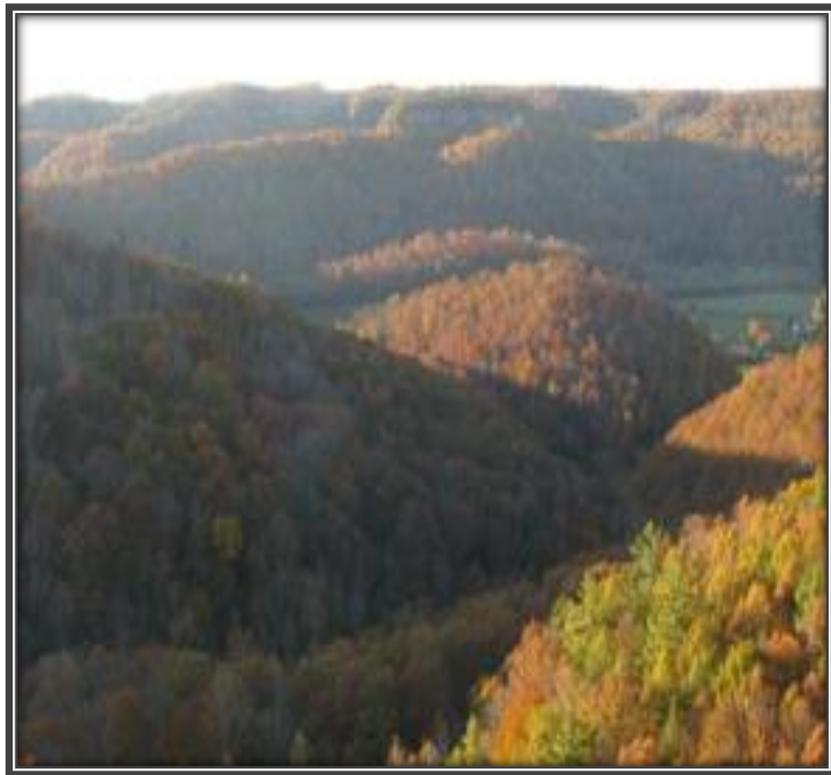


Kentucky Department for Natural Resources

Annual Report Fiscal Year 2012



Commonwealth of Kentucky
Energy and Environment Cabinet
Department for Natural Resources



LETTER FROM THE COMMISSIONER

It is my pleasure to share with you the Kentucky Department for Natural Resource's *Annual Report* for Fiscal Year 2012. The department continues to face challenges related to funding cuts that have resulted in overall staffing decreases which in turn resulted in the department doing more work with fewer employees. The department has challenged its employees to work together to maintain the high level of service the citizens of the Commonwealth deserve.

This is the department's third annual report and will highlight the accomplishments of the department over the past year and will also allow you to judge the progress made in the areas the department regulates. The report will provide clear and factual information to keep interested citizens well informed on the status of the natural resources of the Commonwealth.

The past year posed many high impact challenges ranging from the tornadic destruction of the Morgan County Tree Nursery to instituting necessary changes to the coal miner drug testing program in response to legislative action from the 2012 legislative session.

Please enjoy this informative report and reflect on the many ways the Commonwealth's natural resources impact your own life and how developing trends could impact you in the future.

Sincerely,

Steve Hohmann
Commissioner

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EXECUTIVE SUMMARY

The Department for Natural Resources (DNR) is a highly diversified agency overseeing many different aspects of Kentucky's natural resources. The programs range from administering the surface coal mining regulatory program, protecting and enhancing the forest resources, ensuring the safety of the coal miners of the Commonwealth, administering the Commonwealth's oil and gas program, reclaiming abandoned mine lands, preserving unique heritage land properties, and providing leadership in agricultural conservation. The mission of the varied programs of the department ensures the natural resources of the Commonwealth are protected, conserved and enhanced. Listed below are some of the notable achievements for Fiscal Year 2012.

Notable Achievements

- The Division of Forestry (KDF) celebrated its 100th anniversary in 2012. To help commemorate KDF's Centennial and to acknowledge its employees both past and present, Governor Steve Beshear signed a proclamation declaring 2012 as *The Year of Kentucky's Forests*. The anniversary was acknowledged during the 2012 legislative session by the House of Representatives in HR 105 and the Senate in SR 107.
- The KDF operated two tree seedling nurseries harvesting approximately 4 million seedlings, which were sold to various public and private organizations that planted them for timber production, wildlife habitat, erosion control, and scenic beauty. The division suffered a dramatic and costly loss at the Morgan County Nursery on March 2, 2012 when a tornado demolished most of the facilities at that location near West Liberty. Rallying despite bad weather, division employees quickly salvaged harvested tree seedlings, accomplished a major cleanup, and began the lengthy challenge of rebuilding the nursery operation.
- The KDF acquired its 10th state forest in partnership with the Kentucky Department of Fish and Wildlife Resources (KDFWR). The Big Rivers Wildlife Management Area and State Forest consists of 2,484 acres located in Union County and is jointly owned and managed by KDFWR. The ten state forests managed by the KDF, currently encompassing 43,713 acres, were awarded *American Tree Farm System® Certification* through the Kentucky Center for Forest and Wood Certification's Independently Managed Group.
- The Kentucky Heritage Land Conservation Fund (KHLCF) provided funds to protect in perpetuity more than 5,000 acres of unique and significant natural land areas. The properties included the 2,500 acre Big Rivers State Forest and Wildlife Management Area in Union County; 400-acre Lily Mountain Nature Preserve in Estill County; 900-acres on the Little South Fork River in Wayne County; 80-acres to expand the Shelby County

Trails Park; and the 46-acre Frenchman Knob Preserve in Hart County. Additional acquisitions this year were also made by the Livingston County Fiscal Court and the Kentucky State Parks.

- The DNR, in concert with the Department for Environmental Protection, participated in a signing ceremony with government leaders from Indiana and Ohio to initiate the *Ohio River Basin Water Quality Trading Project*, the first interstate trading agreement of its kind. This agreement put in place a plan for trading of pollution credits and is designed to reduce water pollution in the Ohio River.
- The Division of Conservation successfully implemented the *Mississippi River Basin Initiative (MRBI)*, a project to help Kentucky landowners implement conservation and management practices that avoid, control and trap nutrient runoff from agricultural land. The program is active in the following watersheds: Licking River, Lower Green River, Mayfield Creek, and the Red River Watershed. Forty-one contracts, totaling \$1,592,915, have been approved for Kentucky landowners encompassing 5,148 acres.
- The Division of Conservation assisted the Fox Creek Conservancy District in Fleming County in securing more than \$3 million in federal funds to correct a serious safety issue with the local watershed structure. The previous earthen dam was updated to a roller compacted concrete dam designed to meet high hazard dam safety requirements. It was the first of its kind in Kentucky and strengthens the dam while also extending its lifespan.
- The Division of Abandoned Mine Lands (AML) reclaimed 223 acres, positively affecting the health and safety of an estimated 2,200 citizens of the Commonwealth and significantly improving the water quality in over 9.5 miles of stream. More than 83 miles of waterline was installed with AML funding, providing clean potable water to 1,148 coalfield residents. Additionally, \$2.5 million in funding was provided for the construction of a new Paintsville Lake Water Treatment Plant.
- The AML successfully absorbed the emergency reclamation program from the federal Office of Surface Mining. This mission assumption required a formal reorganization, new office and staffing, development of internal operating procedures, and integration into the division's overall reclamation duties. During this fiscal year, the division completed 18 emergency projects at a cost of \$3,365,536.
- The Office of Mine Safety and Licensing supports the Underground Mine Mapping Information System (MMIS), which offers immediate online access to geo-referenced underground mine maps to the public, resource extraction industries, and governmental agencies. As of June 30, 2012, the database contained: 74,688 total scans of which 32,538 were transmittal documents and 39,909 were maps. The number of geo-referenced maps has reached 34,989. The website averaged approximately 13,000 hits a day and 400,000 hits a month for the first two quarters in 2012. Fifty to seventy-five maps are downloaded each day.

- The Division of Technical and Administrative Support developed the business proposal and obtained from the Kentucky General Assembly \$972,000 to improve the electronic inspection, workflow, and document management systems within the Office of Mine Safety and Licensing.
- The department developed and implemented the most comprehensive water quality monitoring network in the Commonwealth incorporating 133 sampling sites in 363 watersheds to assess the impact of coal mining in both the east and west coal fields. The collected statistics are incorporated into a major data base to be shared with both government and private users.



Upper Green River Biological Preserve (Hart County).

INTRODUCTION

The Department for Natural Resources is one of three departments within the Energy and Environment Cabinet. The mission of the agency is to:

Improve the quality of life for all Kentuckians by protecting our land, air, and water resources; utilizing our natural resources in an environmentally conscientious manner; creating environmentally responsible ways of managing, conserving, and sustaining our resources for future generations.

The department developed a set of goals and objectives to work toward achieving this mission, which is an integral part of the strategic mission of the cabinet. These goals and objectives are:

DNR GOAL 1. Natural resources development activities such as agriculture, oil and gas drilling, logging and mining are done in an environmentally responsible manner.

Objective 1 – Ensure that requirements of the Surface Mining Control and Reclamation Act (SMCRA) of 1977 and the Clean Water Act (CWA), as it applies to mining operations, are met for all Kentucky mining operations.

Objective 2 – Encourage citizen participation in coal mine permitting and enforcement processes.

Objective 3 – Ensure that logging operations employ measures to protect water quality.

Objective 4 – Reduce residual impacts from pre-SMCRA mining by using the additional grant funds from 2006 SMCRA Amendments to increase the number of AML reclamation projects, Acid Mine Drainage (AMD) projects and water supply projects.

Objective 5 – Evaluate the current Division of Oil and Gas regulatory program to ensure it is adequate to prevent waste, is protective of the mineral owners whose properties are adjacent to active operations, and is stringent enough to protect the environment, while encouraging responsible development and compliant production of crude oil and natural gas resources.

DNR GOAL 2. Support statewide efforts to develop alternate energy sources and carbon sequestration opportunities.

Objective 1 – Enhance Kentucky’s forest resources to improve their contributions to the environment and economy through management and reforestation activities.

Objective 2 – Promote reforestation (according to the Forestry Reclamation Approach) and wildlife habitat enhancement as the preferred choice for post-mining land uses to provide for enhanced wildlife habitat, recreational opportunities, high-value hardwoods for timber production, improved hydrologic conditions, and sequestration of carbon as a means to control greenhouse gas accumulation.

Objective 3 – Support the use of Agriculture Water Quality Act plans and practices in the development and production of biofeedstocks for energy production.

Objective 4 – Increase the adoption of agricultural best management practices for proper conservation and wise use of Kentucky’s soil, water and other natural resources.

DNR GOAL 3. The natural resources of Kentucky are protected, managed and enhanced to provide maximum benefits to the people and economy of Kentucky.

Objective 1 – Establish programs and partnerships to reduce the incidence and impact of wildland fires in Kentucky.

Objective 2 – Protect Kentucky’s forest resources from environmental threats such as fires, pests and diseases.

Objective 3 – Protect prime farmland for agricultural production.

Objective 4 – Promote the establishment of new wetland areas as a part of natural resources development activities under the guidance of the Wetlands Working Group.

Objective 5 – Promote stewardship of Kentucky’s natural resources.

Objective 6 – Kentucky Heritage Land Conservation Fund (KHLCF) will continue to promote the conservation and management of ecologically significant lands throughout the Commonwealth.

DNR GOAL 4. Coal mining, logging, firefighting and agricultural activities are performed in a safe manner.

Objective 1 – Prevent flyrock incidents related to coal and non-coal mining.

Objective 2 – DNR divisions will provide training to increase workplace safety and reduce worker accidents and injuries.

Objective 3 – Reduce serious mine accidents and fatalities.

Objective 4 – Upon request of any Kentucky underground coal mine licensee, provide MSHA-mandated mine rescue team coverage that complies with the increased training and contest participation requirements of the federal MINER Act.

Objective 5 – Assist Water Conservancy Districts to address the continuing issue of Conservancy District dams that need maintenance, breach analysis, or emergency action plans.

DNR GOAL 5. DNR regulatory programs must remain responsive to the changing requirements of related federal environmental programs, while remaining consistent with state regulatory requirements.

Objective 1 – Improve the efficiency of regulatory processes and programs through elimination of regulatory overlaps, duplication, inefficiencies and inconsistencies between DNR and other state or federal agencies.

Objective 2 – Evaluate current oil and gas regulatory programs and requirements to determine if changes are needed to address changing conditions or responsibilities.

Objective 3 – Maintain and improve communications with other state and federal agencies.

DNR GOAL 6. DNR’s human, physical, and fiscal resources are efficiently and effectively managed to maintain a high level of service to the citizens of Kentucky in all DNR program areas.

Objective 1 – Ensure the competency, consistency and efficiency of new and existing DNR program staff and citizen volunteers through training.

Objective 2 – Continue to provide guidance and equipment to DMRE’s Explosives and Blasting Branch to increase their efficiency and overall compliance with blasting regulations.

Objective 3 – Improve efficiency and accuracy of DMRE penalty assessments.

Objective 4 – Where feasible, use electronic methods of communication with the DNR regulated community and the public to save time and expense of mailing.

Objective 5 – Pursue the feasibility of fee and assessment increases to provide additional funding to departmental programs.

Objective 6 – Ensure accountability of DNR offices and programs.

Objective 7 – Support the information technology needs of DNR to allow its programs to gain efficiencies through the use of electronic communications, inspections, data collection and storage, workflow, computer modeling, GIS applications, and electronic reporting.

Objective 8 – Provide administrative support and guidance to the department.

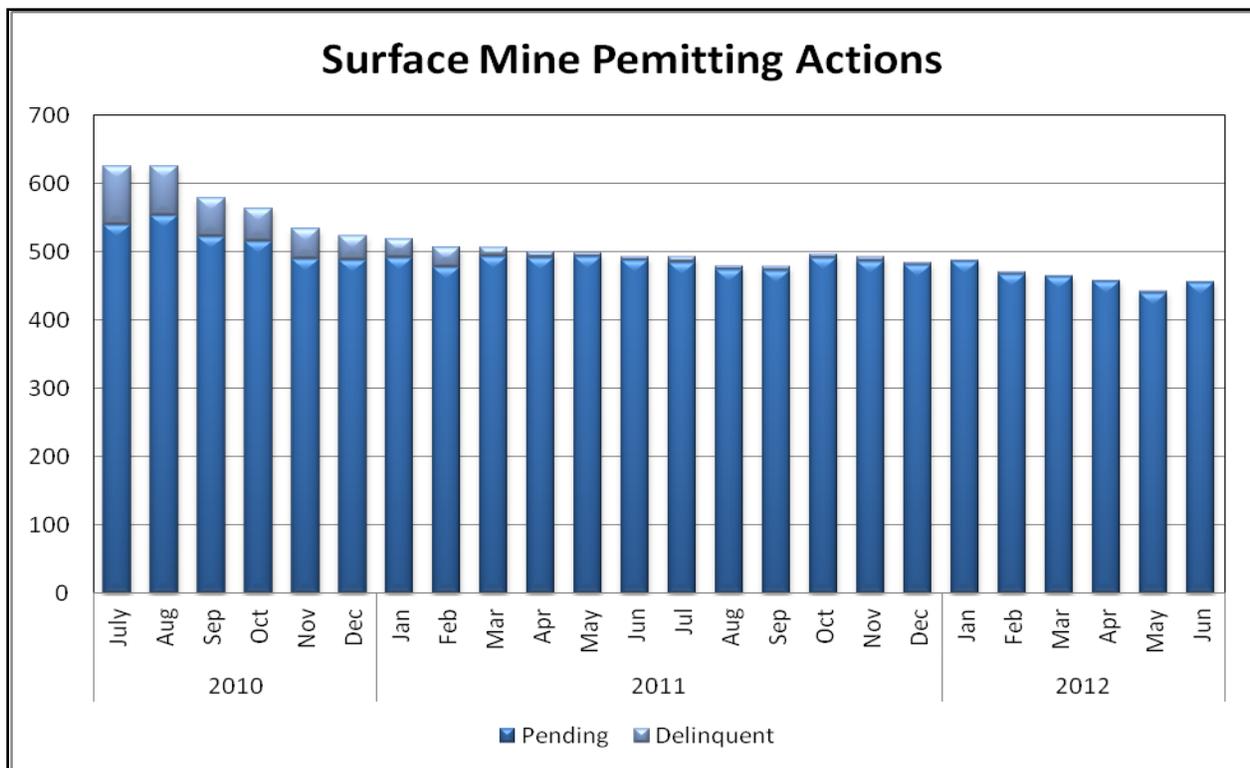


Tygarts State Forest (Carter County)

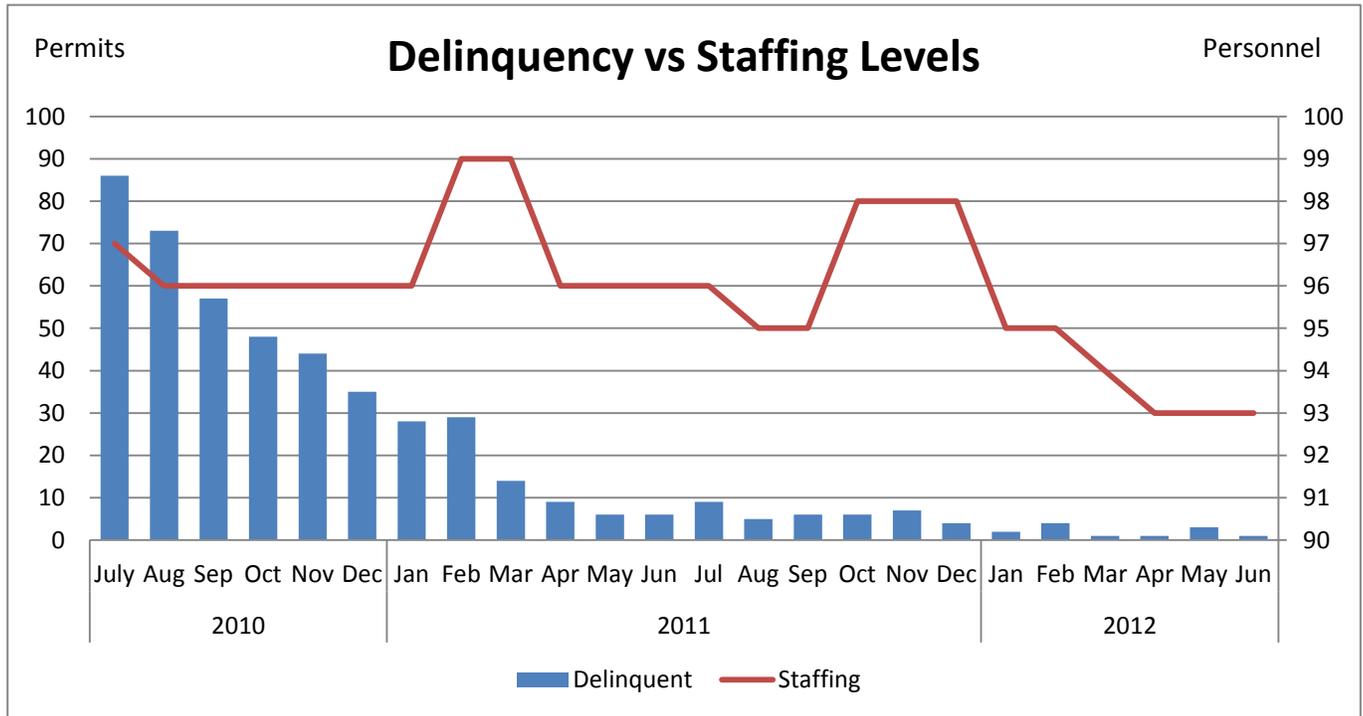
The Department for Natural Resources, through its Division of Mine Permits and Division of Oil and Gas, administers permitting programs for the extraction of natural resources within the Commonwealth. Efficient execution of these permitting programs is the first step in ensuring the Commonwealth's resources are properly managed in order to ensure the safety of its citizens and avoid environmental harm.

Mine Permitting

The Division of Mine Permits (DMP) evaluates coal mining applications that include detailed mining and reclamation plans, and issues permits for the extraction of coal. Its goal is to ensure that all surface coal mining operations in Kentucky meet minimum performance standards for environmental and public protection and reclamation as required by the federal Surface Mining Control and Reclamation Act (SMCRA) of 1977. The graph below demonstrates the number of permits pending over a period of time from July 2010 to June 2012. The graph demonstrates the division's continuing efforts to reduce or eliminate delinquent permit applications. It is also important to note that the graph shows a decline in the number of mine permit applications that has been received by the division.



There are numerous complexities associated with a comprehensive permit review which complicates the training of new staff and potentially leads to delinquencies. The DMP has been very successful in keeping delinquency rates low while bringing in new staff to conduct reviews. The graph below represents the result of the division’s highly effective effort to maintain a low delinquency rate while experiencing fluctuating personnel numbers.

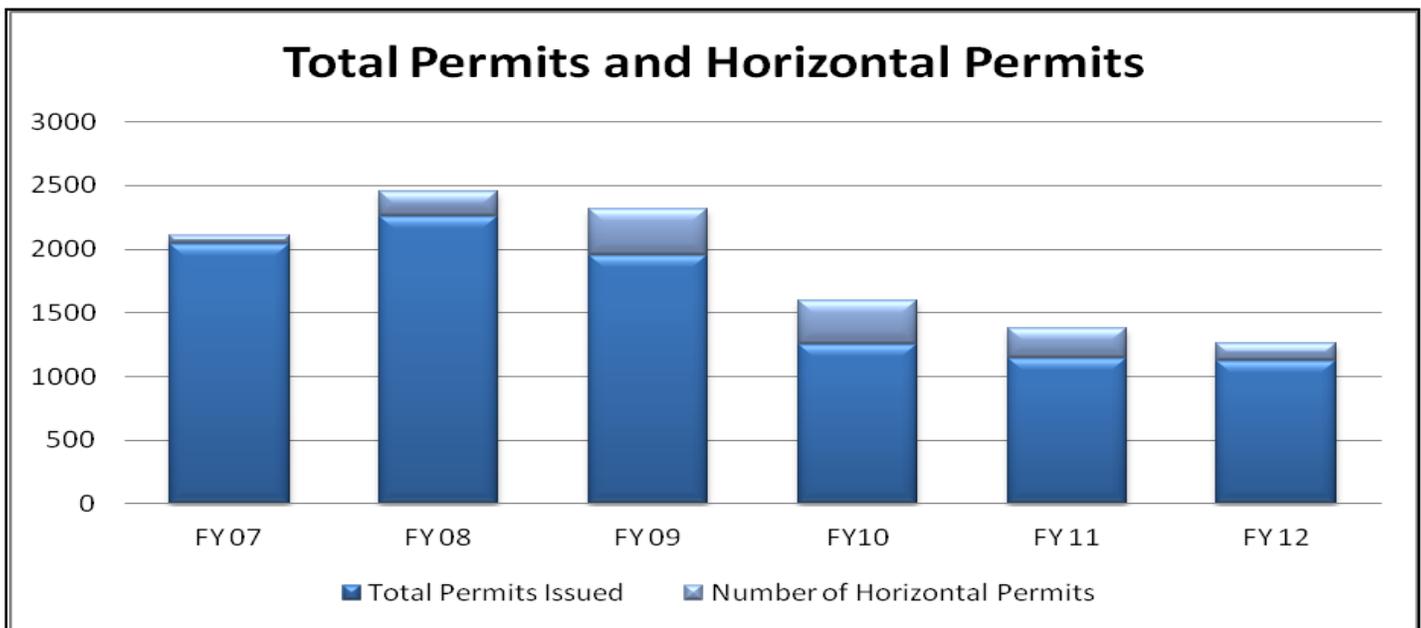
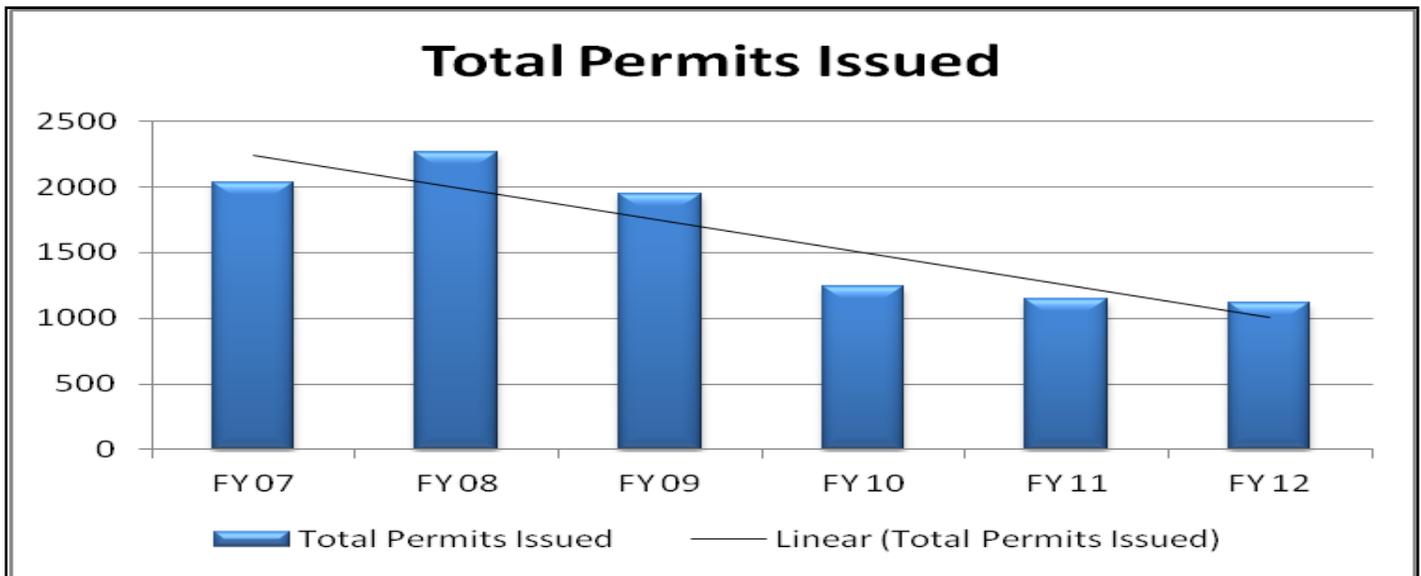


A major improvement in DMP’s permitting function was achieved upon the issuance of Reclamation Advisory Memorandum (RAM) 147 on Aug. 10, 2010 which required all permits submitted on or after Jan. 3, 2011 to be submitted electronically. This action, the culmination of a significant and lengthy work effort by DMP employees and industry representatives, reduced both processing time and costs, greatly benefiting both industry and the department. Fully implemented, it resulted in significantly reducing DMP application review time and allowed industry consultants to correct deficiencies more readily, and ultimately brought permit delinquency rates to near zero.

Oil and Gas Permitting

The Division of Oil and Gas issues permits to drill, deepen or reopen oil and gas wells throughout the Commonwealth. In Fiscal Year 2012, the Division of Oil and Gas issued 1,118 permits which included both vertical and horizontal drilling. As shown in the graph on page 10, the total number of permits issued is down from its peak in FY 2008, due mainly to the increasing prominence of horizontal drilling and hydraulic fracturing (fracking). This fracking procedure,

while not common in the Commonwealth, involves injecting gases or fluids into the ground at high pressure in order to open shale rock and release the trapped gas inside. This process, used nationwide, has increased the amount of recoverable gas and created a surplus that has resulted in the lowering of natural gas prices.



The Division of Oil and Gas experienced its highest number of horizontal permits applications in FY 2009. Since that time, a major gas producer in the state that extensively utilized this method of operation relocated to other areas in the Northeast, resulting in a steadily decreasing number of horizontal permits.

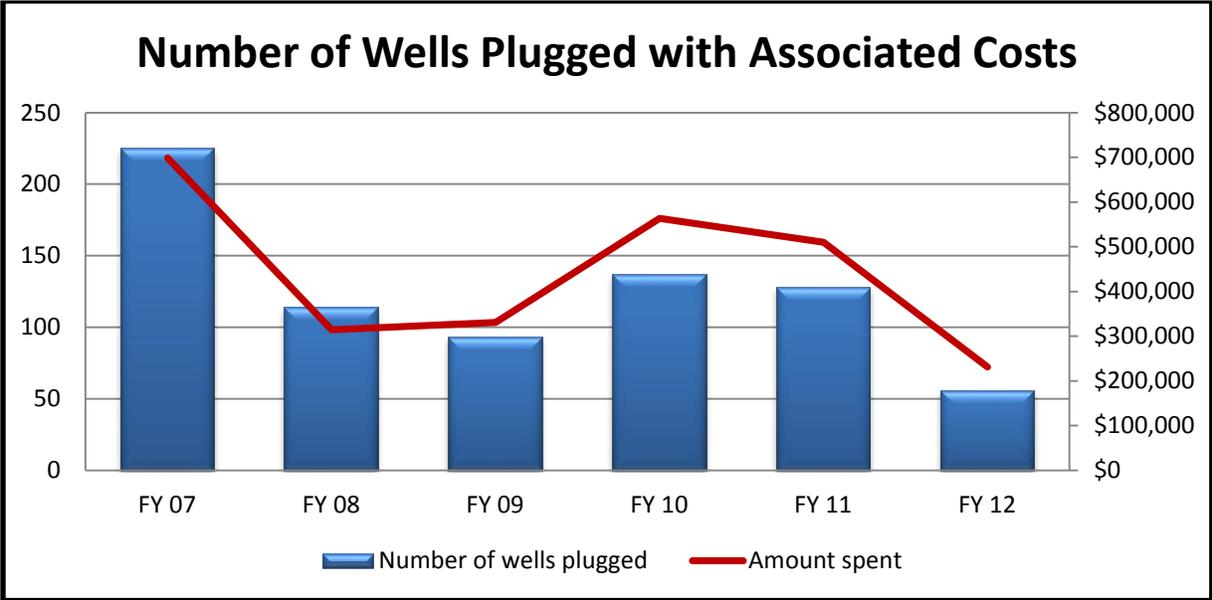
The division continues to provide input to U.S. EPA, Region 4 during its review of Kentucky’s application for primacy for Class II wells.

RECLAMATION

Significant disturbances can occur to the land and water of the Commonwealth as its abundant natural resources are extracted. It is the Department for Natural Resources' responsibility to ensure those disturbances are limited and adhere to the standards outlined in both law and regulation. When the coal or oil and gas industry fail to meet their obligations to reclaim disturbed areas, the department has the authority and responsibility to repair those damaged areas.

Oil and Gas

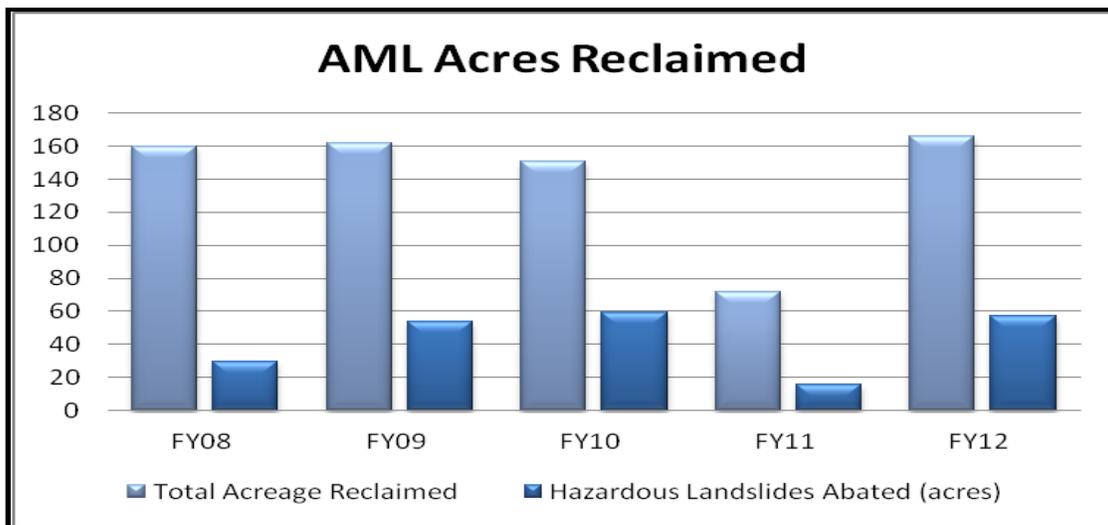
There are numerous abandoned oil and gas wells in the Commonwealth that pose a significant threat to our environment. The Division of Oil and Gas has statutory authority and funding available from the Oil and Gas Well Plugging Fund to address plugging these wells using contractors from an authorized bid list. The division evaluates each well using criteria based on its threat to human health and the environment and the cost to plug the well. In FY 2012, 56 wells were plugged at a cost of \$230,880.



The graph above shows the number of wells the division has plugged and the total amount spent on those wells. The cost to plug a well varies depending on the conditions and complexity of each well. The average cost to plug a well for 2012 was \$4,123. This is slightly above the average cost over the past six years of \$3,607.

Abandoned Mine Lands

The Division of Abandoned Mine Lands (AML) is responsible for working throughout the state's coal fields to protect the public from health and safety problems caused by coal mining. If mining occurred prior to 1982 (pre-law) then the site may be eligible for AML reclamation. Division employees thoroughly evaluate each site to determine the full extent of the problem and make a determination as to the cause. Issues pertaining to water quality, landslides, underground fires, and open mine portals are examples of issues they confront and the severity of these problems help determine the priority given to reclaiming the site. Once a site is found to be eligible for AML reclamation, the Program Development Branch takes the necessary actions to obtain approval from the federal Office of Surface Mining (OSM) to proceed with reclamation.

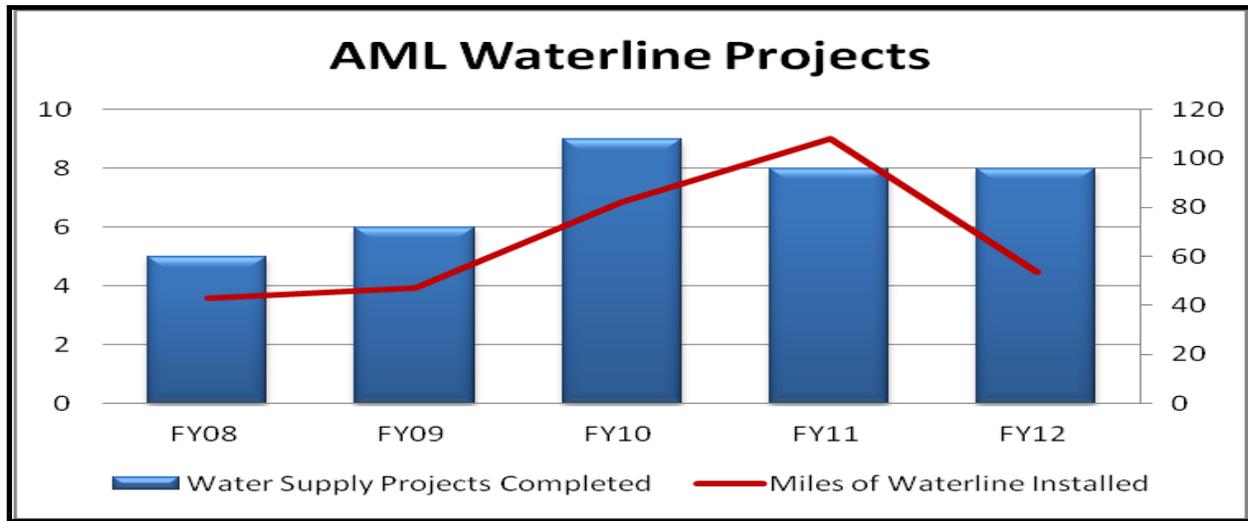


Eligible projects are funded through federal appropriations specifically allocated to address pre-law mining reclamation or through forfeited reclamation bonds. In the event a company fails to reclaim a site to the standards specified in its mining permit, a company's bond may be forfeited to the Commonwealth. The forfeited funds are used by the state to reclaim the site for which the bond was posted.

In FY 12, the budget for the federal OSM eliminated the OSM emergency reclamation program and shifted the responsibility for the program to the division. This assumption forced the state to absorb its \$6 million annual cost without any additional appropriations. AML was required to organize, staff, and develop internal procedures to accommodate this additional responsibility. The program has been successfully integrated into the division's overall reclamation duties. During this fiscal year, the division completed 18 emergency projects at a cost of \$3,365,536.

The division also provides funding to local governments to study the groundwater quality in areas where mining has taken place to assist in determining if existing water quality problems are the result of past mining. If past mining is determined to be the cause, the area may be eligible for assistance from AML. In most cases, local governments usually develop a water supply project using several funding sources with AML paying a portion of the cost based on the mining impacts found in the study.

Since FY 2008 AML has provided 3,575 households with a safe and reliable drinking water supply by laying 344 miles of waterlines. This reflects a total of 36 waterline projects completed, bringing \$51 million of infrastructure to the Commonwealth's coal counties. The following graph shows the number of waterline projects and the miles of waterlines installed per fiscal year.



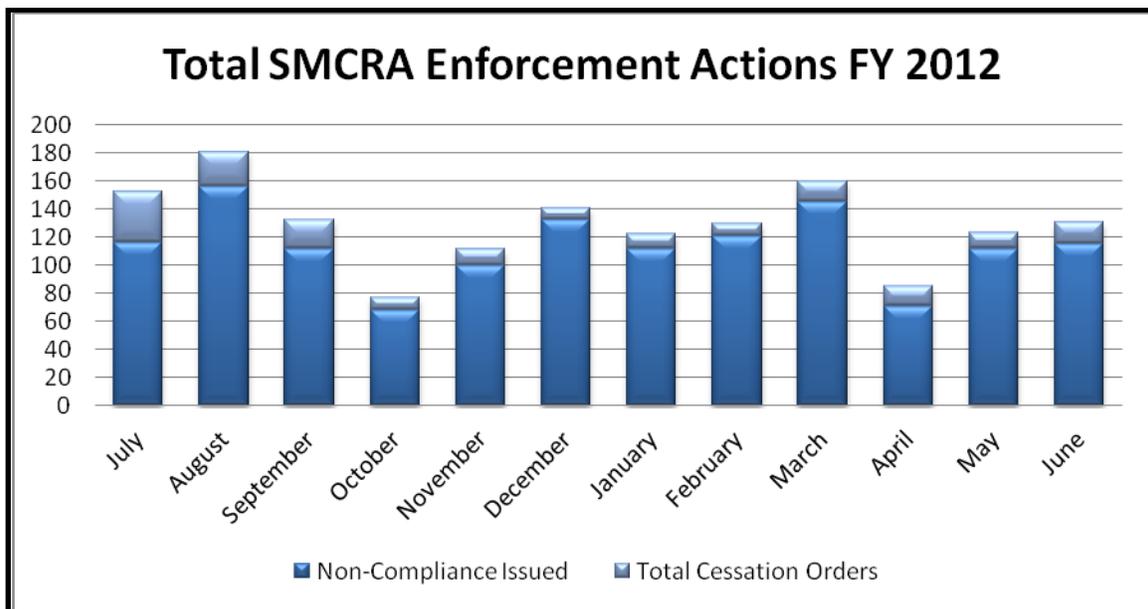
Reclaimed Mine Site in Knott County

ENFORCEMENT

As a regulatory agency the Department for Natural Resources has several divisions that perform inspections to verify regulated entities are complying with statutory and regulatory requirements. When these requirements are not met, enforcement action becomes necessary. The following information provides a brief look at the department's enforcement actions across divisions.

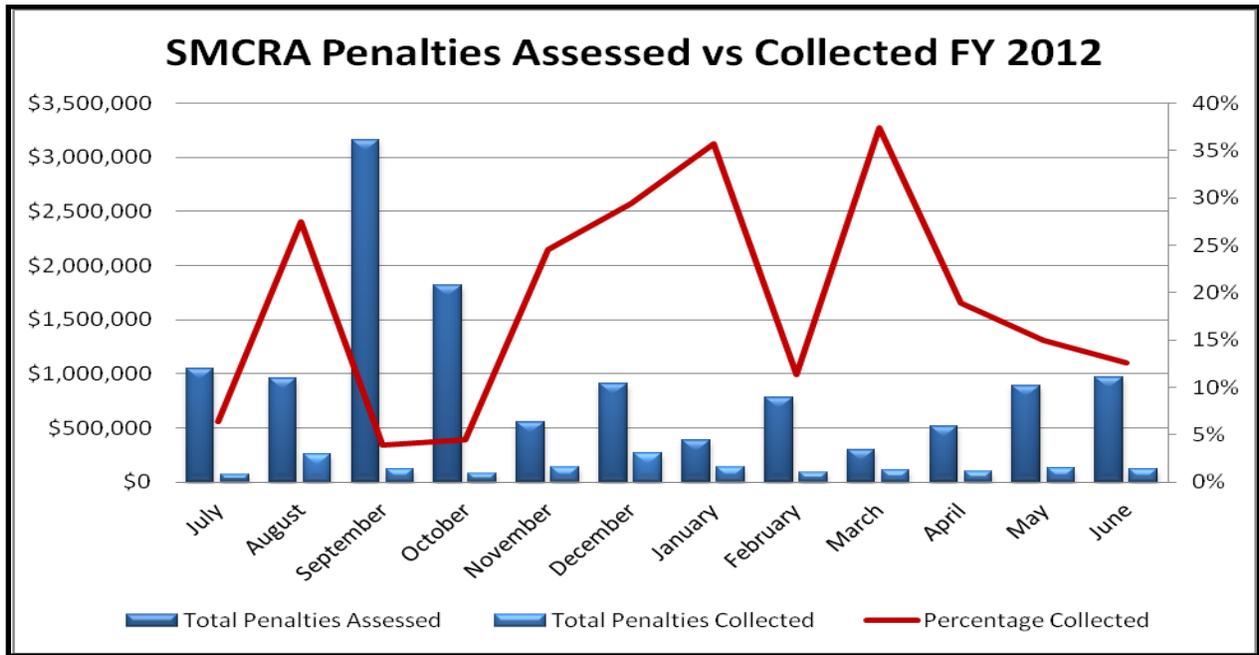
Division of Mine Reclamation and Enforcement

As part of the Surface Mining Control and Reclamation Act (SMCRA) regulatory program, the division is required to perform inspections on SMCRA permitted facilities. If there are violations identified on a particular site, the Division of Mine Reclamation and Enforcement (DMRE) issues a Notice of Non-compliance. Depending on the severity of the violation, a cessation order may also be issued. Also, if the Notice of Non-compliance is not addressed timely and appropriately, a cessation order may also be issued. The graph below shows the number of SMCRA enforcement actions taken by the DMRE over the past year to ensure compliance with mining laws and regulations.



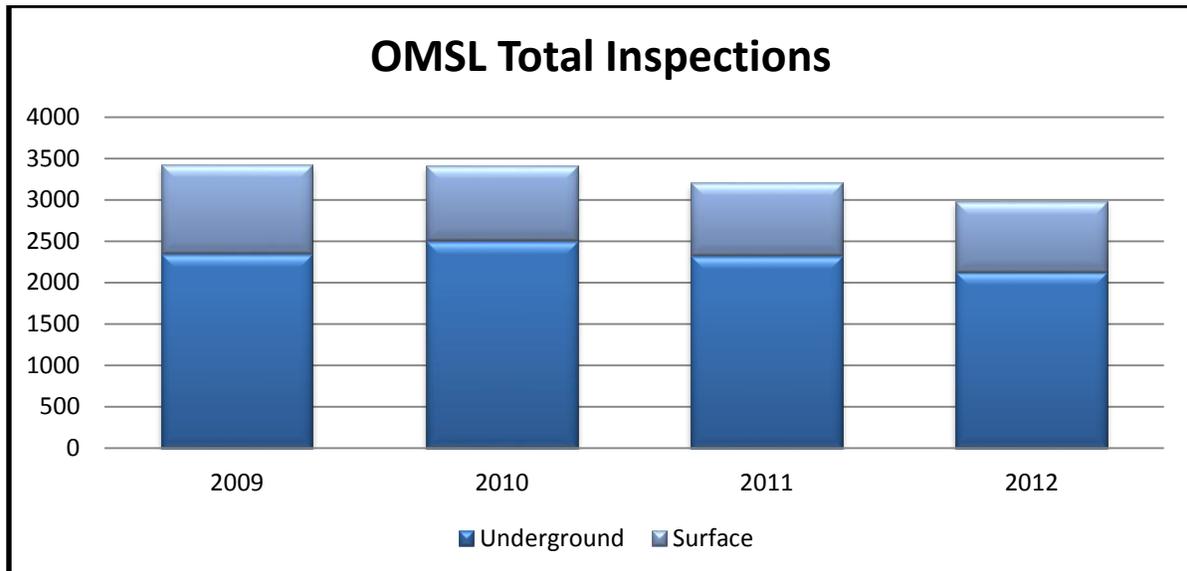
When SMCRA violations are issued, penalties are also assessed by DMRE. The following graph shows the total penalties assessed and the total penalties collected with the percentage collected for each year. The amount of penalties collected varies from the amount assessed due to lack of collection staff, the difference in time between the time the penalty is assessed and when it is

able to be collected, and the potential negotiations that may occur that could reduce the amount collected.



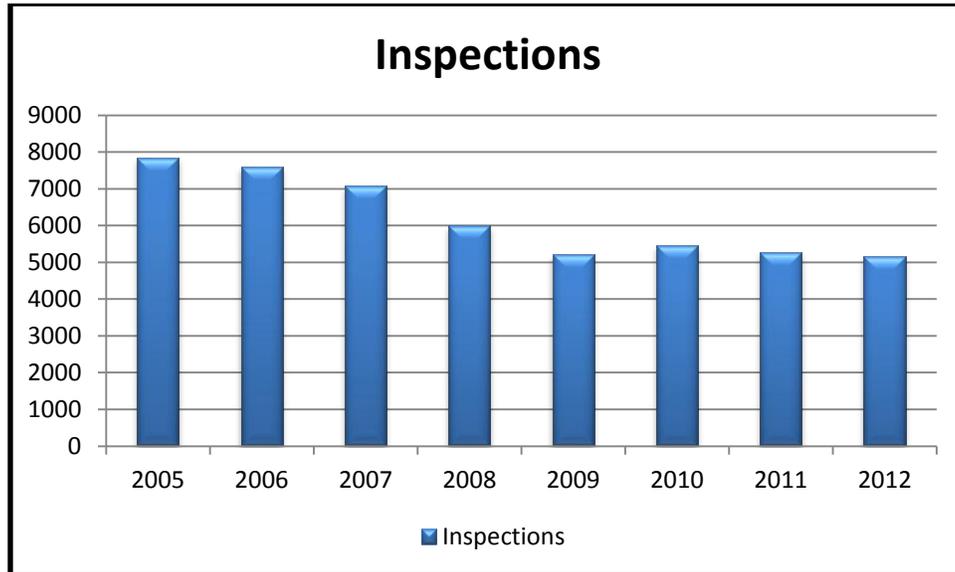
Office of Mine Safety and Licensing

The Office of Mine Safety and Licensing (OMSL) is responsible for performing safety inspections on all licensed mines in Kentucky. At the end of 2012, there were 229 surface mines and 165 underground mines licensed in the state for a total of 394. Inspections cover many different safety aspects of both underground and surface mines. The graph below reflects that the number of total inspections peaked in calendar year 2009 and shows a decline in 2012, a reduction principally caused by a decrease in the number of actively producing mines. The OMSL met the statutorily mandated number of inspections each year.

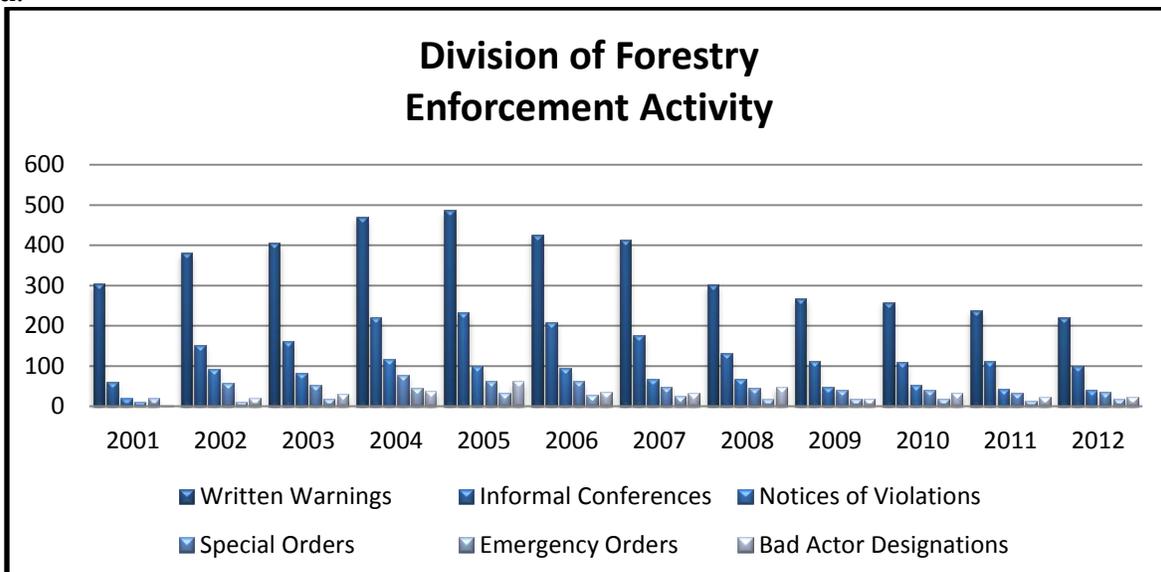


Division of Forestry

The Division of Forestry performs inspections to ensure loggers are in compliance with timber harvesting regulations and authorizing statutes. The following graph shows the total inspections performed over the past eight years. It should be noted that inspections have been in steady decline over the past several years which is mainly due to staff reductions related to budgetary restrictions.

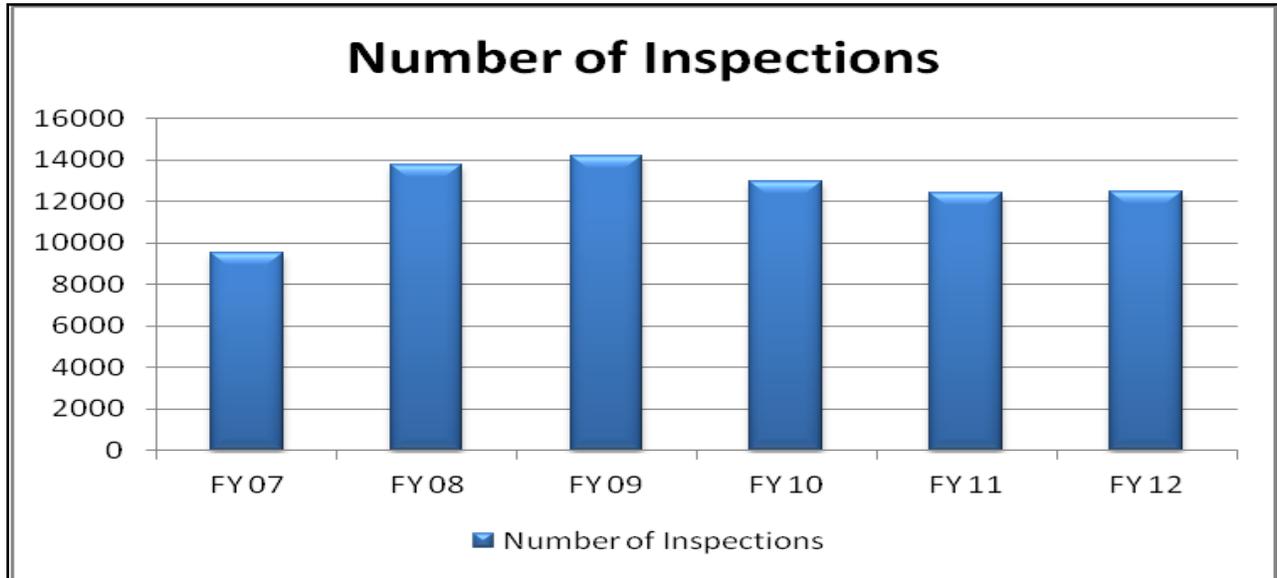


Inspections can result in enforcement actions for violation of forestry laws in KRS Chapter 149. A five-step enforcement procedure begins with a written warning and progresses through various steps ending with either a civil penalty or a Secretary Ordered Bad Actor Designation. This designation is tracked by the Division of Forestry and is provided to interested parties when requested.



Division of Oil and Gas

The Division of Oil and Gas regulates the permitting, drilling, and production of crude oil and natural gas wells in the Commonwealth. In the event that a well is abandoned, the division will evaluate to determine its impact on the environment and if necessary, take the actions required to plug it. The division's field inspectors are stationed throughout the state and perform inspections to ensure the implementation of safe drilling and operational practices. In Fiscal Year 2012 there were 12,445 inspections performed.



Oil drilling site.

The Office of Mine Safety and Licensing (OMSL) is responsible for ensuring mines operating in the Commonwealth comply with applicable mine safety laws and regulations. To achieve the level of safety mandated for the Commonwealth's miners, the agency has several different programs that impact the final result.

Drug Free Workplace

Legislation enacted by the Kentucky General Assembly addressed several different issues related to drug and alcohol abuse in the mines and provided for pre-certification drug testing, random drug testing, and post-accident drug testing.

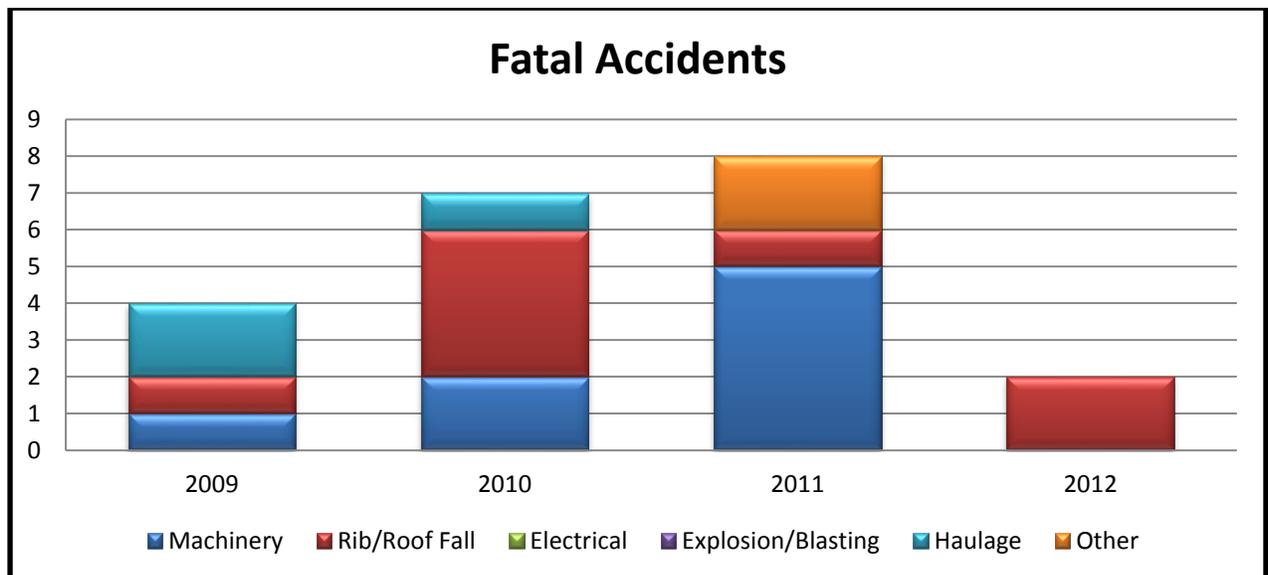
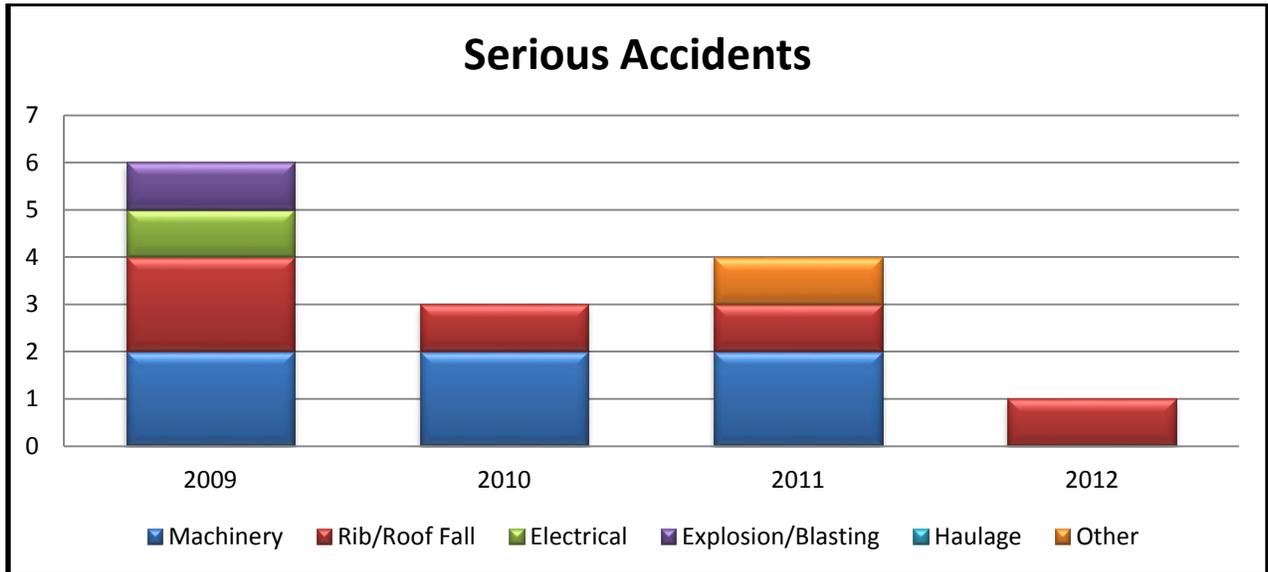
The following graph shows the disciplinary actions taken by the Mine Safety Review Commission regarding the miner's license when reported for a violation from the beginning of the drug testing program to present.



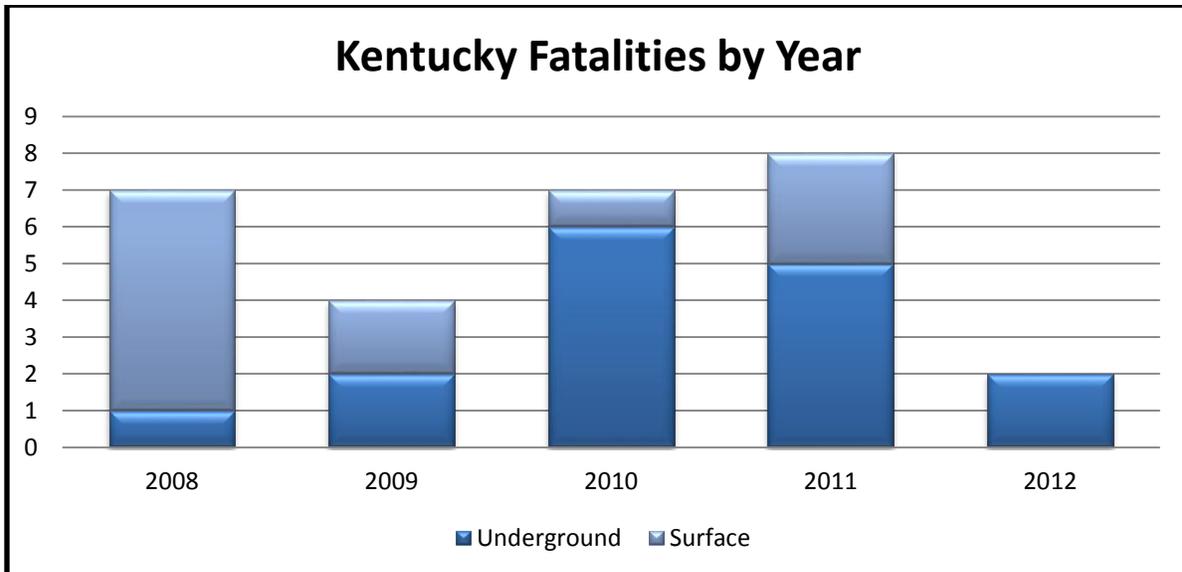
Mining is a hazardous occupation and the OMSL employs analysts to review miner conduct and evaluate mine conditions in a major effort to prevent accidents. OMSL analysts conducted 23,500 job observations in 2012 with 11 percent deemed unsafe acts. Accidents that occur are analyzed

and the information is used to train miners on ways to avoid accidents and alert the mining industry of trends in an effort to prevent future accidents.

The following graphs show information related to serious accidents and fatal accidents. A serious accident is one that causes physical injury and creates a substantial risk of death or causes serious and prolonged disfigurement, prolonged impairment of health, or prolonged loss or impairment of the function of any bodily organ.

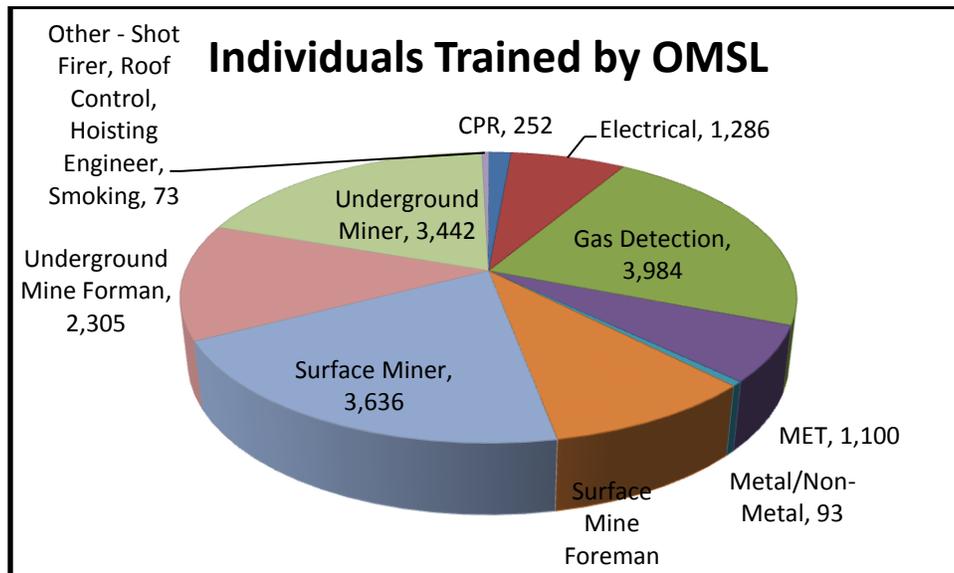


As shown in the graph above, serious and fatal accidents from machinery and rib/roof fall continue to be the largest contributors to mining accidents. OMSL uses this data in order to develop focused training programs that support the industry’s need for miners to work more safely and be assured of a safe work environment.



Training

The Division of Safety Analysis, Training, and Certification provides professional-level miner training and grants certification to those individuals who meet the appropriate requirements. The division takes the data gathered from mine accidents and uses that to amend its training programs to meet growing needs within certain areas. The following graph shows the type of training courses offered by OMSL and the number of tests given and certifications issued.

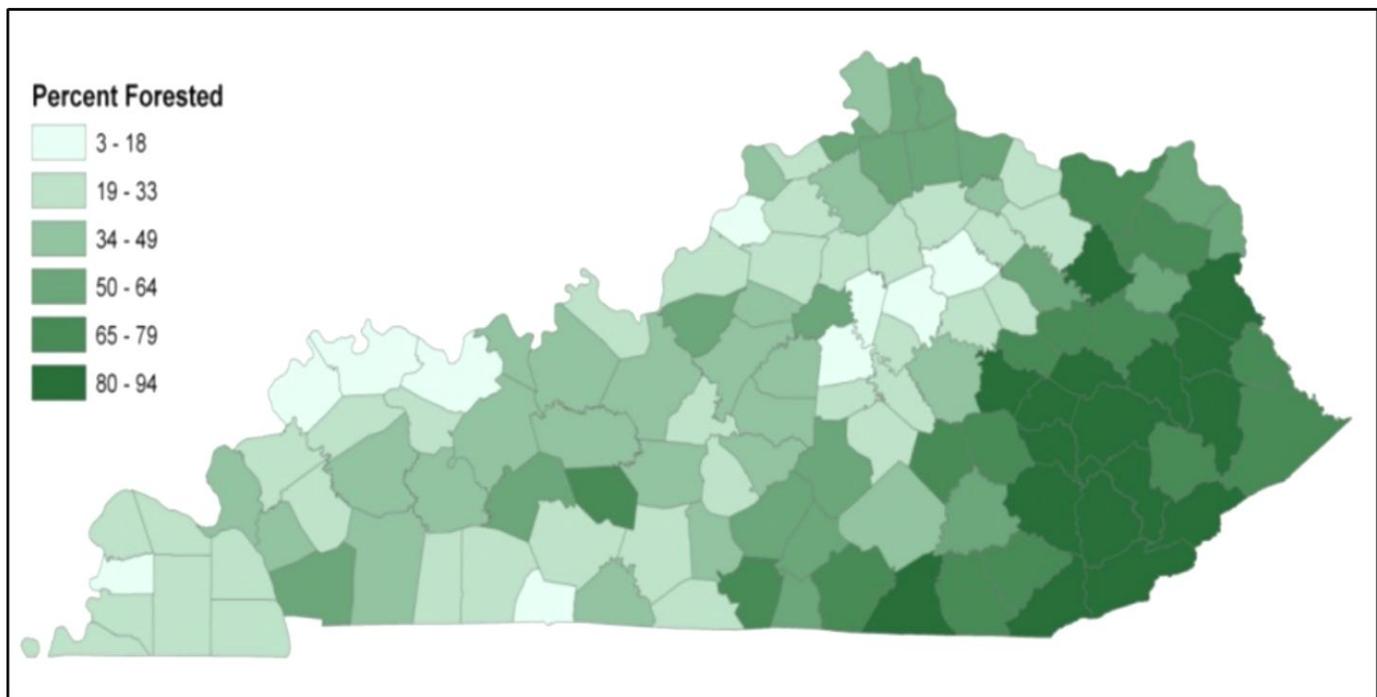


NATURAL RESOURCES AND CONSERVATION

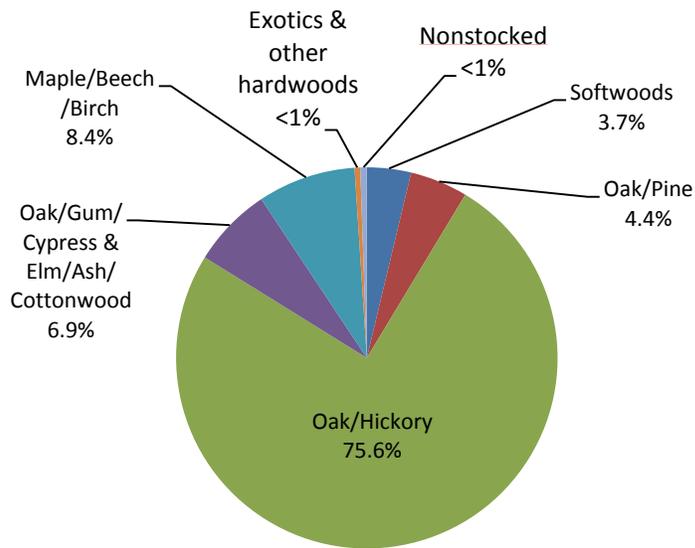
The Commonwealth is rich in natural resources and maintaining an accurate status of those resources is vital in planning for their future use. The following information provides an update on the status of the Commonwealth's forests and the department's conservation efforts.

Forests

Kentucky's forests cover 12.3 million acres or 48 percent of the state. Ninety-eight percent of the forestland is considered available for timber production. The Cumberland Plateau and the Appalachians in the eastern portion of the state are the most heavily forested. The central and western portions of the state, although less densely forested, account for 50 percent of the total forestland area.

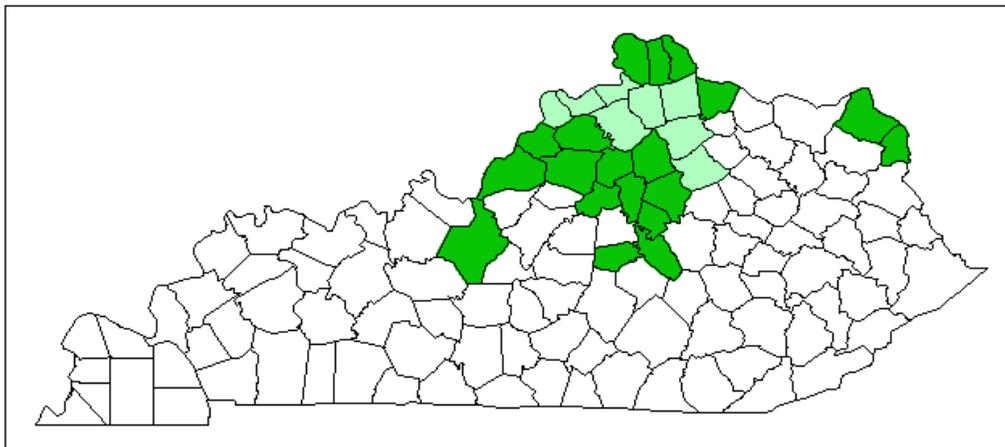


Oak-hickory is the predominant forest type in Kentucky; however, red maple is the dominant individual species in the state and is more numerous than all oak species combined.



Removal of trees has increased slightly, but the growth still remains at a level more than double the rate of removals. As long as the ratio of growth to removal remains at this level, a sustainable forest industry can prosper in the Commonwealth.

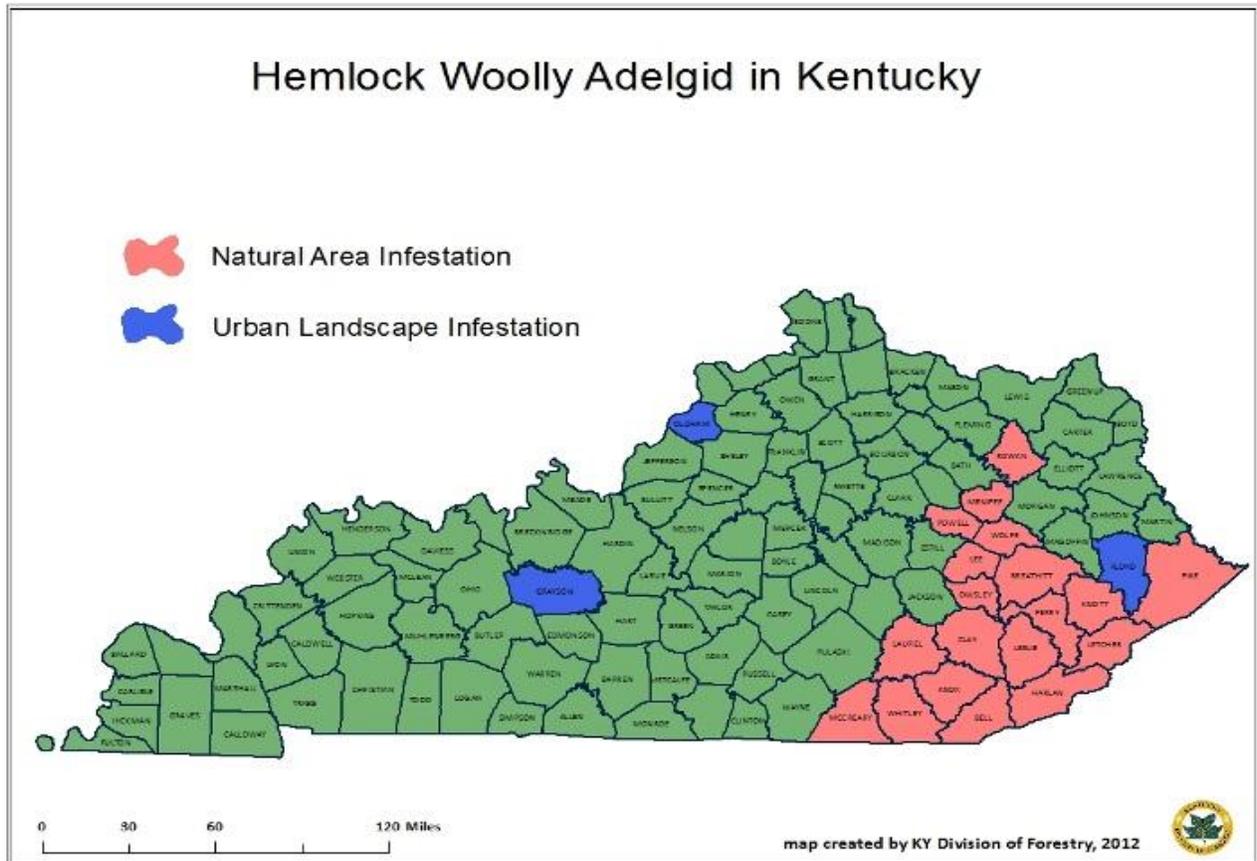
Two insect species remain a problem for the Commonwealth's forests: the Emerald Ash Borer and the Woolly Adelgid. These two species have caused significant damage to the Commonwealth's forests. The Emerald Ash Borer is an exotic beetle originating in Asia that was discovered in southeastern Michigan near Detroit in the summer of 2002. The adult beetles nibble on ash foliage, but cause little damage. The larvae feed on the inner bark of ash trees causing significant damage by disrupting the tree's ability to transport water and nutrients. A ban covering 27 Kentucky counties regulates the movement of ash inside the quarantine area, outside the area and traveling through the area. The map below shows the quarantined counties.



The dark green counties are those where the emerald ash borer has been found. The light green counties are those that could harbor the insect.

The Hemlock Woolly Adelgid is a tiny (1/16-inch long) insect native to Asia. As it matures, the insect covers itself with wool-like wax filaments that can be readily found on the underside tips

of hemlock branches from autumn to spring. The adelgid feeds at the bases of needles, causing them to dry out and the tree to take on a gray color. This results in needle loss, which prevents trees from producing new buds. Funding from the Daniel Boone National Forest allowed the Division of Forestry to hire a seasonal crew to treat hemlocks within the Daniel Boone National Forest and on other state agency lands including state forests. The graphic below shows infestations within the Commonwealth.



Nurseries

The Division of Forestry operates two nurseries located in Marshall County and Morgan County that provide seedlings for planting on public and private lands. Nurseries receive orders from individuals or organizations interested in reforesting large tracts of rural land as well as individuals interested in planting trees in a smaller urban setting. Approximately 4 million seedlings are harvested each year.

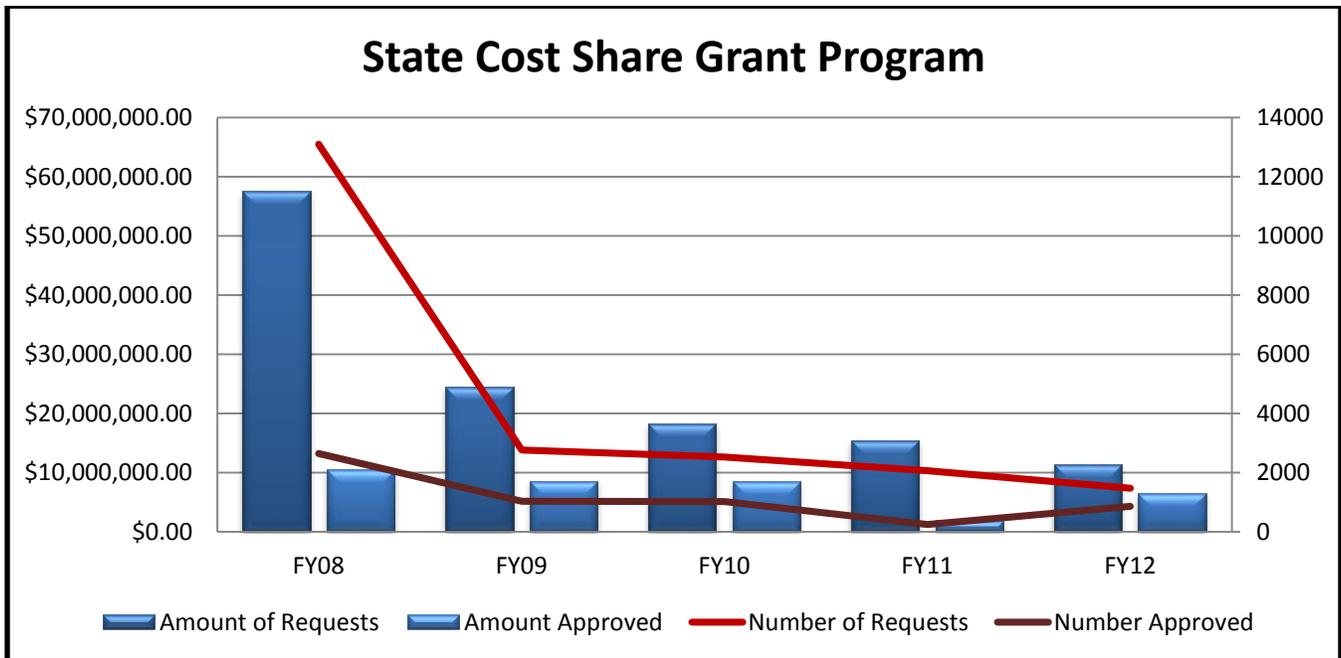
On March 2, 2012 the Morgan County Nursery was devastated by a tornado that also caused extensive damage to nearby West Liberty. Prompt response by division staff salvaged many of the harvested seedlings, but the tornado destroyed most of the buildings and severely damaged the equipment and vehicles, many beyond repair. Damage estimates were approximately \$4 million. Through a sustained herculean effort, the nursery is recovering and daily operations continue while rebuilding is underway.

Conservation

The Division of Conservation is responsible for assisting Kentucky's 121 local conservation districts in the development and implementation of sound soil and water conservation programs. They manage, enhance and promote the wise use of the Commonwealth's natural resources and responsibly administer conservation programs to ensure, through the conservation districts, the availability of technical and financial assistance to the landowners of Kentucky.

Soil Erosion and Water Quality Cost Share Program

The Division of Conservation's Soil Erosion and Water Quality Cost Share program provides financial assistance to individuals to implement best management practices on farms or in forest operations to improve water quality. Any person engaged in agricultural or silvicultural operations is eligible to apply through their local conservation district, which oversees the installation of best management practices.



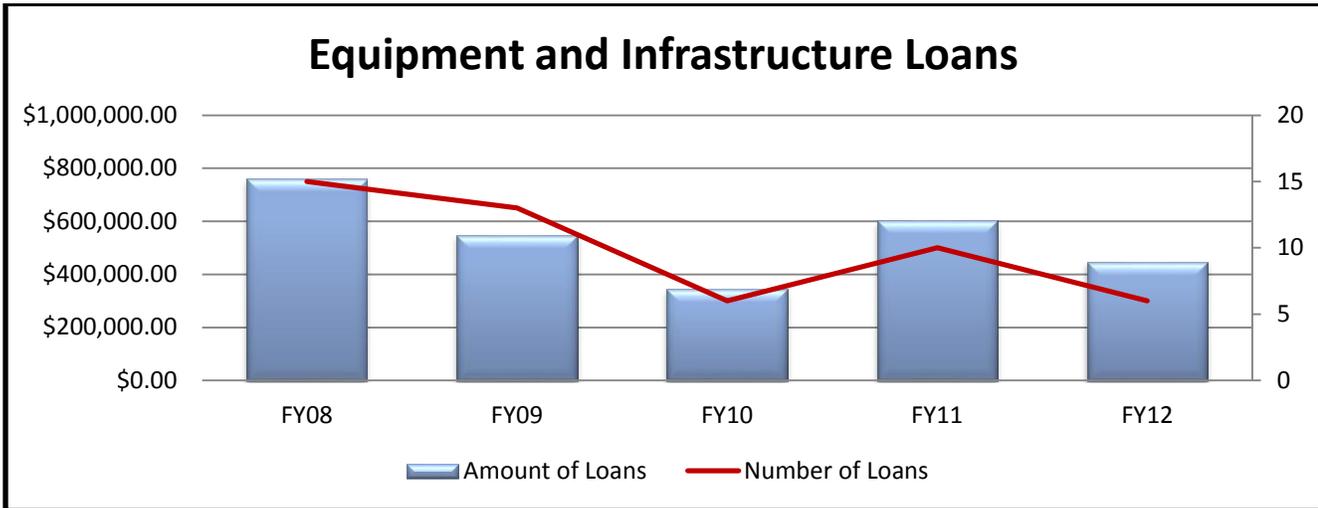
In FY 2012, the division received 1,474 applications resulting in requests for \$11.3 million. The agency had \$6.5 million available for disbursement, which resulted in 885 applications being approved for a total of \$6,542,661.

Equipment and Infrastructure Revolving Fund

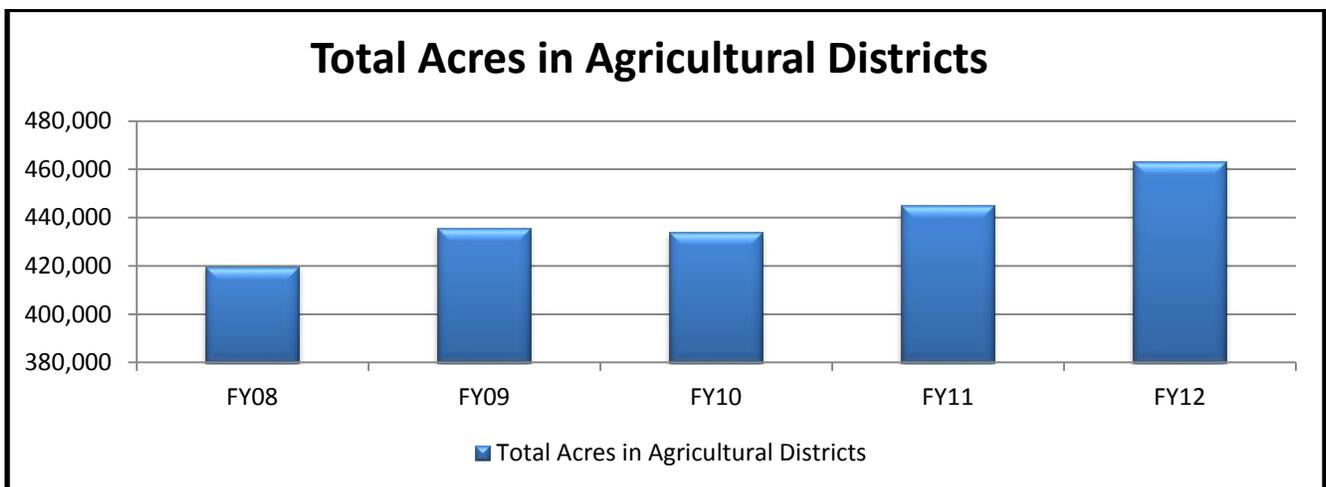
The Equipment and Infrastructure Revolving Fund program authorizes loans to local conservation districts for the purchase of heavy or specialized machinery or equipment that is available to the farmers within the district to construct proper conservation measures or make farming operations more cost efficient. It also provides districts with the funding to purchase their own office building in order to provide more efficient services to the farming community.

Five equipment loans were made to conservation districts for a total of \$396,867.64

At the closing of the fiscal year, there were 26 active equipment loans and four active infrastructure loans. Two other conservation districts began the process of receiving an infrastructure loan.



Kentucky’s Agricultural District Program allows landowners or groups of landowners who own 250 acres or more of land in agricultural use to petition their local district for the creation of an agricultural district. The goal of the agricultural district program is to protect the Commonwealth’s best agricultural land for food and fiber production and to prevent its conversion to nonagricultural uses. The Division of Conservation also supports the Kentucky Department of Agriculture’s Purchase of Agriculture and Conservation Easements (PACE). Division of Conservation routinely processes applications and provides geographic information for databases on the locations of easements. The graph below shows the increase in agriculture acreage added by these two programs.



In Fiscal Year 2012, 19,173.76 additional acres belonging to 123 landowners were added to agricultural districts. As of June 30, 2012, 874 agricultural districts comprised of 463,094.76 acres belonging to 3,707 landowners in 81 counties have been created.

POLICY DEVELOPMENT AND SPECIAL PROJECTS

Policy Developments

Statutory and regulatory policy changes this past year assisted the department reach its goals outlined in its mission statement.

Legislative

The 2012 legislative session of the Kentucky General Assembly passed the following bill, which was signed into law by Gov. Beshear:

HB 385 made several critical changes to the coal miner drug testing program administered by the OMSL. The bill provides:

- A treatment option for those miners reported for a first-time violation that allows their certificates to be reinstated following completion of a treatment program and a clean drug test.
- Failure to file an appeal of a license revocation results in a three-year revocation of all certifications and eligibility for first offenders.
- A five-year revocation of all certifications and eligibility for second offenders.
- Permanent revocation of all certifications and eligibility for third offenders.
- Reconsideration of revocations by the Mine Safety Review Commission (MSRC) only in limited circumstances.
- Allows the MSRC to order additional drugs added to the testing panels by June 1 of each year.

Regulatory

On May 1, 2012 the OSM sent Kentucky a Part 733 letter placing the state on notice that its SMCRA reclamation bonding program was deficient. It allowed Kentucky 30 days to submit a detailed plan to increase the amount of reclamation bonds.

As an initial step, the department filed an emergency regulatory proposal that increased the amount of the individual bond for each coal mining permit. The department also responded to OSM indicating the establishment of a mandatory statewide bond pool to serve as a backup fund should the individual bond be insufficient to complete site reclamation to program standards. The department presented this proposal during the 2013 General Assembly session. The administrative regulations filed were:

- 405 KAR 10:011;
- 405 KAR 10:015;
- 405 KAR 10:030; and
- 405 KAR 16:020

Special Projects
2012 Excellence in Reclamation Awards

The Department for Natural Resources presented the “2012 Excellence in Reclamation Awards” to five companies operating in the Kentucky coalfields in recognition of the outstanding level of mining and reclamation activity conducted on their operations. Each of the five Division of Mine Reclamation and Enforcement (DMRE) regional field offices nominates a specific mine site that best exemplifies outstanding reclamation in their respective regional areas annually. Each regional office nomination undergoes a thorough and systematic review before being recognized by the department. Since mining operations are subjected to repeated inspection and scrutiny throughout the year to ensure compliance with all state and federal surface mining laws, the department feels it is equally as important to recognize those mining operations that exceed their reclamation obligations. During these award presentations, the department also recognizes the efforts of the DMRE inspection staff assigned to these operations. It is through the combined efforts of the company and the inspectors that these sites achieve a high level of reclamation excellence. Below is the list of 2012 award winners

Pikeville Regional Office

The Excellence in Reclamation Award in the Pikeville area went to Deane Mining, LLC (permit no. 867-0478) for outstanding reclamation work on its surface mine located in Letcher County near the community of Mayking.



Prestonsburg Regional Office

The Excellence in Reclamation Award in the Prestonsburg Regional Office went to Laurel Mountain Resources, LLC for the outstanding reclamation work on its surface mine (permit no. 880-0197) located in Martin County near the community of Tomahawk.



Middlesboro Regional Office

The Excellence in Reclamation Award was presented to Xinergy Corporation for their outstanding reclamation work on permit no. 807-0362 located in Bell County near the community of Stoney Fork



Madisonville Regional Office

The Excellence in Reclamation Award was presented to Hopkins County Coal, LLC for their outstanding reclamation work on permit no. 854-0216 located in Hopkins County near the community of Madisonville.



London Regional Office

The Excellence in Reclamation Award was presented to T&T Coal, Inc. for outstanding reclamation work on its surface mine (permit no. 855-0181) located in Jackson County near the community of Green Hall.



Pigeonroost Project

The Department for Natural Resources has been revising its approach to its Cumulative Hydrologic Impact Assessments (CHIA), a required SMCRA permitting document that discusses the effects of a proposed mining operation on the hydrologic balance of the specified watershed.

The CHIA trend station program has been implemented in three phases. Phase I and II will include 64 and 69 different trend stations while Phase III will include all 133 trend stations. This approach will leave gaps in the data that will need to be filled in with additional monitoring at appropriate trend stations.

Pigeonroost Fork, a Martin County watershed, not only contains several active and inactive operations, but also unmined areas in the headwaters, a relatively rare occurrence in the eastern Kentucky coalfield.

The Pigeonroost Fork watershed encompasses 25.03 square miles (16,019.94 acres) and is relatively sparsely populated with 61 residences. Extensive mining has occurred in the northwest quadrant of this watershed with active mining operations and bond-released (fully reclaimed) mine sites covering 79.1 percent of the watershed acreage.



DNR employees gathering water samples.

Pigeonroost Fork stream is approximately 7.3 miles long, draining seven main tributaries. One tributary in the headwaters is Hobbs Fork, designated by Division of Water as an Outstanding State Resource Water.

With the trend station program now fully operational, environmental scientists from the department are now undertaking two related studies that may determine the effects of mining and non-mining activities on the hydrologic regime over time.

Since April 2012, monthly water samples have been taken upstream and downstream of tributaries associated with active mining operations to characterize the chemistry of mine discharge water and to determine the cumulative effects in water quality from several operations by sampling at the mouth of the watershed. Similarly, samples from unmined areas are being collected that will provide a baseline reference to gauge possible mining impacts. Any elements of concern can then be tracked from the mouth of the watershed to its possible source.

This project subsequently caused a more detailed study of the effect of a hollowfill, over time, on the quality of the water being discharged from the underdrain of that fill, into the receiving tributary. Discharges from several fills, varying in age from 10 to 30 years, are



Fill located above Pigeonroost sampling site.

being sampled for pH, conductivity, total dissolved solids, sulfates and selenium. To locate many of these older fills, LIDAR technology was utilized because previous mining areas were fully reclaimed and extensive tree canopy and mature vegetation obscures the fills from the naked eye and aerial photography. Sampling hollowfill discharges in other areas of eastern Kentucky (with different coal seams) may then reveal which coal seams have higher or lower concentrations of total dissolved solids and selenium. Given this information, coal operators could customize their spoil handling procedures to lessen the impact of mining on water quality.

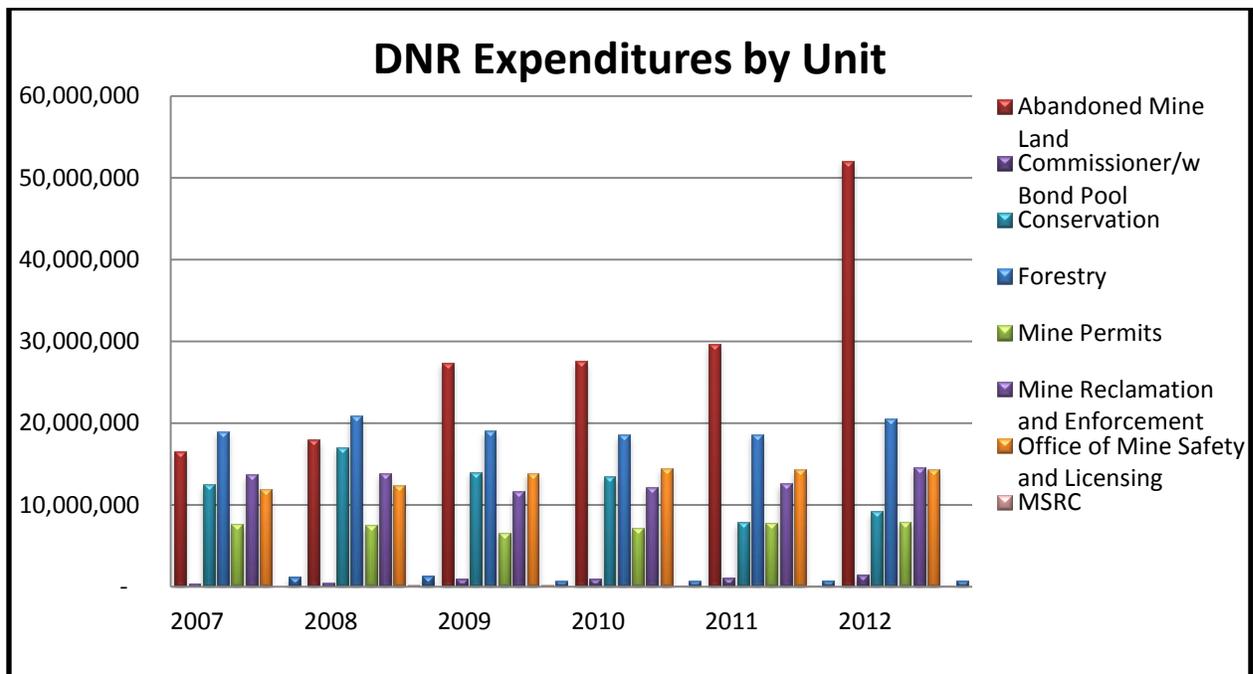
Sampling and analysis is ongoing for this watershed. Sampling concluded in March 2013 and final analysis for this watershed will be used to further understand how various land uses impact a watershed.

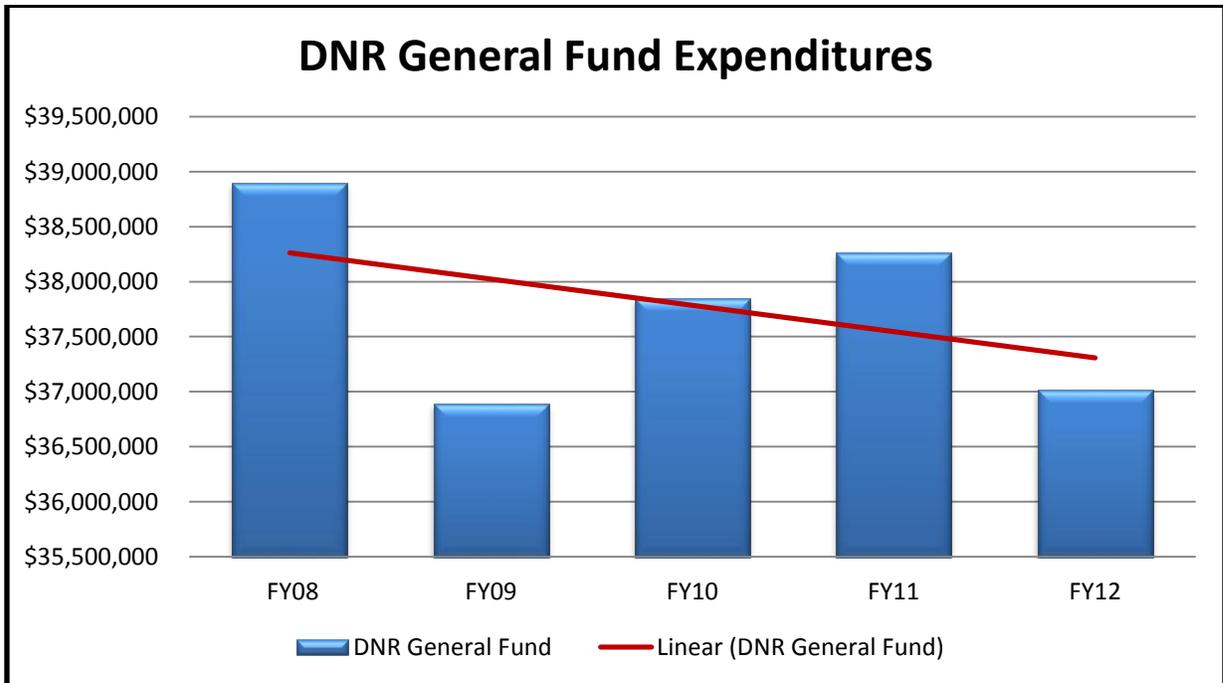
ADMINISTRATIVE AND TECHNICAL INFORMATION

To ensure agencies within the department are able to perform their regulatory duties, technical and administrative support is provided in the areas of personnel, budget, grants, and special projects.

Budget

The Department for Natural Resources continues to address a serious budget situation because of a significant reduction in General Funds. While the latest round of budget cuts minimized the impact to the Division of Mine Permits (DMP), the Office of Mine Safety and Licensing (OMSL), and Division of Mine Reclamation and Enforcement (DMRE), other department agencies were not as fortunate. Staff reductions have occurred in the Commissioner’s Office and other divisions except the Division of Abandon Mine lands (DAML) whose funding source is 100 percent federal. General Fund reductions in both DMP and DMRE also result in an equal loss of 50/50 matching federal funds. The agency most severely affected by cuts in General Funds, the Division of Forestry, will be required in subsequent months to reorganize and significantly reduce their staffing level. The following graphs provide information on department expenditures.

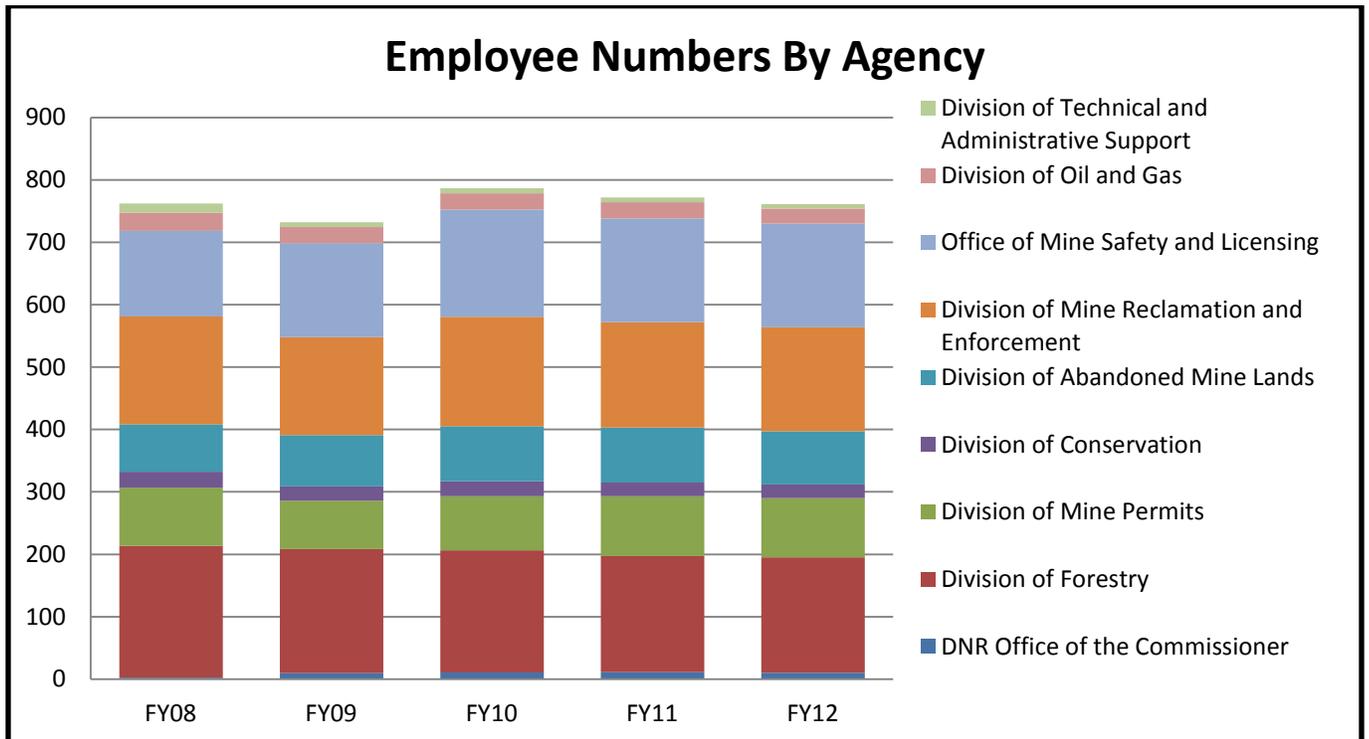




The department’s revenue sources consist of General Funds, federal grants, and fees collected as authorized by various statutes and regulations. The department’s General Funds are essential to the operation of most agencies. As can be seen by this graph, the department’s General Fund expenditures have been trending down over the past five years with a decrease of \$1,881,517 from FY08 to FY12. This downward trend has been experienced in nearly every agency that receives General Fund contributions. The most significant reductions were experienced in the Division of Mine Permits and the Division of Mine Reclamation and Enforcement.

Personnel

The Department for Natural Resources is the largest department within the Energy and Environment Cabinet with 774 authorized full-time positions, a slight reduction from FY 11 levels. During both spring and fall fire seasons, the Division of Forestry will hire in excess of 100 additional emergency firefighters to assist in combating wildfires. The following chart shows the number of filled full-time positions within each department agency.



	FY08	FY09	FY10	FY11	FY12
DNR Office of the Commissioner	3	10	11	11	10
Division of Forestry	211	199	196	186	185
Division of Mine Permits	93	77	87	96	95
Division of Conservation	26	23	24	22	22
Division of Abandoned Mine Lands	76	82	88	88	85
Division of Mine Reclamation and Enforcement	173	157	175	169	167
Office of Mine Safety and Licensing	137	150	172	166	166
Division of Oil and Gas	29	26	26	26	24
Division of Technical and Administrative Support	15	8	8	8	7
TOTAL	762	732	786	772	761

Budget restrictions going into next fiscal year will continue to constrain the department in personnel hiring, with the exception of Division of Abandon Mine Lands, for the foreseeable future.

ACKNOWLEDGMENTS

This annual report is intended to provide information to the general public related to the department's divisions and programs. Comments or questions regarding this report are welcomed and should be directed to the contacts below:

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The department would like to acknowledge the following directors for their efforts in assembling this report:

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Bob Scott	Division of Abandoned Mine Lands
Billy Ratliff	Division of Mine Reclamation and Enforcement
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Leah MacSwords	Division of Forestry
Kim Collings	Division of Oil and Gas
Steve Coleman/Kimberly Richardson	Division of Conservation
Linda Potter	Division of Technical and Admin. Support
Compiled by:	Michael Mullins

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