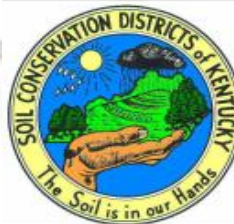


FY 2012 STRATEGIC PLAN PROGRESS REPORT



Department for
Natural Resources

FY 2012 STRATEGIC PLAN PROGRESS REPORT
DEPARTMENT FOR NATURAL RESOURCES
57-128-128N
AUGUST 17, 2012

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 of 1977 (SMCRA) and the Clean Water Act (CWA), as it applies to mining operations, are met for all Kentucky mining operations.

The Division of Mine Permits (DMP) is challenged with maintaining a balancing act between quality and consistency in review of permit applications while meeting mandated regulatory timeframes for issuance. To assist in this effort in the past fiscal year, the division hired 7 new employees to strengthen the review effort resulting in the timely issuance of 719 permits (77-new, 65-major revisions, 473-minor revisions, and 104 amendments). Additionally, the mid-term review function was expanded in order to address quality control and the requirements of recent Reclamation Advisory Memorandums (RAM).

The Division of Mine Reclamation and Enforcement (DMRE) inspected 87.76% of the inspectable units (1851) in accordance with federal and state frequency requirements but did not meet the required 100% threshold. The Division filled five inspector positions to assist in alleviating the past due inspections but six inspector positions remain vacant due to budget constraints.

The CHIA (Cumulative Hydrologic Impact Assessment) process, a critical part of the coal permitting action, is a continuing activity that currently administers water quality, benthic, and impact data for 363 watersheds. CHIA interns completed 363 watershed HUC-12 characterizations, and entered more than 93,000 Discharge Monitoring Reports and 120,000 surface and groundwater baseline and water monitoring reports into the Surface Mine Information System (SMIS).

137 trend stations were established and are monitored by DMRE inspectors who collect water samples every three months. Inspectors conducted four quarters of water sampling at 64 trend stations and an additional 73 trend stations were sampled once. Sampling at all 137 stations will continue during 2012-2013. At each station, field data are recorded (air/water temperatures, pH, conductivity and stream flow) and the water column sampled for a complete metals analysis. Each report becomes part of a specific watershed dataset to be used for future cumulative hydrologic assessments. These reports represent over 1.5 million data points entered into SMIS allowing water quality data to be sorted in a variety of ways for use by internal staff and the regulated public.

These 363 watersheds are hydrologic unit code (HUC) 12 geographic areas and cover the entire coal mining extents for the commonwealth, including both east and west coal fields. Each set of data collected is held in a directory specific to that watershed. Each directory contains the following data:

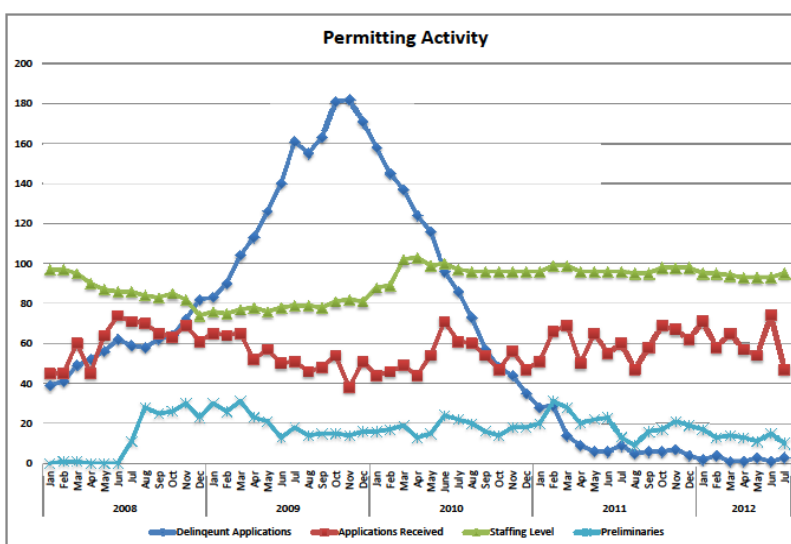
- KPDES point descriptive information (Excel)
- Groundwater quality results data from SMIS (Excel)
- Surface water quality results data from SMIS (Excel)
- STORET water quality results data (Excel) prior to 2011 – static dataset
- KGS groundwater quality results (Excel) – obtained from DOW

- A record of prior violations
- A comprehensive mine history report for existing permits
- A report of current pending permits
- A Microsoft Access forms driven WQ results data viewer pre-loaded with the specific watershed's available results tables.
- Benthic data for mHBI, mEPT, and MBI extracted from DOW's EDAS database.
- A series of 6 maps in JPG and PDF format that illustrate watershed location within the state, hydrology with named streams, water quality with 305(b) and 303(d) data, water use, and historic mining sites. Each watershed's collection of data is compressed into a ZIP format and posted to the website for download by the public at no charge.

As new mining extends into additional HUC12 watersheds that may not be currently characterized by the CHIA process, these watersheds are added to the collection and all available data is collected. New watersheds are then included as part of the periodic update activity.

The 363 HUC12 watersheds described above automatically become part of a strictly regulated update process and are classified according to the presence of active mining. Update cycles are quarterly, bi-annual, and annual. HUCs with active mining in them are updated quarterly. HUCs without active mining that still have full datasets are updated bi-annually. Changes in mining activity can lower or raise the frequency of updates.

DMP has developed a Microsoft Access scheduling program that is checked by update staff on a daily basis. As DOW updates its KPDES, 305(b), 303(d) and benthic data, and as Kentucky Geological Survey (KGS) and SMIS water quality records are added, the new maps, spreadsheets, histories, and viewer table data is included in the updated collection, which is compressed into a ZIP format and stored on the server for download by the public, overwriting any previous compressed versions. DMP is awaiting the rollout of DOW's KWADE database which will afford ready access to a variety of updated benthic and other data. When access to KWADE is available, DMP will adjust its CHIA collection and update procedures accordingly to make use of the latest and best datasets.

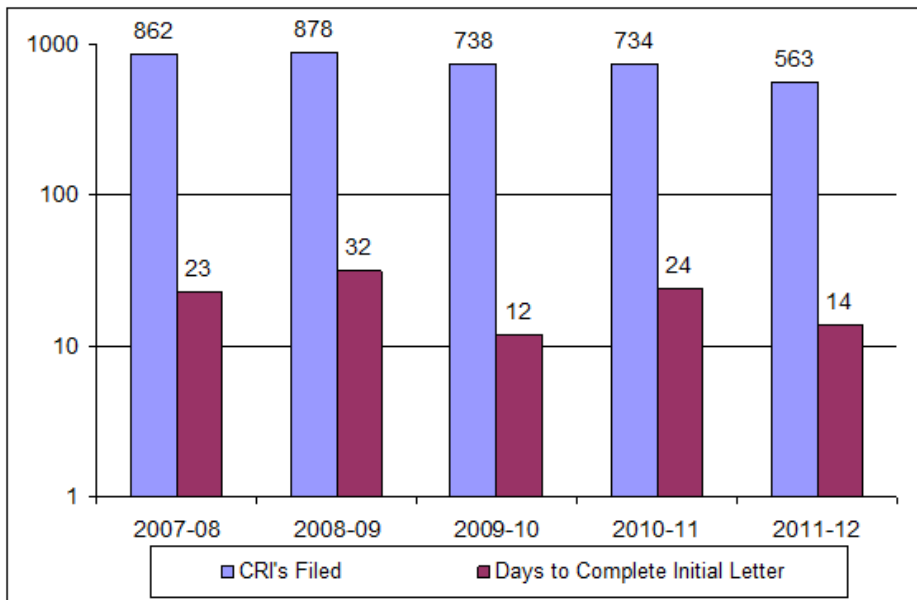


Note: Applications Received is the number received for the entire month.

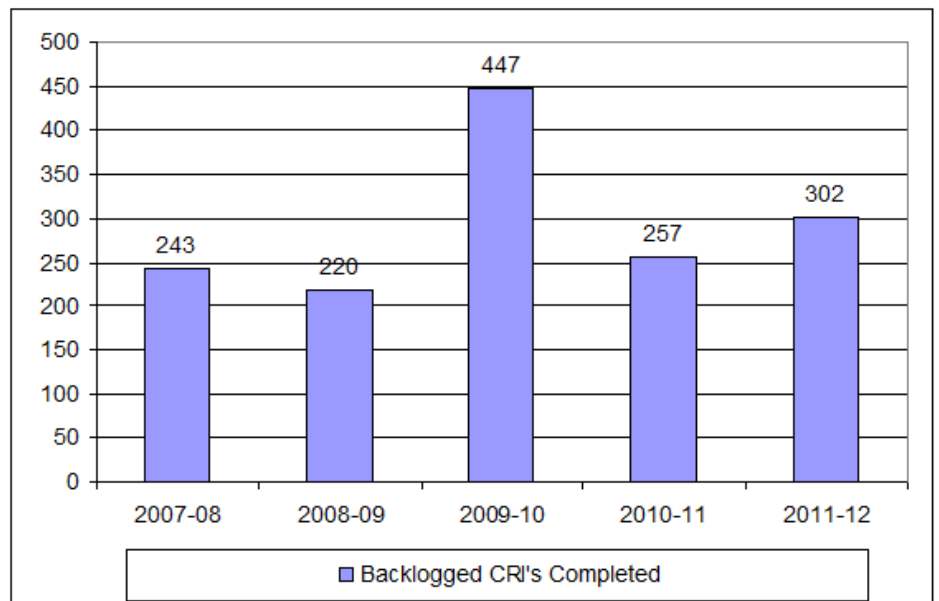
Objective 2 - Encourage citizen participation in coal mine permitting and enforcement processes.

The DNR Commissioner and staff from DMRE and DMP met routinely during the year with environmental groups to listen to their concerns. Extensive outreach material, accessible on the department's web site, was updated in a timely manner and plans are being developed to add more data requested by interested groups. Protests, complaints, and requests for permit conferences were fully integrated into an electronic process for review by the staff of the Division of Mine Permits. Form templates for these services were placed online for use by the public and are easily crafted with a click of a button. All correspondence and documentation received are promptly scanned into DocTree and immediately verified. Integrating protests, complaints, and permit conferences into an electronic process has allowed the Division of Mine Permits to track the paperwork more accurately and greatly reduce the chance of issuing a permit with an unresolved protest. Man-hours and keystrokes spent on protests and complaints were greatly reduced by creating the templates and forming buttons in Staffware that populate information for reviewers.

563 citizen requests for inspections (CRI) were filed with DMRE with an average initial response of 14 days. The backlog of CRI's pending in the division was greatly reduced during the year. The goal with respect to responding to citizen complaints is being modified from filing the initial response within 2 working days to filing the initial response to citizen's requests within 5 working days.



Citizen Requests for Inspection that are older than 30 days are considered as a backlogged CRI's. For FY2012, 302 backlogged CRI's were completed.



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

The Best Management Practices Board overseeing logging operations state-wide did not propose any changes in the last year to current forestry best management protocols or penalties. No legislation was introduced in the 2012 session of the Kentucky General Assembly regarding logging and water quality.

The division performed 5,155 inspections on commercial harvest operations, issuing 220 written warnings for water quality violations. Five emergency orders were issued for serious best management practices violations, (12) no Master Logger on site, and one for a combination of serious violations and no Master Logger on site.

Fourteen (14) new bad actor designations were issued with penalties assessed totaling \$28,210. In FY12, 12.7% of fines were collected. One bad actor designation was removed during the past year and nine are in process of remediation.

The division conducted eight 3-day Kentucky Master Logger programs with 191 graduates. Twenty nine one-day continuing education programs were held with 1,149 attendees. The requirement to have a Master Logger on site during harvesting has significantly reduced the incidents of water quality violations.

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, AMD projects, and water supply projects.

For Fiscal Year 2012 the Division of Abandoned Mine Lands (AML) received a total grant of \$36,721,012 which is up from the previous year's grant of \$33,591,345. A total of forty-one (41) AML projects were completed and twelve (12) were High Priority (emergency) reclamation projects. The total number of acres reclaimed was one-hundred sixty-six (166). \$14,172,000 was expended on these projects.

The maximum amount of AMD funds allowed by SMCRA was set aside for this grant in the amount of \$8,240,000. During this fiscal year, six AMD projects were completed improving approximately 4.5 miles of stream. Construction expenditures were \$737,000. The largest AMD project to date, Ebenezer in Muhlenberg County, was begun with an estimated cost of over 3 million dollars.

Eight water supply projects were completed serving an estimated 802 households in six eastern Kentucky counties. Construction costs were \$9,654,000.00.

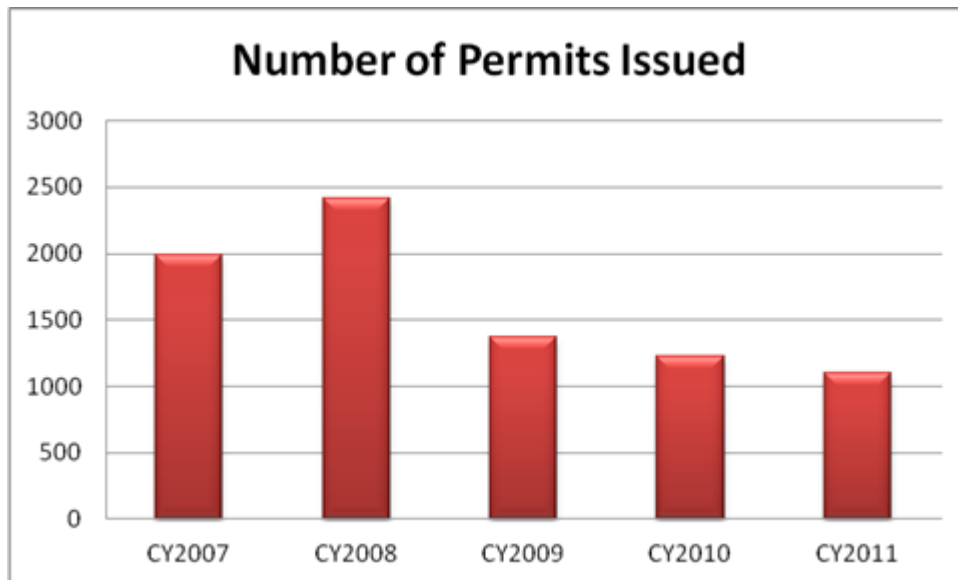
Objective 5 - Evaluate the current Division of Oil and Gas regulatory program to ensure it is adequate to prevent waste, is protective of the mineral owners, whose properties are adjacent to active operations, and is stringent enough to protect the environment, while encouraging responsible development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

The Division of Oil and Gas is continuing its pursuit of primacy of Class II Underground Injection Control wells under Section 1425 of the Safe Drinking Water Act from the USEPA. Division staff has worked closely with USEPA Region 4 representatives on a number of program description submissions in order to achieve a complete package with all EPA requirements. At this time, the Division is awaiting USEPA final review and approval of the primacy application package.

Once primacy has been granted by the USEPA, the Division will receive a federal grant to assist with the implementation and administration of the Class II program. The Division plans to use this grant money

to increase its staff levels.

The Division has also updated its Well Operator's Manual to inform the regulated community and general public of the division's regulations and best management practices. This manual is made available at no cost on the Division's website.



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.

Kentucky forests are continuing a positive Growth-to-Removal Ratio of 2.0 to 1. This ensures a steady replenishment of one of the state's critical natural resources and thus a continuing supply of raw material for Kentucky's important wood-oriented industries.

The Division of Forestry operated two tree seedling nurseries during the year harvesting approximately 4 million seedlings which were sold to various public and private organizations who planted them for timber production, wildlife habitat, erosion control, and scenic beauty. The division lost 440,000 tree seedlings due to the March 2, 2012 tornado at Morgan County Nursery (MCN) in West Liberty. Loss of production at MCN will reduce the division's capacity for producing and distributing tree seedlings by 1.5 million. Rebuilding of the Morgan County Nursery is in the initial planning stage.

The division worked with the Economic Development Cabinet to promote wood-using industries for the *Kentucky Export Initiative*. The two agencies have also shared trade leads and inquiries for wood products while analyzing potential impact on the forest resources.

Strategy 2 of the *Intelligent Energy Choices for Kentucky's Future* plan states "Kentucky has great potential for producing renewable energy from woody biomass." The division continues to work with the Department for Energy Development and Independence to promote woody biomass for energy production. Unfortunately, funding has not materialized for technical and financial assistance to develop energy from woody biomass.

The Division of Abandoned Mine Lands (AML) entered into a Memorandum of Agreement with the Division of Forestry (DOF) for \$100,000 to promote the reestablishment of hardwood forest, including hybrid American chestnut, on a bond forfeiture site in Lawrence County. The SAMMI grant (Southern Appalachian Mixed Mesophytic hardwood restoration coal reclamation Initiative) will provide reimbursement to AML through DOF. Reclamation on the site is currently in progress which includes deep ripping to alleviate compaction with tree planting scheduled for spring 2013.

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.

During calendar year 2011 DNR permitted a total acreage of 16,450 acres on new surface mines. Mining companies committed to reclaiming 10,291 acres using the RAM #124 or Forestry Reclamation Approach (FRA) methodology. The use of FRA on the 10,291 acres will result in the establishment of nearly seven million new trees (assuming a typical planting rate of 680 trees per acre).

During 2011, DNR also granted phase 3 bond release (complete releases) on 1,845 acres that had been planted with trees and shrubs. 210 acres of the released acreage had been reclaimed using the FRA approach and support 142,800 trees. The remaining 1635 acres were also planted with trees and shrubs but the companies may or may not have specifically followed the FRA approach. These 1,635 acres will support an additional 1,111,800 trees.

DNR expanded its roles within the Appalachian Regional Reforestation Initiative (ARRI) by recently partnering with Green Forests Work (GFW) to convert previously reclaimed grasslands on surface mined lands back to forests. GFW is a recently created 501(c) (3) non-profit organization that is independently funded through grants, donations, and other sources. On September 28, 2011, GFW received a \$300,000 grant from the Appalachian Regional Commission (ARC) and will combine the ARC grant with other funding sources to expand the economic development program based on the successes and science of the FRA. Through this grant and other funding sources, GFW has strengthened its partnerships with DNR, federal agencies, watershed groups, coal operators, conservation groups, environmental organizations, faith-based groups, numerous universities and colleges, and K-12 schools.

During FY 2012 DNR partnered with GFW to coordinate volunteers for twelve tree-planting projects/events throughout Kentucky. During those twelve events in 2012, the DNR assisted over 749 volunteers in planting 44,355 trees over 46.15 acres. GFW is gaining momentum and the tree

planting events are now evolving into large scale projects funded by grants, cost share programs, utility companies seeking carbon credits, corporate and personal donations. By the end of 2012, nearly 2 million trees will have been planted on non-managed grassland reclaimed sites to return those sites to forestlands.

DNR partnered with the University of Kentucky's Department of Forestry to establish research and demonstration plots that will be used to assess the carbon sequestration capability of fast growing hard wood species on surface mined lands belonging to the university.

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

The Division of Conservation with technical assistance Natural Resources Conservation Service has reached the following numbers:

Technical Assistance to 18,528 Customers

Conservation Practices planned – 30,277

Conservation Practices applied – 20,950

Conservation Plans written – 2,853

Conservation Plans applied – 3,534

Conservation Plans written for 241,157 acres

Conservation Plans applied to 304,782 acres

Comprehensive Nutrient Management Plans (CNMP) – 26 written

Comprehensive Nutrient Management Plans (CNMP) – 1,214 acres

Soil Quality applied to 132,545 acres

Grazing land conservation applied to 106,086 acres

Forest land conservation applied to 22,579 acres

Wetlands created, restored, enhanced – 1,881 acres

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.

The Kentucky Soil Erosion and Water Quality Cost Share Program provide financial assistance to individuals to implement best management practices on farms or in forest operations. In FY 2012, the division received 1,474 applications resulting in \$11.3 million dollars requested. Due to only \$6.5 million being available, 885 applications involving 981 best management practices were approved.

The Equipment Loan Program provides necessary equipment for the installation of best management practices. Low interest loans are made to conservation district for no-till drill, dozers, aerators, trenchers and other types of specialty equipment needed in the community to install best management

practices. For FY 12, five new equipment loans were made for a total of \$396,867.64.

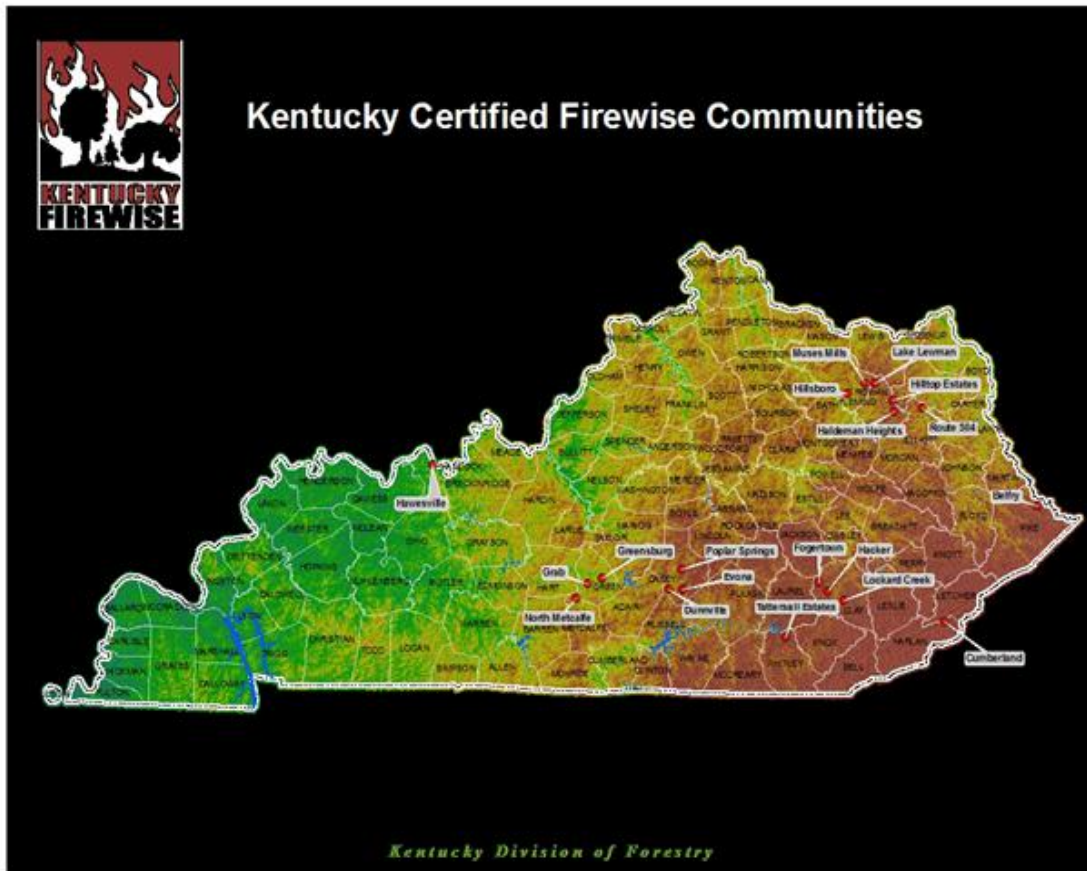
The Division of Conservation successfully competed and received federal funding for the Mississippi River Basin Initiative (MRBI). This project is to implement voluntary conservation projects over the next four years within targeted watersheds in 12 key states. The MRBI will help Kentucky landowners implement conservation and management practices that avoid, control and trap nutrient runoff from agricultural land. The watersheds selected were based on the potential for managing nitrogen and phosphorus while maintaining agricultural productivity and benefiting wildlife. Participation in MRBI was made possible through a competitive process that partnered USDA's Natural Resources Conservation Service with local, state and national entities. The Kentucky Conservation Partnership, led by the Division of Conservation, recognized the urgency of this issue and immediately submitted their conservation proposal to obtain financial assistance. Out of 76 projects awarded nationwide, the Division was awarded three projects: Licking River Watershed, Lower Green River Watershed and the Mayfield Creek Watershed, totaling \$3 million. An additional \$500,000 will be made available for each project in the next four years through the Kentucky Soil Erosion and Water Quality Cost Share program to focus on precision nutrient management. Over the four-year lifespan of the projects, incentive payments totaling \$25.5 million will be awarded to Kentucky landowners. In 2012, an additional project area was included by the addition of the Red River Watershed along with an additional \$500,000 in federal funding. To date, 41 contracts have been funded in Kentucky covering 5,148 acres totaling \$1,592,915 in the first year, with remaining requests of \$4.2 million in unfunded applications.

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

The 2011 ten-year annual average number of acres burned by wildfires in Kentucky is 37,286. Over 80% of the wildfires are caused by humans with over 50% caused by arson. Although earlier recommended by a Governor's Task Force, funding has not been appropriated to implement a dedicated law enforcement unit to focus on this serious problem. The Division of Forestry (DOF) worked routinely with local law enforcement, volunteer fire departments, and community leaders to reduce the number of fire incidents and educate the public on fire safety.

There are nineteen designated *Firewise* communities in Kentucky. The Firewise program encourages people and local leaders to take responsibility to make their homes and communities safe from wildfire. A Firewise Community is the national recognition a community receives when it creates a board or committee, obtains a wildfire risk assessment of the area, creates an action plan to minimize the wildfire risks, conducts a "Firewise Day" event each year, and invests a minimum of \$2 per capita in local Firewise actions for the year.



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

The DOF purchased one bulldozer/tractor unit and five pumper units and communication headsets were purchased to allow direct contact with dozer operators while constructing fire lines.

Forests were monitored for Hemlock Woolly Adelgid and infestations were located in 5 additional counties. Working with a federal grant, DOF is currently treating state forests, state parks, and the priority sites in the Daniel Boone National Forest. Black walnut trees were monitored for Thousand Canker disease and at this point none have been found to be infested. Further monitoring was accomplished for bark beetle infestations, including Emerald Ash Borer, Asian Longhorn beetle, woodwasps, Ambrosia beetles and Southern Pine Beetle.

The division held three Hemlock Woolly Adelgid workshops in southeastern and eastern Kentucky and a Woodland Owner Short Course in northeastern Kentucky for Hemlock Woolly Adelgid and Emerald Ash Borer awareness.

Three issues of the Kentucky Woodlands Magazine were produced that highlighted management strategies for invasive exotic plants, Emerald Ash Borer and Hemlock Woolly Adelgid monitoring updates.

Objective 3 - Protect prime farmland for agricultural production.

The designation of farmland to be part of an Agricultural District is designed to protect the state's best agricultural land for food and fiber production and to prevent its conversion to nonagricultural usage. Land enrolled in the program cannot be annexed, cannot be condemned without mitigation, is taxed at the agricultural rate, is eligible for deferred assessment costs when water lines are extended, and

receives extra points when applying for state Cost Share or to the Purchase of Agricultural Conservation Easements (PACE) Program. Farmers continue each year to enroll in this special program and at this time the state has 463,094.76 acres of farmland enrolled with 3,707 landowners.

The Division of Conservation provides soil survey, land use and Geographical Information System data to assist the Purchase of Agricultural Conservation Easements (PACE) Board with the ranking of landowner applications who offer their land for easement under the program. To date, the PACE program has 88 purchased easements and 34 donations on a total of 25,565 acres.

The Conservation Reserve Enhancement Program (CREP) is an enhanced version of the USDA Conservation Reserve Program (CRP) which has been the federal government's largest and most comprehensive private lands environmental improvement program. Because the section of the Green River in Kentucky has been identified as such a special place, partner agencies felt that the enhanced version of CRP would be ideal for this area. As of the fall of 2009, all 100,000 acres allotted for this program have been utilized and each year farmers are profiting from performing best management practices that protect this vital water source. The partnering agencies (NRCS, DOC, KYDFWR, and DOF) worked diligently during the year to identify gaps in the program and then design an amendment that fit the local geography and land use to embody the intent of CREP.

In FY 12, the Division of Conservation began discussions on the "Water Quality Trading Pilot Project." This project will involve 5 northern Kentucky counties, along with districts from Ohio and Indiana. This program will bring in private money from the Electric Power Research Institute to landowners who install best management practices to reduce the total nitrogen and total phosphorus released from agricultural activities. This action will result in the availability of credits to energy companies to purchase.

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.

During the construction of the Big Branch Acid Mine Drainage (AMD) project in Perry County, the Division of Abandoned Mine Lands incorporated into the reclamation two vernal pools. These pools will provide excellent habitat for wildlife, especially amphibians.

The DNR continues to work with the U.S. Forest Service to identify programs and resources that will promote wetland reestablishment and creation wherever possible.

Objective 5 - Promote stewardship of Kentucky's natural resources.

The Division of Conservation worked diligently to educate and promote the stewardship of Kentucky's natural resources by educating the state's youth through two programs. *Envirothon* is a program that works with high school students and creates a competition focused on environmental issues involving aquatics, forestry, soils, wildlife and a current issue. For FY 12, Kentucky Envirothon had 34 teams compete. The *Jim Claypool Art and Conservation Writing Contest* is for students in 1st through 12th grades and rotate around the subjects of soils, water, forestry and wildlife. In 2011, 60,113 students competed in this contest.

The Division of Forestry assisted forestland owners in planting tree seedlings on 249 acres while marking 6,625 acres of existing forestland for improvement practices. Landowners harvested 2,977 acres of forests with division assistance ensuring the health of the remaining forest.

Environmental education continues to be a key in protecting and enhancing Kentucky's forest resources. The division participated in 75 field demonstrations and workshops reaching more than 10,000 landowners. The division is co-author of the *Kentucky Woodlands Magazine* which is produced

three times a year with a circulation of 12,000 copies and is available online. Each issue contained numerous articles on forest management, health, invasive species, champion trees, utilization and educational opportunities.

The division worked with other partners such as the USDA Natural Resources Conservation Service, Farm Bureau, Kentucky Woodland Owners Association and others to reach the more than 467,000 forest landowners across the state. The division worked with the Division of Conservation to provide 251,940 tree seedlings as a match for tree seedlings purchased and distributed by local conservation districts for Arbor Day events.

The division assists cities and communities in the stewardship of their urban forests. In April 2012, thirty-two communities were designated as a Tree City USA® for their continued commitment in managing their urban trees. Three municipal utilities and seven universities also received designations as Tree Line USA® and Tree Campus USA® respectively through division assistance.

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

This goal is accomplished by awarding funding for the purchase and preservation of natural areas that protect rare and endangered species and migratory birds, areas of natural importance, and natural areas utilized by the public for outdoor recreation and education. The fund continued to encourage partnerships between state and local agencies for the acquisition and protection of these natural areas.

HLCF staff continued their outreach efforts through stewardship workshops and seminars for award recipients and the public. In FY12 staff completed the following:

- Three invasive species/site restoration workshops were conducted as part of the Kentucky Native Plant Society Stewardship Certification Program, in conjunction with Kentucky Division of Forestry;
- Three presentations were given to civic groups on "Land Conservation in Kentucky";
- Staff biologist was guest lecturer for Campbellsville University biology department field trips;
- Staff biologist was active in developing Kentucky Prescribed Fire Council, Kentucky Native Plant Society, and Kentucky Society of Natural History conferences.
- In an effort to educate local officials on the importance of the program, staff conducted 90 site visits throughout the state on properties purchased using KHLCF funds. Most of these visits incorporated meetings with the managing entity including judge-executives and mayors.
- 15 on-site visits were conducted for new application project reviews.
- Staff published invasive species articles in Kentucky Woodlands Magazine and Kentucky Academy of Sciences newsletter.

In an effort to increase license plates sales, the KHLCF brought back the popular classic "bobcat", "cardinal", and "butterfly" designs. The marketing campaign included new posters distributed to county clerks and extension offices, press releases on new property acquisitions, one article in the EEC's Land, Air and Water publication and radio spots on NPR stations in Kentucky's largest metro areas.

New policies and regulations were established to increase program efficiency, effectiveness and project oversight by the KHLCF Board of Directors. These included annual project site visits by KHLCF staff, the development of habitat management and trail management guidelines for sites, development of biological inventory standards, and adoption of a multi-phased management funding protocol to better track and direct management expenditures.

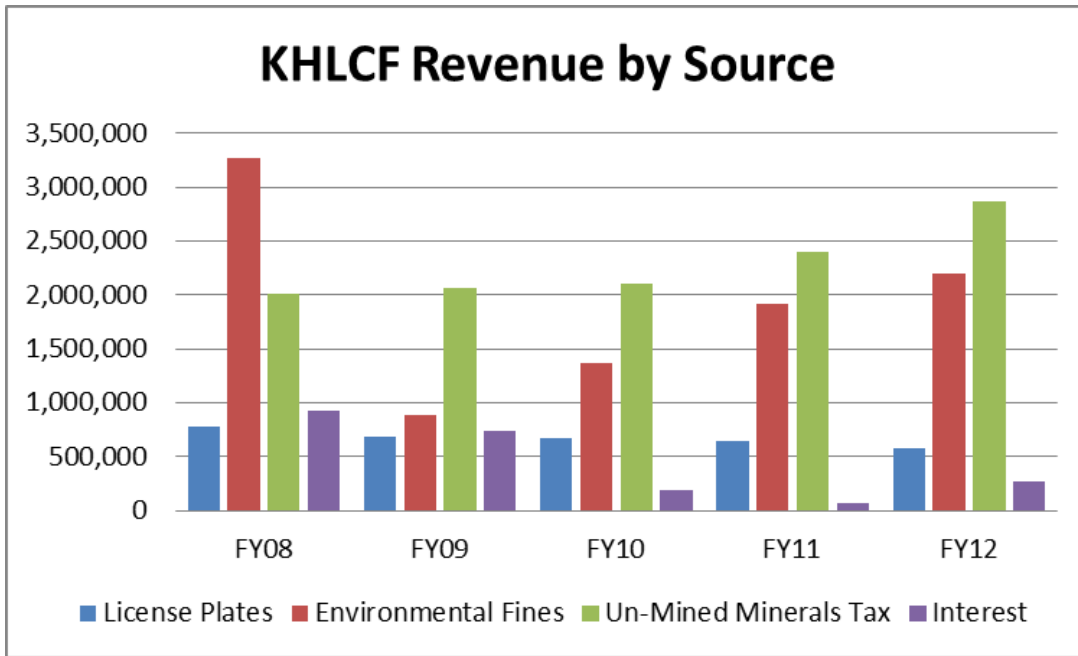
To more effectively accomplish its mission, the Board approved an increase of program staff by adding two positions; an administrative assistant to help with project tracking and board business, and a biologist consultant to coordinate land management activities and new project acquisitions.

During FY 2012, the fund acquired 4,280 acres for conservation through nine awards.

<u>PROJECT</u>	<u>AGENCY</u>	<u>COUNTY</u>	<u>ACRES</u>
Lower Howards Creek Addition	Clark County Fiscal Court	Clark	17.51
Frenchman’s Knob	Hart County Fiscal Court	Hart	46.55
Lily Mountain	Estill County Conservation	Estill	349.45
Cove Springs Park Addition	City of Frankfort	Franklin	5.26
Big Rivers Corridor Phase I	Forestry and Fish and Wildlife	Union	2,483.55
Burnett Property on Little South Fork	Division of Water, Wild Rivers Program	Wayne/McCreary	997.07
Wilson Tract (Rush Island)	Division of Water, Wild Rivers Program	Hart	139.70
Perkins Tract	Livingston County Fiscal Court	Livingston	76.00
Natural Bridge SP (White Branch)	Division of Parks	Powell	165.00

Total Acres **4,280.09**

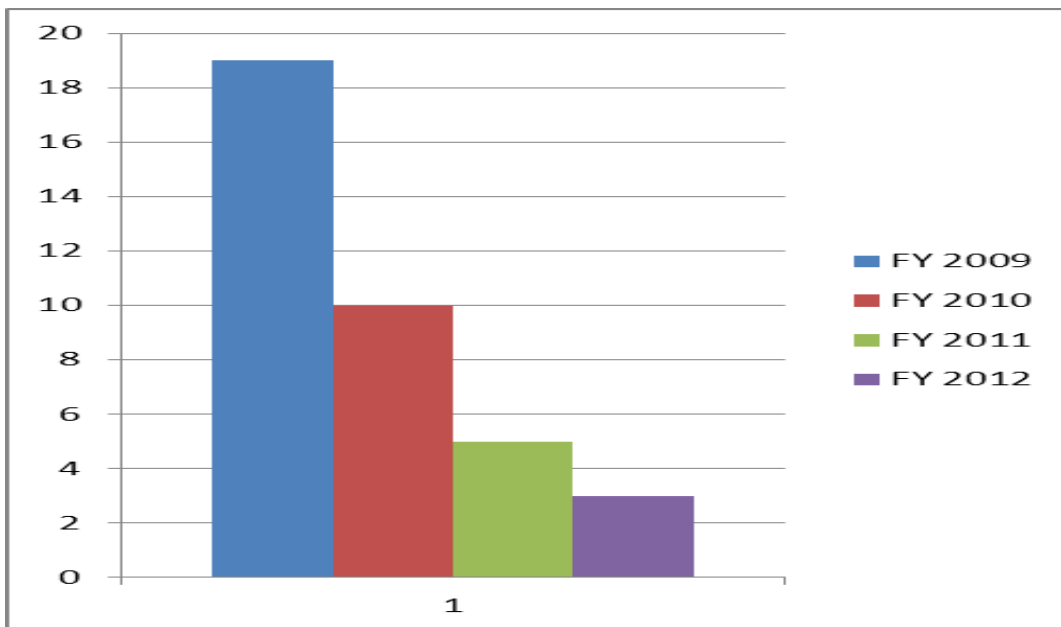
In addition, 12 additional project applications were reviewed and approved by the board in early 2012. Funding awards totaling over \$3.3 million were approved for the proposed acquisition and management of more than 1,480 acres located throughout the state. Local government/university projects were approved in Campbell, Clark, Estill, Fleming Jefferson, Lewis, Shelby and Taylor counties. State agency projects were approved in Bell, Bullitt, Calloway, and Powell counties.



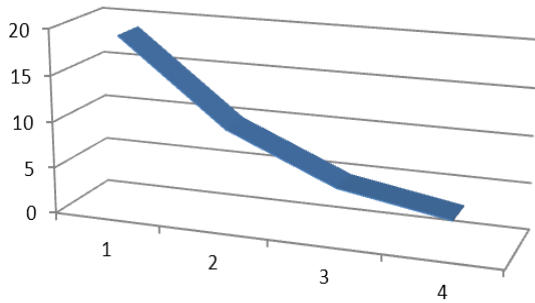
DNR GOAL 4. Coal mining, logging, firefighting and agricultural activities are performed in a safe manner.

Objective 1 - Prevent Flyrock Incidents Related to Coal and Non-Coal Mining (DMRE)

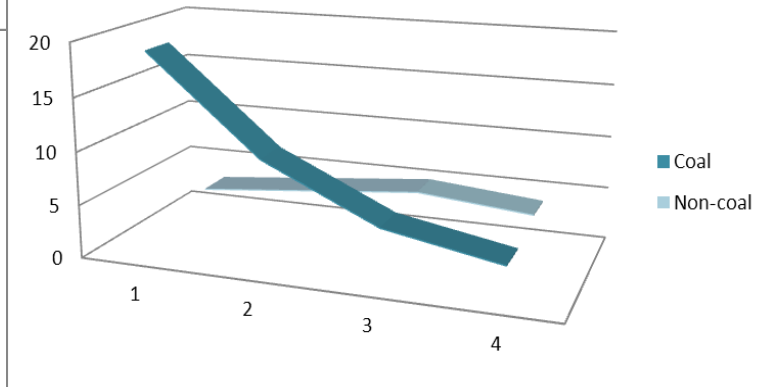
The positive trend in flyrock reduction for coal mines continued with 3 in FY2012.



4 year pattern of decline



4 year flyrock pattern



Efforts are being made to determine high risk sites for non-coal operations (including construction and demolition operations) to implement the same measures used for flyrock prevention for coal sites. Special consideration is being given to the unique circumstances that occur on non-coal sites (i.e., extremely close distances to structures) and efforts are made to promote the use of mats and/or other precautions to prevent flyrock.

The number of pre-blasting briefings of on-site personnel on coal and non-coal operations was increased. The Blasting Remediation Plan (BR) meetings proved successful and EEB staff continued their participation. Private and confidential blaster/inspector discussions fostered informal information sharing about specific conditions which has also proved helpful.

Explosives and Blasting Branch (EBB) assisted OMSL, BSEE, and other agencies in developing training courses and procedures addressing the specific needs of licensed blasters relative to the unique areas for their blasting operations. EBB implemented a policy that students participating in training classes complete evaluations of course material and presentation. Staff routinely monitored training classes to insure professionalism and adherence to the guidelines of the program under which it was approved. Staff also continued updating the suggested training topics based upon reviews of regulatory work and issues found to be most problematic in the blasting industry.

EBB continues their coordination with the University of Kentucky, Department of Mining Engineering in a joint effort to produce a study of flyrock events in Kentucky. The study will review and analyze data from many different prospective and look for trends to identify common and contributing causes of flyrock incidents.

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

Wildland Fire Safety Training Annual Refresher has been provided to all full-time and part-time firefighters. Annual training in first-aid and CPR was conducted in every DOF office for all full-time and interim firefighters. Incident Commanders conducted safety briefings at each wildfire incident prior to beginning suppression activities.

The Mine Safety Analysts program within the Office of Mine Safety and Licensing is a critical component of the state's overall mine safety program. Trained safety analysts are placed in underground mines and at surface mines to observe and evaluate the work habits of all miners involved in coal production. They act as job safety counselor, providing essential safety training and correcting unsafe conditions.

In 2011, OMSL Instructors/Analysts trained and/or tested a total of 38,648 miners and issued 22,191 certifications. Of the total trained, 4,723 were certified surface and underground foremen. These foremen, according to KRS 351.106(1), are required to have this training annually. The majority of these miners are front line supervisors and this training better prepares them to become more efficient and more safety oriented.

The Safety Analysis Training and Certification Division Instructors teach approximately 15 different mining classes, thus making our miners more comprehensibly knowledgeable in their chosen fields of endeavor. Surface miners backing over berms and into hollow fills with rock trucks and underground miners getting crushed by equipment have recently plagued the industry with injuries and fatalities. The Mine Safety Analysts have focused heavily on these areas utilizing their skills in the classroom, safety meetings and on the job training of the miners. Due to the effort put forth by this division, the coal industry has seen a drastic reduction in these types of accidents and fatalities.

Objective 3 - Reduce Serious Mine Accidents and Fatalities. (OSML)

Safety inspections are made by well-qualified and trained inspectors who are stationed in the six district offices/mine rescue stations throughout the commonwealth. Inspectors carry out and enforce the laws of Kentucky as specified by KRS 351 – 352 and associated regulations. Inspectors report on the condition of the mine and a copy of the inspection report is given to the operator or superintendent of each mine. Inspections are proactive accident prevention measures used to identify hazards prior to their causing accidents.

Kentucky law requires the agency's inspection force to conduct six inspections a year. Of the six annual inspections, two shall be full electrical inspections and four general inspections. Furthermore, all surface mines must be inspected two times annually.

Licensing Activity

Type of Mine License 2010 2011 2012

Underground Mine License	219	214	192
Surface Mine License	294	317	247

Inspection Data

Type of Inspection 2010 2011 2012

General Underground Inspection	657	652	367
Electrical Underground Inspection	340	355	200
Idle Inspection	98	97	64
General Surface Inspections	294	317	247
Surface Idle Inspections	98	97	64

Enforcement Data

Type of Citation 2010 2011 2012

Non Compliances	3593	2693	2158
Closure Orders	2918	2699	1558

Underground and surface mine fatalities have shown a downward trend over the past ten (10) years as compared to the previous ten (10) years. Surface and underground accidents have also decreased.

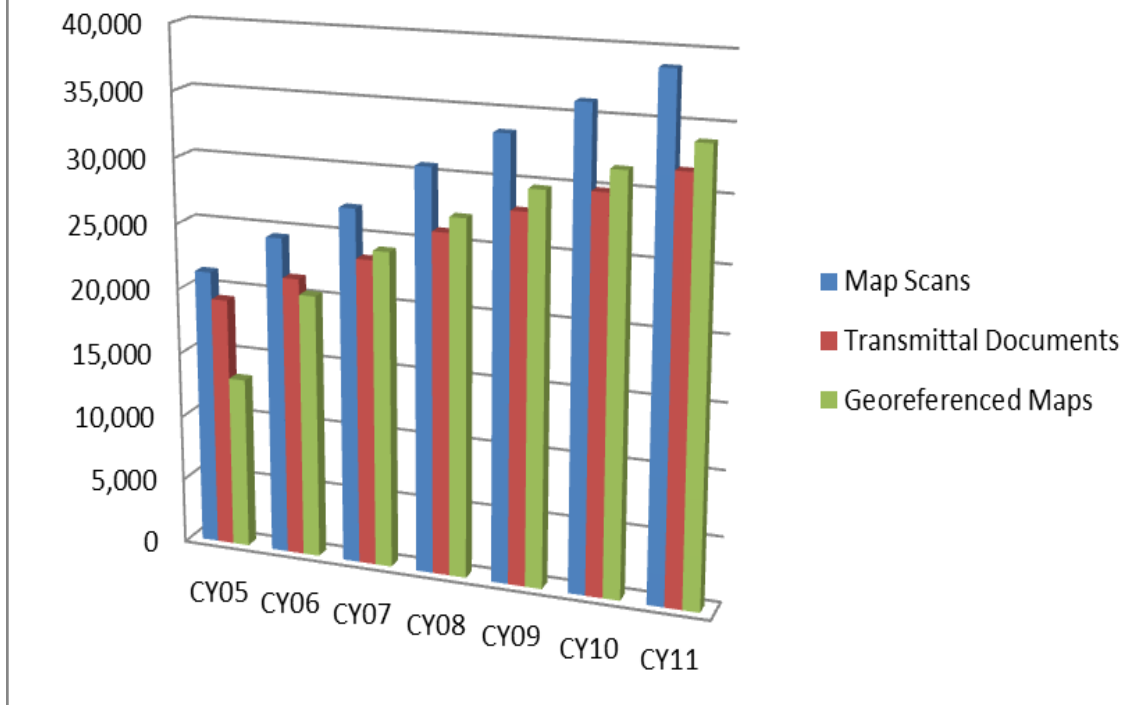
The DNR continues to support the Underground Mine Mapping Information System (MMIS), which offers immediate online access to geo-referenced underground mine maps to the public, resource extraction industries, and governmental agencies. The online service allows for the identification of historic and current mining activity in both of Kentucky's coalfields so as to avoid hazards created by unmapped underground voids. The system continues to provide essential information in the event of miner rescue, subsidence issues and blow-outs from abandoned mines. The federal Office of Surface Mining awarded OMSL \$62,750 in FY12 to continue this crucial effort.

As of 6/30/12, 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 web site averaged approximately 13,000 hits a day and 400,000 hits a month for the first two quarters in 2012. 50 to 75 maps are downloaded each day. OMSL sent a database of 182,000 historical records (1884 – 2002) to accompany Kentucky's scans to OSM-Pittsburgh.

The MMIS will be enhanced in the next year as the OMSL Mine Safety and Mapping Capital IT project is developed and implemented.

Mine Mapping Information System Scans



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

OMSL has twelve (12) fully equipped mine rescue teams that provided this critical service to underground mines who requested signature mine rescue coverage. These rescue teams have conducted 302 MSHA mine rescue compliance visits and is in compliance with all MSHA required mine rescue visits.

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

The Division of Conservation assisted the Fox Creek Conservancy District, located in Fleming County, in securing matching federal funds to correct a serious safety issue with the local watershed structure. The previously 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. \$350,000 obtained from a Department for Local Government grant, matched with \$50,000 from the water conservancy district, was sufficient to match the NRCS federal funds to cover the nearly \$4 million cost of repairs.

To increase the availability of funds to renovate older agricultural watershed dams, the Soil and Water Commission has revised its policy for distributing funds from the Equipment Loan Program to include the repair of dams operated under the auspices of local Water Conservancy Districts.

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.

The "Local Interagency Coordination Agreement for Coal Mining Activities in Kentucky Associated with the Clean Water Act, the Surface Mining Control and Reclamation Act, and the Endangered Species Act" was signed by the Kentucky Department for Natural Resources, Kentucky Division of Water, U.S. Fish and Wildlife Service, Office of Surface Mining, U.S. Army Corps of Engineers, and U.S. Environmental Protection Agency on June 20, 2012.

DNR coordinated with the Department for Environmental Protection to develop a new protocol for coordination of inspection and enforcement tasks between the two agencies. A revised Memorandum of Understanding is currently being drafted to reflect the changes scheduled to go into effect on January 1, 2013.

The Division of Oil and Gas continued its pursuit of primacy of Class II Underground Injection Control wells under Section 1425 of the Safe Drinking Water Act from the USEPA. Division staff worked closely with USEPA Region 4 representatives in order to bring this program to the state level. Once primacy is granted, the division will provide a one-stop processing center for all oil and gas industry's permitting requirements.

The Division of Oil and Gas conducted several meetings throughout the year with industry representatives from the Kentucky Oil & Gas Association, land owner representatives and other interested parties to discuss ways to improve oil and gas well site reclamation. The topics discussed included the removal and reclamation of storage facilities, burial of gathering lines and well access road reclamation. These topics are currently under evaluation.

The Coal Water Quality Task Force, a joint endeavor with the Department for Environmental Protection met monthly to exchange information and resolve water quality concerns. Work continues on the development and implementation of computer system upgrades to improve the efficiency of transferring KPDES permitting and water monitoring data to online sites. DMRE continues to work with DEP concerning water related issues. The group is currently working to revise the DNR-DEP Memorandum of Understanding, which allocates responsibilities related to inspection duties, DMR reviews, the transfer of information between agencies, and other areas of overlap between SMCRA and the Clean Water Act.

Once a year the OMSL's Director of Safety Analysis, Training and Certification meets with the Virginia Department of Mines to discuss safety trends and issues which may arise concerning the reciprocity issues shared by both states.

Objective 2 - Evaluate current Oil and Gas regulatory programs and requirements to determine if changes are needed to address changing conditions or responsibilities.

An in-depth evaluation of the oil and gas regulatory requirements has begun but it is too early to determine quantitative results. An initial effort to review the program in the area of storage facility (tank) registration and removal requirements has evolved into a review of all operational aspects to include the drilling site and associated access roads.

The Division is also reviewing the regulatory requirement for well stimulation/fracturing fluid disclosure. The disclosure of fluids would allow for transparency of oil and gas well completion practices and could be done easily by requiring operators to submit to an existing national fluid disclosure database.

The Division has taken steps to implement electronic filing of *Well Log and Completion Reports* through

an EForms project sponsored by the Ground Water Protection Council (GWPC). Division staff is working with GWPC consultants to create an electronic filing system that will provide the Division with more technical data on the drilling of oil and gas wells. This will allow for an increase in the Division's oversight of drilling and completion operations, while decreasing the Division's administrative workload on processing and maintaining paper documents.

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

DNR continues to participate in ongoing quarterly interagency meetings composed of representatives from U.S. Office of Surface Mining, U.S. Environmental Protection Agency, U.S. Army Corps of Engineers, U.S. Fish and Wildlife, KY Department for Environmental Protection, KY Division of Water, and KY Department of Fish and Wildlife.

The DMRE Explosive and Blasting Branch (EBB) continues their coordination with blasting personnel within OSM, MSHA, OMSL, and other agencies on blasting issues, blasting assistance, joint inspections, and blasting summits in order to raise the standards of practice for blasting in Kentucky.

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.

DMP provides an on-line library of guidance documents and training modules on technical documents to ensure that all DMP and DMRE employees are trained sufficiently to ensure the review and issuance of permits are in compliance with SMCRA requirements and performance standards. Reclamation Advisory Memoranda, or RAMs, are issued by the Commissioner and serve as a method of communication between the regulatory mining authority and the coal industry. These RAMs assist the regulated public by explaining and clarifying current or proposed statutes, regulations, or permitting procedures and requirements. Once issued, RAMs are electronically sent to coal industry representatives and interested parties and posted on the DNR web page. In FY 12, six RAM's were issued on a variety of topics important to the coal industry.

The department's mining divisions took full advantage of OSM-sponsored training during the year. A total of ninety-four training slots were filled with personnel from the Division of Abandoned Mine Lands during the reporting period attending thirty-one different courses. In addition, the Division of Mine Permits filled seventy-nine training slots and the Division of Mine Reclamation & Enforcement filled forty-two.

All divisions provided in-house training for new employees and refresher training for veteran staff. The Division of Mine Permits, emphasizing in-house training of its employees during this period, developed an aggressive training plan and conducted the following in-house training courses during the past FY:

06/23/11: *Preparing Permit Faces and Written Findings*

09/10-12/11: Western Kentucky Field Trip

09/20/11: *Ground Water Monitoring Requirements*

10/20/11: *Protests and Permit Conferences*

11/07/11: *E-Permitting Access Form*

11/29/11: *Engineering / Finite Element Modeling- Saturated*

12/08/11: *Engineering / Finite Element Modeling- Unsaturated*

12/19-20/11: *ArcMap 10*

01/19/12: *Surface Water Monitoring: Item 17 of the MPA-03*

02/02/12: *Item 18: Probable Hydrologic Consequences / Hydrologic Reclamation Plan*

02/29/12: *Engineering / Geo-Slope Sigma*

03/22/12: *Subsidence*

05/24/12: *Thick Overburden Guidelines*

06/05/12: *Thick Overburden (Engineering): Groundwater and Stability*

06/26/12: *Sediment Trenches (Engineering)*

As noted above, an overnight field trip for new reviewers was held in the western KY coal field. This highly successful effort strengthened the review program by exposing permit reviewers to the "real-world" of coal mining, therefore making their reviews more meaningful and ultimately more reasonable and accurate.

A revised Reviewers Manual is currently under development to coincide with the newly revised MPA-03 application form. DMP reviewers and DMRE inspectors attend OSM training courses together and further coordination is achieved by written comments made on the permit walk sheet and follow up communication by e-mails and telephone regarding issues of concern. A formal joint training for DMP Permit reviewers and DMRE Inspectors will be implemented in FY13.

EBB inspectors accompany DMRE inspectors when possible on complete inspections and give one-on-one training regarding specific blasting concerns for the permit. EBB inspectors also assist DMRE Inspectors regarding blasting complaints.

Objective 2 - Continue to provide guidance and equipment to DMRE's Explosives and Blasting Branch to increase the efficiency of blasting regulation.

An online library was created which continues to be further developed and updated. GPS devices were furnished to all blasting staff to increase their reporting accuracy in the field. The blasting design form and the MSHA joint approval form (SMP-61 and SMP-60) are now available in

electronic form. Additional work is underway to have the EBB fully electronic by the end of FY2013.

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

Completion of this project is anticipated in FY2013. A veteran inspector has been promoted to Supervisor of DMRE's Assessment and Records Section. On the job training is being utilized to give section staff a better understanding of the on-the-ground circumstances leading to the inspector's decision that a violation should be written. Additional field training for Frankfort office administrative personnel and assessments and records personnel is proposed for FY2013. Approximately 80% of the work to convert the assessment worksheet to Excel format has been completed.

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

The Department, through the authority of the Secretary's Office, promulgated administrative regulations that allowed the transmittal of enforcement documents (notices of noncompliance and order for remedial measures, order for cessation and immediate compliance, and notice of inspection of noncompliance) electronically when the service is requested by the regulated entities. These regulations became effective 02/03/12. The Department continues to use the RegWatch system that allows citizens to sign up for Department regulations which are then transmitted electronically.

The Division of Mine Permits is in the process of finalizing conversion of all eleven application forms from MSWord format to MSAccess format. Benefits of this are as follows:

- ✓ Validation to help in filling out an application to reduce deficiencies
 - Data entry is more structured
 - Completeness checks
 - Analysis reporting to identify inaccuracy or inconsistencies
 - Easy to identify required information at a glance
 - Import and export data to and from previous applications
- ✓ Attachments
 - Full build process will take seconds as opposed to minutes
 - Adding attachments is more flexible and supports all file types
 - Attachment names will only be limited to what is a legal filename
 - Easy to change attachments for the resubmittal process
 - Attachment name scheme will be automatically enforced
- ✓ Easier navigation
 - Each section is separated
 - Attachments will directly managed from each section
- ✓ DMP application processing time decreased
 - Interface with SMIS is automated
 - Ease of extracting information from the application to help in the review process.
 - More information going into SMIS processing such as water data
- ✓ Full documentation provided in new User's Guide

DMP has completed the main form (MPA-03) and has been testing it during the past FY. Most of the remaining forms have also been completed but will require testing. Training on the Access forms has been scheduled throughout the state. Each regional office now has an FTP site where applicants can submit minor field revisions electronically.

A File Transfer Protocol has been developed for the electronic submission of Surface and Ground Water Monitoring Reports. DMP staff is still working to implement a computer system to allow automatic upload of that data into the SMIS database. Blast remediation plans and MSHA joint approval forms can now be submitted electronically to the regional office.

The Division of Oil and Gas has taken steps to implement electronic filing of *Well Log and Completion Reports* through an EForms project sponsored by the Ground Water Protection Council (GWPC). Division staff is working with GWPC consultants to create an electronic filing system that will provide the Division with more technical data on the drilling of oil and gas wells. This will allow for an increase in the Division's oversight of drilling and completion operations, while decreasing the Division's administrative workload on processing and maintaining paper documents.

Electronic submittal of proposed penalty assessments has been implemented for those permittees who have elected to receive their penalty assessments transmitted electronically. Receipt of the proposed penalty assessments are verified by *RPost*.

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

The Department evaluated its fee structure across DNR agencies and came to the conclusion there were two fees that were regulatory-based that could be amended without an authorizing statutory change. These fees were the non-coal permit fee and the Office of Mine Safety and Licensing fee charged for mine licenses. However, due to several factors at the time, including other higher priority statutory and regulatory efforts, this approach was not undertaken.

Objective 6 - Ensure accountability of DNR offices and programs.

In FY 12, five audits were performed by DNR senior staff in the following division field offices: OMSL Harlan Office, OMSL Main Office, DOF Elizabethtown Office and John P. Rhody Nursery, and DMRE's Middlesboro Office. An audit completed in these locations reviewed the accuracy of receipts and deposits, inventory, cell phone re-imbursments, fleet maintenance, timekeeping practices, bulletin board requirements and job postings, office appearance and cleanliness, safety violations, that each driver has a valid license and insurance card, and any other general observations by the auditor(s). Written audit reports were completed and any infractions were corrected at the Division level. A copy of the audit report was also sent to the Office of the Inspector General. Positive feedback was received from the Inspector General of the accuracy and effectiveness of the audits.

The Division of Conservation implements an audit program for the 121 Local Conservation Districts that accomplishes the following:

- Each is audited on a 4-year rotation basis as required by law. In FY 12, 20 districts and 5 conservancy districts were audited. All are required to submit any required corrective measures plan to DOC.
- The division enacted a "Districts in Good Standing Program" in which conservation districts are graded on their submittal of reports, participation in state programs and involvement in county government. In 2012, 88 of our 121 conservation districts scored 100%.
- The State Auditor lists conservation districts has having one of the best accountability efforts

among special purpose districts.

Objective 7 -Support the information technology needs of DNR to allow DNR's programs and offices to gain efficiencies through the use of electronic communications, wireless inspection, digital data collection and storage, electronic workflow, computer modeling, GIS applications and electronic reporting. (DTAS)

The Division of Technical and Administrative Services (DTAS) initiated efforts to provide improved technology planning and coordination of all Department technology staff. Since budgetary restraints have curtailed purchases significantly, DNR continues to develop a departmental device network that will allow more rapidly replaced equipment to have a second use in other DNR divisions. The Division of Forestry received "surplus" laptops and desktops from Labor (62) and AML (43). The Division of Oil and Gas transferred a scanner/plotter to AML for their GIS efforts.

In order to save on maintenance and operational costs, 11 servers have been virtualized at Hudson Hollow. DNR physical servers at the cabinet facility were aging and have also been virtualized without purchasing new equipment. The identification of hardware, software or network needs that will allow better electronic communication between the Division of Conservation main office, conservation district offices, state and federal agencies, field staff and the general public is progressing.

The Office of Mine Safety and Licensing (OMSL) received \$972,000 in the form of a Capital IT project to rewrite the Common System application that tracks miners, mines, inspections and analysis. Requirements for each module have been identified and design/programming is ongoing. A byproduct of the new system will allow direct upload of electronic documents (inspections, analysis, training and education) to the database. Enhancements to the underground mine mapping system and interfaces to SMIS are planned as well. A single repository for OMSL documents will reside in SharePoint to mimic DocTree. Workflow software is being tested to further streamline the business processes for the Inspection and Analysis personnel.

The Division of Forestry obtained federal funding to upgrade GIS servers for the Cabinet which increased speeds and efficiencies throughout the Cabinet/Department/Division. Efforts are ongoing to better share GIS resources and expertise. Currently, staff from the Division of Mine Permits (DMP) is assisting GIS personnel at the OMSL to create a functional specification for ArcGIS upgrades required for enhancements to the Underground Mine Mapping System and mapping applications at DMP. The functional specification promises to aid greatly in the Mine Safety and Mapping Capital project.

The Division of Abandoned Mine Lands (AML) has entered into a Memorandum of Agreement with Commonwealth Office of Technology's Division of Geographic Information within the Finance and Administration Cabinet in the amount of \$390,269 to gather LiDAR for Perry, Knott, and Letcher Counties. This data will allow for a highly accurate bare earth model that can eliminate the need for much of our field-based surveying therefore saving valuable resources.

Student interns have entered nearly 93,000 Discharge Monitoring Reports (DMRs) into SMIS from DocTree, a scanned document management system. Each DMR is then sorted by watershed, becoming a part of a watershed dataset. These datasets assist the Department in the creation of a cumulative hydrologic assessment for each mining permit issued. Once DMR data is entered into SMIS, it can then be utilized by the regulated public.

With the inception of *Reclamation Advisory Memorandum (RAM) 148* in January of 2011, the Division of Mine Permit's GIS Section began accepting digitally submitted proposed mine boundary shapefiles from industry in March 2011, immediately following the completion of a series of free training seminars offered to industry and conducted by GIS staff. This ongoing effort is assisting greatly in streamlining data received from the mining industry. Submissions of digital shapefiles for 2011 totaled 16 over a period of 10 months yielding 1.6 submittals per month. At this writing, submissions of digital permits

for 2012, comprising eight months beginning in January, are 46, yielding 5.75 per month. Although adherence to RAM 148 is not mandatory, the GIS staff seizes every opportunity to promote this program. This includes verbal appreciation to firms that submit shapefiles, acknowledgement of these firms at periodic industry meetings, and in working diligently with any firm attempting to submit a shapefile that has contacted the DMP for assistance.

***Objective 8 - Provide administrative support and guidance to the Department.
(DTAS)***

The efficiency of the department's personnel action process has seen improvement. For FY2012, DTAS handled or processed 842 personnel actions, including 49 arrivals and 60 departures. DTAS has successfully turned over actions within the timeframes given in staff work plans with the exception of those that required additional documentation.

GAPS implemented an online vehicle system (VTS) to properly support central office vehicle needs through tracking and maintenance. Each division has been trained and is expected to input data into the VTS. Reports available through the system provide vital management information:

- ensure that required maintenance is done
- ensure that vehicle usage/mileage is appropriate
- provides data regarding personnel with permanently assigned vehicles and justification for that assignment
- provides data for responding to requests from Finance to justify DNR's need for agency owned vehicles rather than leasing from Fleet.

DNR was required to report the entire vehicle inventory (agency owned and leased) to Finance this year. The effort proved tedious and very time-consuming, but the VTS promises to provide reports that will ameliorate the hardship in the coming years if agencies use the system as directed. There are 23 vehicles in the motor pool at Hudson Hollow and a total of 721 for the department.