supply sources. The completion of this project is expected to reduce the number of people at risk by 21.



Hickory Creek Waterline Extension Project – Campbell County, TN: ATP issued June 29, 2011, and reclamation was complete on June 22, 2012. Total project cost is \$284,957. Potable water was provided to seven households in the Hickory Creek Lane Community accounting for one GPRA acre. Many of the wells were contaminated by surface and subsurface water sources and were further degraded from water coming from pre-law mining. Secondary Drinking Standards for iron and manganese were exceeded in all wells. Residents related health problems and severe economic burdens attributed to the poor water quality and quantity. The completion of this project reduced the number of people at risk by 45.



Jellico New City Tank Landslide – Campbell County, TN: ATP issued May 10, 2011, and reclamation complete as of September 24, 2012. This project was initially submitted as an emergency, but after review by technical staff was deemed not to rise to the level requiring emergency funding. KFO issued the ATP for slope stabilization caused by a 2010 landslide that occurred approximately 30 feet from Jellico’s 750,000 gallon water storage tank. The slide was considered a Priority 2, Dangerous Slide and received funding of approximately \$300,000 in AML funds from the 2011 Water Supply grant. All incidental costs will be paid by Jellico Electric and Water and the City of Jellico, TN.



Jellico New City Tank Landslide – Post-Reclamation

Stinking Creek Waterline Extension Project – Campbell County, TN: ATP issued on January 23, 2012, and reclamation completed on September 21, 2012. This project provided potable water to six households in the project area by adding 6,920 feet of waterline. Five of six domestic wells had elevated levels of sulfate, iron, and manganese and exceeded drinking water standards.

- **National Environmental Policy Act (NEPA) Compliance Reviews**

During FY 2012, TDEC submitted to OSM four new AML projects for NEPA compliance review and ATP consideration. OSM conducted NEPA compliance reviews of the environmental documents submitted and issued ATPs on four AML projects during FY 2012.

During FY 2012, TDEC submitted and OSM issued ATPs on four projects during the evaluation year. These projects will provide reclamation on 108 acres and include the extension of a county waterline and reclamation of three abandoned surface mines. The projects have a total estimated cost of \$1,664,000.

Two of the projects are complete and two are currently under construction to be completed in FY 2013:

Crab Mountain Reclamation Project – Fentress County, TN: This project will eliminate two acres of a P2 dangerous slide which threatens Crab Mountain Road, a county road connecting two communities. The slide will require the removal of 20,000 cubic yards of slide material which will be used to cap five acres of highly acidic P2 spoil area adjacent to the P2 slide. Approximately \$275,000 of AML funding from the 2011 Tennessee AML Grant Non-Water Supply cost category will be expended on this project.



Slide along road



Spoil Area

Roseanne Ellis Reclamation Project – Overton County, TN: The project is a 20 acre site that has over 4000 feet of abandoned highwalls and pits. Most of the pits have AMD associated with them. Under drains will be constructed to treat AMD and the highwalls will be eliminated during reclamation.



- **AML Non-Emergency Construction Review**

Pre-construction site visit to Bellview 2 Reclamation Project – June 20, 2012
Post-construction site visit to New Highway 111 – June 20, 2012
Active-construction site visit to Cherry Branch II – June 20, 2012
Pre-construction site visit to Roseanne Ellis – May 8, 2012
Pre-construction site visit to Crab Mountain – May 8, 2012
TDEC completed 223 inspections and 63 complaint investigations/project development site visits in FY 2012

- **Title IV Reclamation Proposed Projects for FY 2013**

During FY 2013, the Land Reclamation Section of TDEC will be seeking ATPs for the following projects:

Bellview 2 Reclamation Project is 75 acres of abandoned strip mines in Van Buren County. Reclamation will consist of eliminating twenty hazardous water bodies and 5,450 linear feet of highwall. The water bodies and highwall will be backfilled using on-site spoil. The Land Reclamation Section of TDEC is working with biologists from TWRA and NRCS on developing a wildlife habitat plan for the site.

Cherry Branch 3 Reclamation Project is 46 acres of abandoned strip mines on the Sequatchie and Grundy County line. The site has six water-filled pits with low pH and highwalls associated with most of the water-filled pits. The pits and highwalls will be backfilled during this project using on site spoil material.

Ramsey Lake Reclamation Project is 63 acres of abandoned strip mines located in Grundy County. The site has three water-filled pits with low pH, most of which have highwalls associated with them. On site spoil will be used to backfill the highwalls and pits.

Farmer Hill 3 Reclamation Project is 83 acres of abandoned strip mines located in Grundy County. The site has 14 low pH water-filled pits, most of which have highwalls associated with them. On site spoil will be used to backfill the highwalls and pits.

Dock Hollow Project is a 20 acre site located in Campbell County. The site has five water-filled pits which have a low pH, most of which have highwalls associated with them. One of the pits is located next to a county road and has been used as a dumping site. The pits and highwalls will be backfilled during this project.

- **GIS and AML**

In 2011, KFO developed a complete inventory of AML hazards in Tennessee. This effort entailed scanning, geo-referencing, and digitizing the AML inventory from quadrangle maps on loan from TDEC. KFO worked with TDEC to come up with a schema for housing the AML inventory; digitizing AML features has since commenced. To date, 30

quadrangles have been digitized with attendant geospatial attributes from information provided by the State. Once this project is complete (projected completion date of December 2013), KFO and TDEC will have a complete inventory of all known AML hazards available in a geographical information system (GIS) for the State of Tennessee. This project will provide a more effective implementation of Title IV and Title V of SMCRA through improved efficiencies in determining AML site status and eligibility. This project is being utilized by KFO staff in the review process for the North Cumberland Wildlife Management Area LUM Petition and will be especially useful in the field. TDEC is now receiving support from OSM's Technical Innovation Professional Services (TIPS) and has received GIS training which they are now using for field and office support. TDEC has also provided KFO with new GIS point locations for several AML projects. These point locations were incorporated into the KFO GIS inventory. Thanks to TIPS training, TDEC is willing and able to use and maintain this inventory.

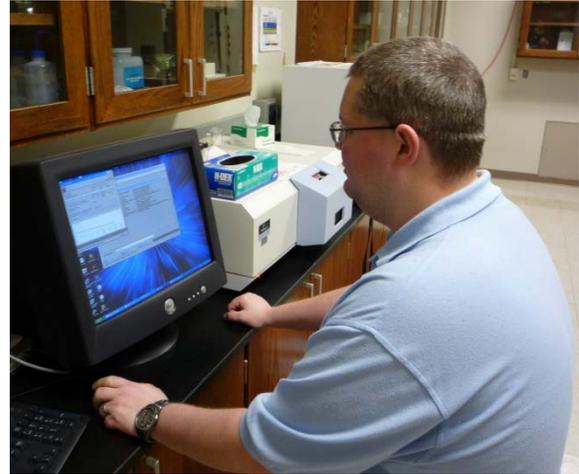
VII. TECHNICAL ASSISTANCE

KFO continues to have a number of its employees, primarily the Technical Group staff, serving on different projects, teams, and assignments that are of common interest to the Appalachian Region and to all of OSM. Several of these technical assistance activities are cooperative efforts with the Program Support Division within the Appalachian Regional Commission. During FY 2012, the Technical Group spent approximately ninety-nine percent of their time on Federal program activities (including the LUM) and one percent on technical assistance activities. The projects and activities, which involve KFO employees, are as follows:

- National Blasting Work Group;
- Instructors for National Technical Training Program Training Courses;
- Instructors for TIPS Training Courses;
- Appalachian Regional Reforestation Initiative;
- KFO Reforestation Initiative;
- Stream Protection Rule and the associated Environment Impact Statement;
- Technical support to OSM's Lexington and Charleston Field Offices for oversight and Federal Lands issues;
- Technical support to Bureau of Land Management on Federal Lands issues such as leasing and NEPA requirements;
- Technical support for joint OSM/State initiative to apply geospatial technology in implementation of the SMCRA regulatory program;
- Technical support to National Park Service and other Federal/State agencies in development of a hydrologic database for the New River watershed;
- Dam Safety Team;
- Impoundments Team;
- North Cumberland Wildlife Management Area LUM Petition;
- ePermitting;
- Geomine.



KFO hydrologist checking dye concentrations in an injection well used to trace ground water movement.



Technical staff member using spectrophotometer to detect low concentrations of dye in ground water.

APPENDIX A

Acronyms used in this Report

Acronyms used in this Report

The following acronyms are used in this report:

AMD	Acid Mine Drainage
AML	Abandoned Mine Land
AMLIS	Abandoned Mine Land Inventory System
e-AMLIS	Electronic Abandoned Mine Land Inventory System
AMLR	Abandoned Mine Land Reclamation
ARCC	Appalachian Regional Coordinating Center
ARO	Appalachian Regional Office
ARRI	Appalachian Regional Reforestation Initiative
ATP	Authorization to Proceed
CCWF	Coal Creek Watershed Foundation, Inc.
CWA	Clean Water Act
EPA	Environmental Protection Agency
EPACS	Electronic Permitting Application Control Solution
ESA	Endangered Species Act
FAM	Federal Assistance Manual
FOCIS	Field Office Comprehensive Information System
FOIA	Freedom of Information Act
FR	Federal Register
FRA	Forestry Reclamation Approach
FY	Fiscal Year
GIS	Geographical Information System
GPRA	Government Performance and Results Act
INE	Inspection and Enforcement
IUL	Inspectable Units List
KFO	Knoxville Field Office
LiDAR	Light Detection And Ranging
LIWA	Local Interagency Working Agreement
LUM	Land Unsuitable for Mining
MEIR	Mine Site Evaluation Inspection Report
MSI	Mine Site Inspection
NCWMA	North Cumberland Wildlife Management Area
NEPA	National Environmental Policy Act
NOI	Notice of Intent to Explore
NOI	Notice of Intent to Sue
NPDES	National Pollution Discharge Elimination System

NPS	National Park Service
OSM	Office of Surface Mining Reclamation and Enforcement
PAD	Problem Area Description
PED/EIS	Petition Evaluation Document / Environmental Impact Statement
SMCRA	Surface Mining Control and Reclamation Act of 1977
TDEC	Tennessee Department of Environment and Conservation
TIPS	Technical Innovation and Professional Services
TVA	Tennessee Valley Authority
TWRA	Tennessee Wildlife Resources Agency
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish & Wildlife Service
UT	University of Tennessee
VISTA	Volunteers in Service to America
WBS	Work Breakdown Structure

APPENDIX B

Tabular Summary of Core Data to Characterize the Program

Tabular Summary of Core Data to Characterize the Program

These tables present data pertinent to mining operations and Federal regulatory activities within Tennessee. The reporting period for the data contained in the tables is October 1, 2011, through September 30, 2012. Additional data used by KFO in its evaluation of performance is available for review in the evaluation files maintained by the KFO.

Table 1: Coal Production in Tennessee

Table 2: KFO Inspectable Units in Tennessee

Table 2: KFO Inspectable Units in Georgia

Table 3: Permits Allowing Special Categories of Mining *(Not Completed)*

Table 4: KFO Permitting Activity in Tennessee

Table 5: Off-Site Impacts in Tennessee

Table 5: Off-Site Impacts in Georgia

Table 6: Surface Coal Mining and Reclamation Activity in Tennessee

Table 7: KFO Bond Forfeiture Activity

Table 8: KFO Staffing

Table 9: Funds Granted to State by OSM

Chart 9A: Funds Granted to State by OSM (2011-2012)

Table 9A: Funds Granted to State by OSM (2011-2012)

Table 10: KFO Inspection Activity in Tennessee

Table 10: KFO Inspection Activity in Georgia

Table 11: KFO Enforcement Activity in Tennessee

Chart 11A: KFO Enforcement Activity in Tennessee (2011-2012)

Table 11A: KFO Enforcement Activity in Tennessee (2011-2012)

Table 11: KFO Enforcement Activity in Georgia

Chart 11A: KFO Enforcement Activity in Georgia (2011-2012)

Tabular Summary of Core Data to Characterize the Program (Continued)

Table 11A: KFO Enforcement Activity in Georgia (2011-2012)

Table 12: Lands Unsuitable Activity

Chart 12A: Lands Unsuitable Activity (2011-2012)

Table 12A: Lands Unsuitable Activity (2011-2012)

Chart 12 B: Lands Unsuitable Acres Declared Unsuitable (2011-2012)

Table 12B: Lands Unsuitable Acres Declared Unsuitable (2011-2012)

TABLE 1

COAL PRODUCED FOR SALE , TRANSFER, OR USE ^A (Millions of short tons)			
Calendar Year	Surface Mines	Underground Mines	Total
2010	1.2	0.6	1.8
2011	1.0	0.4	1.4

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

TABLE 2

PERMANENT PROGRAM PERMITS, INITIAL PROGRAM SITES, INSPECTABLE UNITS, AND EXPLORATION														
Mines and Other Facilities	Numbers of Permanent Program Permits and Initial Program Sites								Insp. Units ^{1, 2}	Area in Acres ³				Total Area
	Permanent Program Permits				Initial Program Sites					Permanent Program Permits (Permit Area)		Initial Program Sites		
	Active	Inactive	Abandoned	Total	Active	Inactive	Abandoned	Total		Federal Lands	State/Tribal and Private Lands	Federal Lands	State/Tribal and Private Lands	
Surface Mines	41	8	29	78	2	0	92	94	172	201	23,987	0	3,415	27,603
Underground Mines	19	12	15	46	0	0	22	22	68	161	853	0	159	1,173
Other Facilities	19	16	3	38	1	0	2	3	41	0	2,164	0	14	2,178
Total	79	36	47	162	3	0	116	119	303	362	27,004	0	3,588	30,954
Permanent Program Permits and Initial Program Sites (Number on Federal Lands: 5)				Total Number:		281		Average Acres per Site:				110.16		
Average Number of Permanent Program Permits and Initial Program Sites per Inspectable Unit (IU):				Total Number:		1.00		Average Acres per IU:				110.16		
Permanent Program Permits in Temporary Cessation:				Total Number:		20		Number More than 3 Years:				8		
EXPLORATION SITES				Total Number of Sites				Sites on Federal Lands ⁴				Exploration Inspectable Units		
Exploration Sites with Permits:				0				0				0		
Exploration Sites with Notices:				22				0				22		
¹ 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. ² Total Inspectable Units calculation includes Exploration Sites Inspectable Units ³ 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. ⁴ 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														

TABLE 2

PERMANENT PROGRAM PERMITS, INITIAL PROGRAM SITES, INSPECTABLE UNITS, AND EXPLORATION														
Mines and Other Facilities	Numbers of Permanent Program Permits and Initial Program Sites								Insp. Units ^{1, 2}	Area in Acres ³				Total Area
	Permanent Program Permits				Initial Program Sites					Permanent Program Permits (Permit Area)		Initial Program Sites		
	Active	Inactive	Abandoned	Total	Active	Inactive	Abandoned	Total		Federal Lands	State/Tribal and Private Lands	Federal Lands	State/Tribal and Private Lands	
Surface Mines	0	0	0	0	0	0	4	4	4	0	0	0	127	127
Underground Mines	0	0	0	0	0	0	2	2	2	0	0	0	14	14
Other Facilities	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	6	6	6	0	0	0	141	141
Permanent Program Permits and Initial Program Sites (Number on Federal Lands: 0)				Total Number:				6		Average Acres per Site:				23.50
Average Number of Permanent Program Permits and Initial Program Sites per Inspectable Unit (IU):				Total Number:				1.00		Average Acres per IU:				23.50
Permanent Program Permits in Temporary Cessation:				Total Number:				0		Number More than 3 Years:				0
EXPLORATION SITES			Total Number of Sites				Sites on Federal Lands ⁴			Exploration Inspectable Units				
Exploration Sites with Permits:			0				0			0				
Exploration Sites with Notices:			0				0			0				

¹An 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.

²Total Inspectable Units calculation includes Exploration Sites Inspectable Units

³When 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.

⁴The 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

TABLE 3

PERMITS ALLOWING SPECIAL CATEGORIES OF MINING			
Special Category of Mining	30 CFR Citation Defining Permits Allowing Special Mining Practices	Numbers of Permits	
		Issued During EY	Total Active and Inactive Permits
Experimental Practice	785.13(d)	0	0
Mountaintop Removal Mining	785.14(c)(5)	0	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 ¹	App. Rec.	Issued/ Appvd	Acres	App. Rec.	Issued/ Appvd	Acres
New Permits	2	3	1,406	2	0	0	0	0	0	4	3	1,406
Renewals	1	0		2	0		2	6		5	6	
Transfers, sales, and assignments of permit rights	0	2		0	7		0	4		0	13	
Small operator assistance	0	0		0	0		0	0		0	0	
Exploration permits										1	0	
Exploration notices ²											11	
Revisions that do not add acreage to the permit area		62			5			10			77	
Revisions that add acreage to the permit area but are not incidental boundary revisions	0	0	0	1	1	153	0	0	0	1	1	153
Incidental boundary revisions	11	10	40	0	2	4	0	0	0	11	12	44
Totals	14	77	1,446	5	15	157	2	20	0	22	123	1,603
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:		1,463.0	
Permits in temporary cessation							Notices received:	4	Terminations:		1	
Midterm permit reviews completed that are not reported as revisions							Number:	6				
¹ Includes only the number of acres of proposed surface disturbance												
² 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	0	0	0	0	0	0	1	0	0	0	0	0
Land Stability	2	0	0	0	0	1	0	1	0	0	0	0	0
Hydrology	24	0	0	0	2	0	0	13	8	2	0	0	0
Encroachment	2	2	0	0	0	0	0	0	0	0	0	0	0
Other	1	1	0	0	0	0	0	0	0	0	0	0	0
Total	30	3	0	0	2	1	0	15	8	2	0	0	0

Total Number of Inspectable Units²: 312
 Inspectable Units with one or more off-site impacts: 18
 Inspectable Units free of off-site impacts: 294 % of Inspectable Units free of off-site impacts¹: 94

² 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

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	1	0	0	0	0	1	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
Total	1	0	0	0	0	1	0	0	0	0	0	0	0

Total Number of Inspectable Units³: 3
 Inspectable Units with one or more off-site impacts: 1
 Inspectable Units free of off-site impacts: 2 % of Inspectable Units free of off-site impacts¹: 67

³ Total number of Inspectable Units is (1) the number of bond forfeiture sites that were reclaimed during the Evaluation Year and (2) the number of bond forfeiture sites that were unreclaimed at the end of the Evaluation Year

TOTAL OFF-SITE IMPACTS INCLUDING BOND FORFEITURE SITES													
RESOURCES AFFECTED		People			Land			Water			Structures		
DEGREE OF IMPACT		Minor	Moderate	Major	Minor	Moderate	Major	Minor	Moderate	Major	Minor	Moderate	Major
TYPE OF IMPACT EVENT	NUMBER OF EVENTS												
Blasting	1	0	0	0	0	0	0	1	0	0	0	0	0
Land Stability	3	0	0	0	0	2	0	1	0	0	0	0	0
Hydrology	24	0	0	0	2	0	0	13	8	2	0	0	0
Encroachment	2	2	0	0	0	0	0	0	0	0	0	0	0
Other	1	1	0	0	0	0	0	0	0	0	0	0	0
Total	31	3	0	0	2	2	0	15	8	2	0	0	0

Total Number of Inspectable Units⁴: 315
 Inspectable Units with one or more off-site impacts: 19
 Inspectable Units free of off-site impacts: 296 % of Inspectable Units free of off-site impacts¹: 94

¹ % 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.

⁴ 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
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Number of Inspectable Units ² :		6											
Inspectable Units with one or more off-site impacts:		0											
Inspectable Units free of off-site impacts:		6											
											% of Inspectable Units free of off-site impacts ¹ :		100
² 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													
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
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Number of Inspectable Units ³ :		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 ¹ :		0
³ Total number of Inspectable Units is (1) the number of bond forfeiture sites that were reclaimed during the Evaluation Year and (2) the number of bond forfeiture sites that were unreclaimed at the end of the Evaluation Year													
TOTAL OFF-SITE IMPACTS INCLUDING BOND FORFEITURE SITES													
RESOURCES AFFECTED		People			Land			Water			Structures		
DEGREE OF IMPACT		Minor	Moderate	Major	Minor	Moderate	Major	Minor	Moderate	Major	Minor	Moderate	Major
TYPE OF IMPACT EVENT	NUMBER OF EVENTS												
Blasting	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
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Number of Inspectable Units ⁴ :		6											
Inspectable Units with one or more off-site impacts:		0											
Inspectable Units free of off-site impacts:		6											
											% of Inspectable Units free of off-site impacts ¹ :		100
¹ % 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.													
⁴ 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		
2,631		0			171	Phase I	2,802
	0			971		Phase II	971
			1,463			Phase III	1,463
Cumulative Total Acres Released under All Bond Release Phases at the End of the Evaluation Year					6,395		
Number of Permanent Program Permits with Jurisdiction Terminated Under Phase III Bond Release During the Evaluation Year					9	Other Releases - Acres	
Initial Program Sites with Jurisdiction Terminated During the Evaluation Year					2	Administrative Adjustments	0
Number of Inspectable Units Removed					12	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							1,450
Total Area Bonded for Disturbance					21,895	21,707	(188)
Area Bonded for Disturbance without Phase I Bond Release					17,663	19,479	1,816
Area Bonded for Disturbance for which Phase I Bond Release Has Been Approved					4,369	3,536	(833)
Area Bonded for Disturbance for which Phase II Bond Release Has Been Approved					1,645	2,609	964
Area Bonded for Disturbance with Bonds Forfeited During Evaluation Year							175
Area Bonded for Remining					0	0	0
Areas of Permits Disturbed by Surface Coal Mining and Reclamation Operations							
Disturbed Area					435	17,402	16,967

TABLE 7

BOND FORFEITURE ACTIVITY (Permanent Program Permits)			
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) ¹	0		0
Sites with bonds forfeited and collected during the current Evaluation Year	3	88,600	175
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 ¹	3		175
Sites with bonds forfeited but un-collected at the end of the current Evaluation Year	0		0
Forfeiture Sites with Long-Term Water Pollution			
Bonds forfeited, lands reclaimed, but water pollution is still occurring	5		
Bonds forfeited, lands reclaimed, and water treatment is ongoing	0		
Surety/Other Reclamation Activity In Lieu of Forfeiture			
Sites being reclaimed by surety/other party at the start of the current Evaluation Year (i.e., the end of previous Evaluation Year) ²	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 ³	0		0
Sites being reclaimed by surety/other party at the end of the current Evaluation Year ²	0		0
¹ Includes data only for those forfeiture sites not fully reclaimed.			
² Includes all sites where surety or other party has agreed to complete reclamation and the site is not fully reclaimed.			
³ 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

REGULATORY AND AML PROGRAMS STAFFING	
Function	Number of FTEs
Regulatory Program	
Permit Review and Maintenance	9.00
Inspection	10.00
Other (supervisory, clerical, administrative, fiscal, personnel, etc.)	14.00
Regulatory Program Total	33.00
AML Program Total	1.00
TOTAL	34.00

TABLE 9

FUNDS GRANTED TO STATE OR TRIBE BY OSM (Actual Dollars Rounded to the Nearest Dollar)			
Type of Funding	Federal Funds Awarded	Total Program Cost	Federal Funds Awarded as a Percentage of Total Program Costs
Regulatory Funding			
Administration and Enforcement Grant	0		
Other Regulatory Funding, if applicable	0		
Subtotal (Regulatory Funding)	0	0	
Small Operator Assistance Program Grant Funding	0	0	
Abandoned Mine Land Reclamation Funding	3,395,925	3,395,925	100
Watershed Cooperative Agreement Program	0	0	
TOTAL	3,395,925		

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

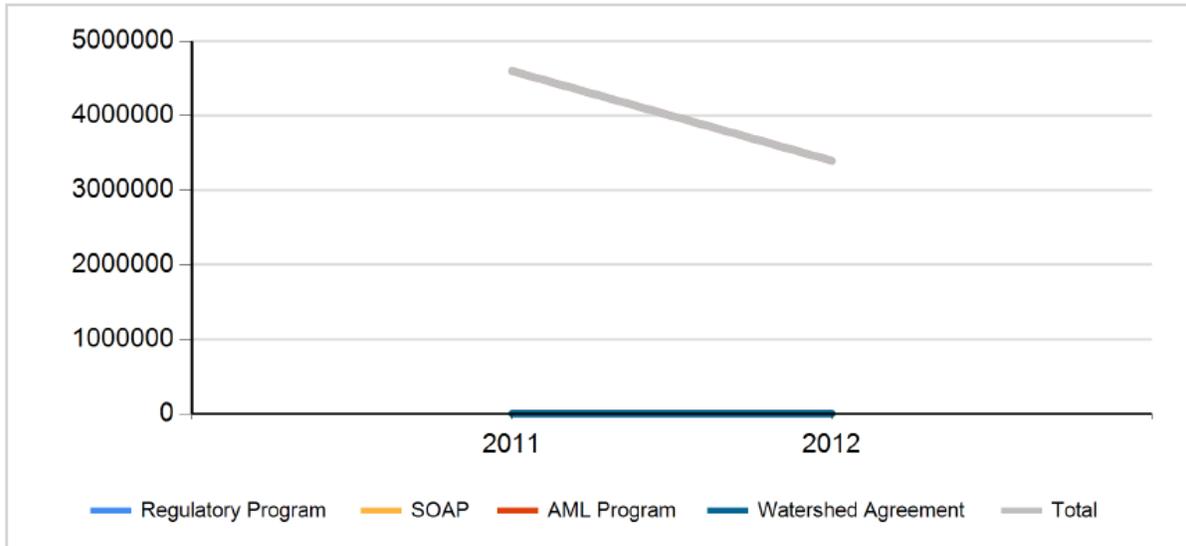


TABLE 9A

FUNDS GRANTED TO STATE OR TRIBE BY OSM				
Year	Regulatory Program	SOAP	AML Program	Total
2011	0	0	4,600,437	4,600,437
2012	0	0	3,395,925	3,395,925

TABLE 10

STATE INSPECTION ACTIVITY								
Permits and sites	Number of inspections conducted		Percent of required inspections conducted ¹		Permits and sites for which State met required inspection frequency			
	Complete inspections	Partial inspections	Complete inspections	Partial inspections	Complete inspections		All inspections	
COAL MINES AND FACILITIES					Number	%	Number	%
Active	333	836	100	100	91	111.0	91	111.0
Inactive	153	45	100	100	40	111.1	40	111.1
Abandoned	12	4	7	6	10	6.1	9	5.5
TOTALS	498	885	76	100	141	50.2	140	49.8
Exploration sites with permits ²	0	0						
Exploration sites with notices ²	53	20						

¹ Calculated on a site-specific basis. Excess complete inspections are considered partial inspections. For each site, any inspections in excess of the total number required by the approved program are not included.

² 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.

TABLE 10

STATE INSPECTION ACTIVITY								
Permits and sites	Number of inspections conducted		Percent of required inspections conducted ¹		Permits and sites for which State met required inspection frequency			
	Complete inspections	Partial inspections	Complete inspections	Partial inspections	Complete inspections		All inspections	
COAL MINES AND FACILITIES					Number	%	Number	%
Active	0	0	0	0	0	0.0	0	0.0
Inactive	0	0	0	0	0	0.0	0	0.0
Abandoned	0	0	0	0	0	0.0	0	0.0
TOTALS	0	0	0	0	0	0.0	0	0.0
Exploration sites with permits ²	0	0						
Exploration sites with notices ²	0	0						

¹ Calculated on a site-specific basis. Excess complete inspections are considered partial inspections. For each site, any inspections in excess of the total number required by the approved program are not included.

² 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.

TABLE 11

STATE OR TRIBAL ENFORCEMENT ACTIVITY		
Type of Enforcement Action	Number of Actions ¹	Number of Violations ¹
Notice of Violation	87	120
Failure-to-Abate Cessation Order	12	20
Imminent Harm Cessation Order	2	2

¹ Does not include actions and violations that were vacated.

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

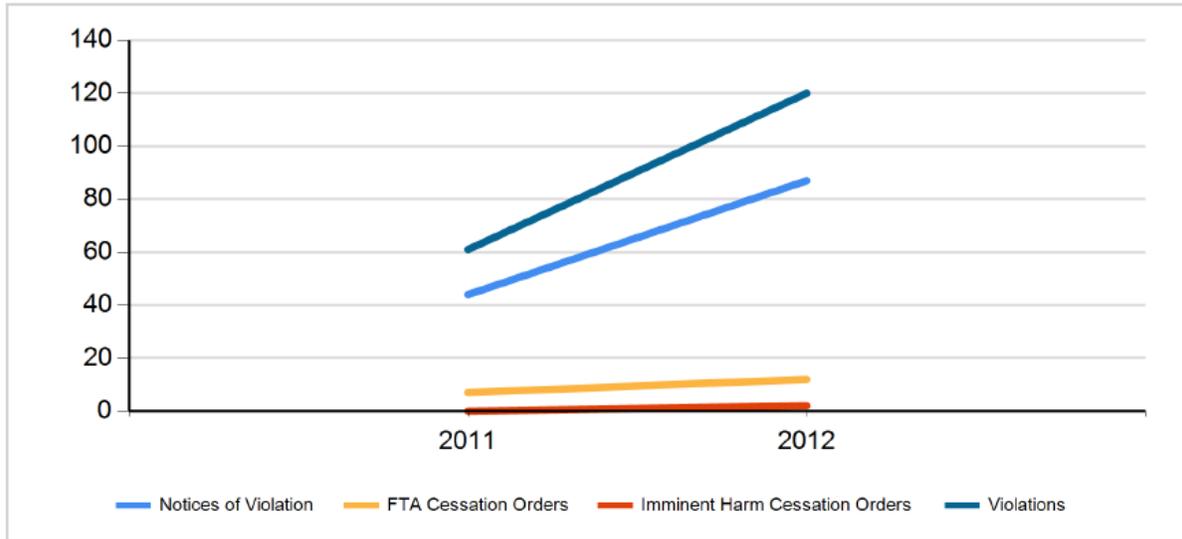


TABLE 11A

STATE OR TRIBAL ENFORCEMENT ACTIVITY				
Year	Notices of Violation	Violations	FTA Cessation Orders	Imminent Harm Cessation Orders
2011	44	61	7	0
2012	87	120	12	2

TABLE 11

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

¹ Does not include actions and violations that were vacated.

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

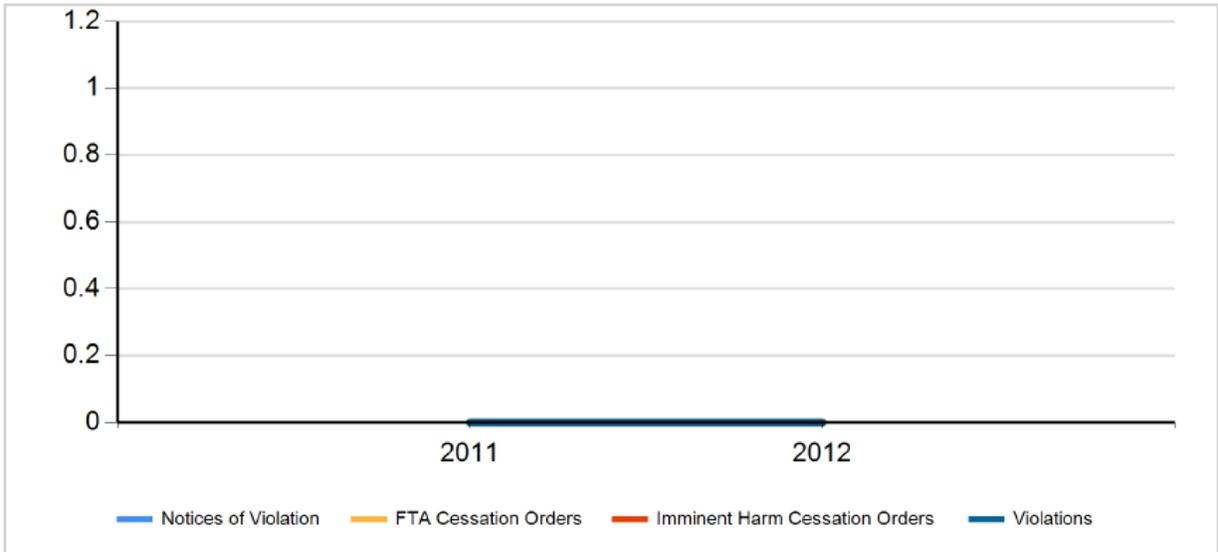


TABLE 11A

STATE OR TRIBAL ENFORCEMENT ACTIVITY				
Year	Notices of Violation	Violations	FTA Cessation Orders	Imminent Harm Cessation Orders
2011	0	0	0	0
2012	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**

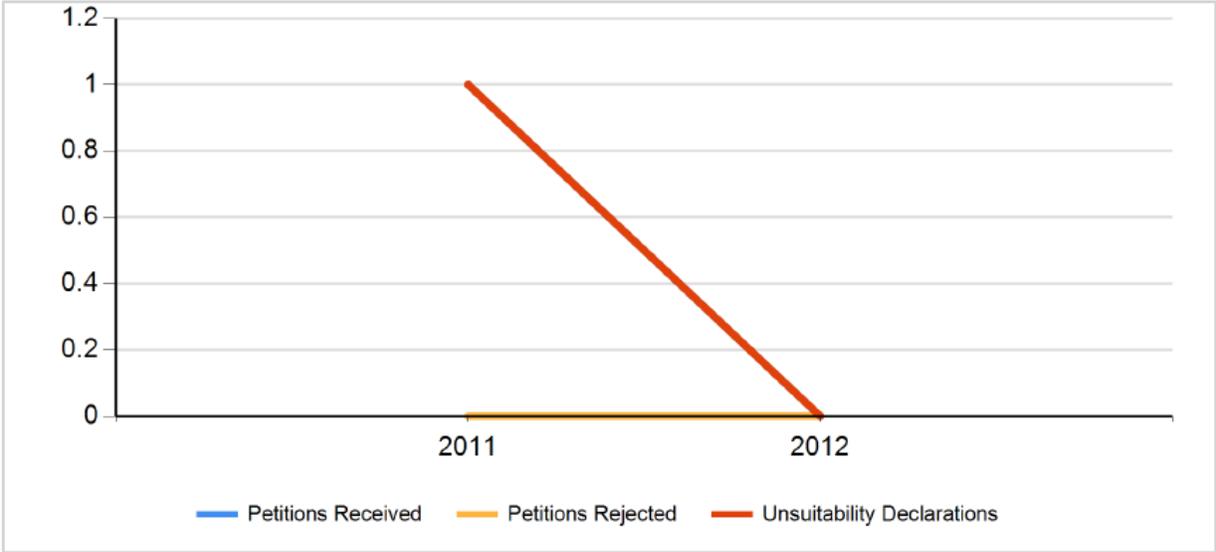


TABLE 12A

LANDS UNSUITABLE ACTIVITY			
Year	Petitions Received	Petitions Rejected	Unsuitability Declarations
2011	1	0	1
2012	0	0	0

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

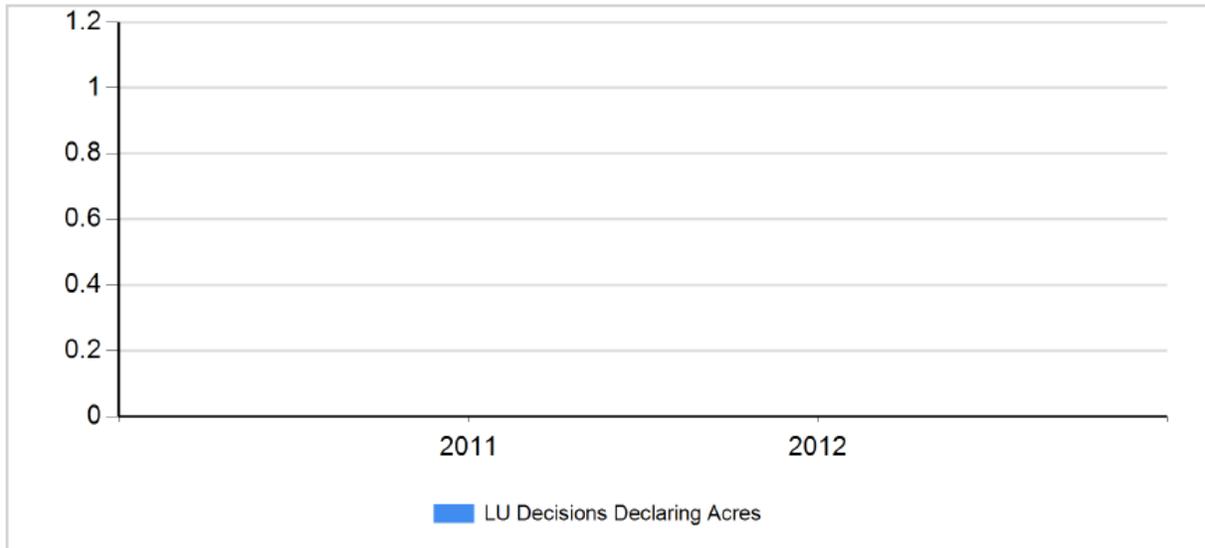


TABLE 12B

ACRES DECLARED UNSUITABLE	
Year	Acres Declared Unsuitable
2011	0.0
2012	0.0