The background of the cover is a photograph of a forest floor. It is covered with brown, dried leaves and some green foliage. Scattered across the floor are several white flowers with yellow centers, likely wildflowers. The overall tone is natural and serene.

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Spring 2006

Land & Air & Water

Kentucky Environmental and Public Protection Cabinet

Land Air & Water

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What can you do?

By Kate Shanks
Office of Communications and Public Outreach



In the hustle and bustle of life, it's easy to forget our environment. We may find ourselves tossing an aluminum can into the trash instead of recycling it or jumping in the car to drive – not walk – a short distance to the store. But on Earth Day, April 22, people around the globe slow down to think about the environment.

For the past two years, the Kentucky Environmental and Public Protection Cabinet, with the help of partners, has spearheaded a statewide Earth Day campaign. This year the campaign is about doing your part for the environment. The campaign slogan "What can you do?" encourages people to consider their role in protecting the environment.

We all have a role to play. Solving environmental problems can seem daunting. But even small, simple actions can change the world around us.

Protecting the environment has changed in a way. Important environmental legislation was passed soon after the first Earth Day in 1970 to regulate sources of pollutants. Today, regulating polluters is still important, but the collective impact of citizens is often the primary cause of pollution. Water washing over pavement and grass carrying oil, fertilizer, pet waste and other contaminants into the water is the primary cause of water pollution. Emissions from vehicles cause substantial air pollution. This may surprise some, but we all pollute the environment.

This Earth Day, what can you do? What role can you play in protecting Kentucky's environment? Can you make a change in your home, community, school or workplace that will benefit the environment? If you aren't sure, learn more about your impact on the environment and what you can do to reduce that impact by visiting the state Earth Day Web site at www.earthday.ky.gov.

Earth Day is about everyone. We welcome you to join the celebration of Kentucky's environment and to consider: What can you do?



Land Air & Water Online

Visit *Land, Air & Water* magazine on the World Wide Web
at <http://www.eppc.ky.gov/educationoutreach/law/>

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on the cover

Bloodroot (*Sanguinaria canadense*) is one of the earliest bloomers in spring. It takes advantage of high light conditions before leaves come out in deciduous forests in our area. Photographed by Barry Howard, Kentucky State Nature Preserves Commission



Old black water Stemming the flow

By Linda Potter

Department for Natural Resources

Google black water and the hits range from the Doobie Brothers' tune, "Old black water, keep on rollin'," to a Joyce Carol Oates novel of the same name. There are expedition companies, outfitters and black water rivers (touted as the purest of all waters) in the Amazon.

To Kentuckians, there is nothing lyrical, adventurous or pure about black water. It reminds us of the Oct. 11, 2000, Martin County Coal Corp. slurry spill when roughly 250 million gallons of coal slurry drained into an adjacent underground mine and rushed into nearby watersheds. The slurry affected more than 75 miles of streams in Kentucky and West Virginia with the spill eventually reaching

the Ohio River. No injuries were reported, but the spill resulted in an environmental calamity. Thankfully, after much hard work and the expenditure of millions of dollars, the streams impacted by this spill are recovering.

Naturally, black water spills are of great concern due to their effect on the environment and the citizens who live in Kentucky's coalfield regions. Spills impact water quality, harm aquatic life and

damage environmental health.

During the six-week period beginning in December 2003 and ending in January 2004, 13 spills occurred fouling



ABOVE: *Remnants of the plume are visible as black water mixes with fresh in the river's flow toward Fishtrap Lake.*

RIGHT: *Black water traveling in the Levisa Fork toward Fishtrap Lake in April 2005.*

BELOW: *The graphic compares the number of spills in 2004 and 2005. Photos and chart provided by the Department for Natural Resources*



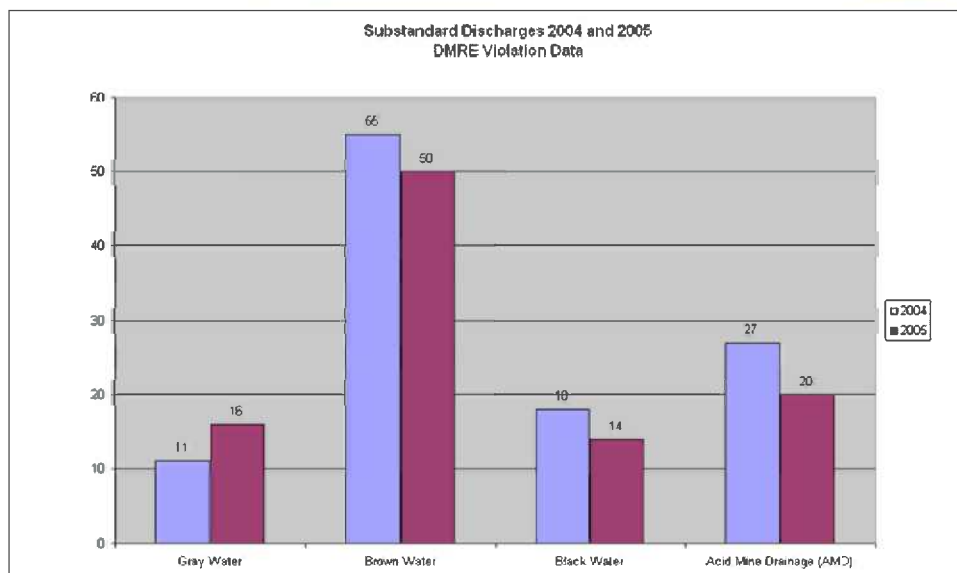
miles of Kentucky's waterways and prompting the Kentucky Environmental and Public Protection Cabinet (EPPC) to launch a preventative task force to analyze the problem.

Led by EPPC Secretary LaJuana S. Wilcher, the Black Water Task Force included leaders of environmental and coal organizations in Kentucky. The task force members met regularly to develop recommendations to reduce the frequency of black water discharges and minimize their severity. The results of the year-long study can be found in the Black Water Task Force Report at http://www.dnr.ky.gov/homepage_repository/BlackWater.htm.

Departmental statistics show that 17 black water spills occurred in 2003, 18 in 2004 and 14 in 2005.

The reduction is due to the heightened awareness and recommendations resulting from the work of the task force and the vigilance of the Division of Mine Reclamation and Enforcement (DMRE), the Division of Water and the Department of Fish and Wildlife Resources.

DMRE tracks four major types of substandard discharges—black, brown, gray and acid mine drainage (AMD). They occur as a result of discharges from coal impoundments, sediment ponds, roads

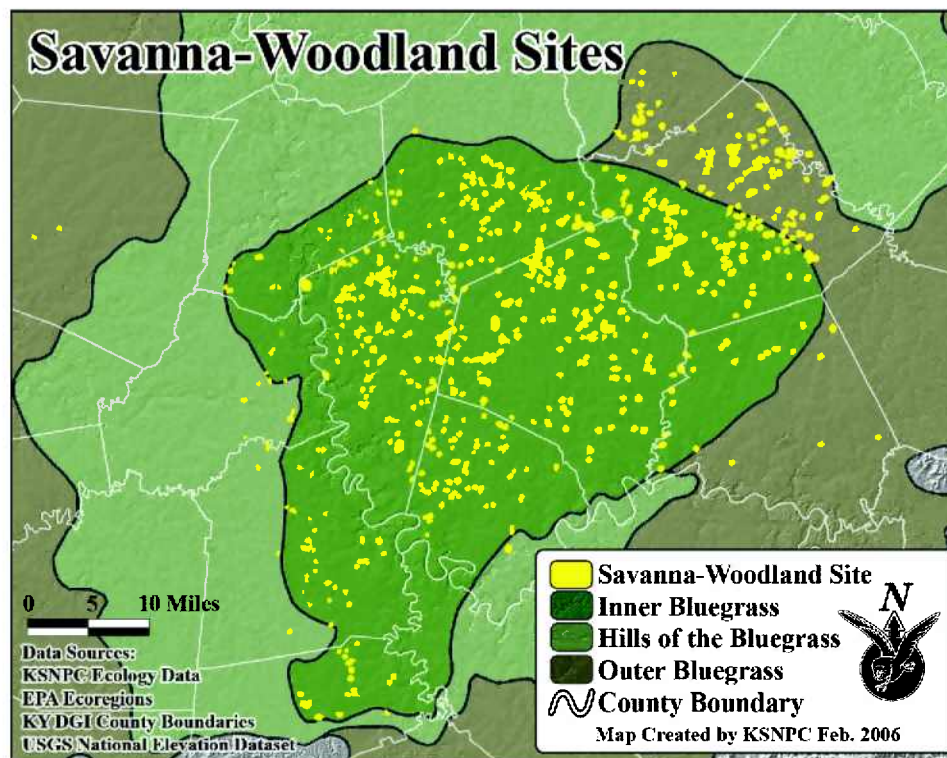


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Bluegrass savanna-woodland

By Brian Yahn
Kentucky State Nature Preserves
Commission

*Project documents
location, number and species
of tree community.*



LEFT: *Bur oak savanna in Georgetown.* Photo by David Yahn

ABOVE: *Graphic provided by the Kentucky State Nature Preserves Commission*

Biologists in Kentucky have long debated what types of natural communities existed in the Bluegrass region when the first European settlers arrived from the east. Lucy Braun, an expert forest ecologist, referred to the Inner Bluegrass as "the most anomalous of all vegetation areas of eastern United States."

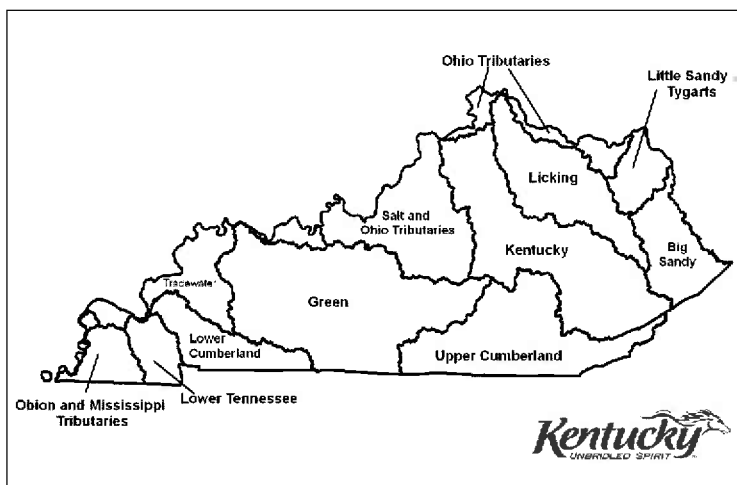
There are many early descriptions of the Bluegrass, which tell of rich forests as well as canebrakes, salt licks and meadows of clover and grasses. Giant cane (*Arundinaria gigantea*), typically found along river banks and bottomland hardwood forests in the eastern United States, was found throughout the Bluegrass growing unexpectedly on uplands when the first settlers arrived. The federally endangered running buffalo clover (*Trifolium stoloniferum*) is thought to have been locally abundant in the Inner Bluegrass according to early descriptions.

Frontiersmen, like Simon Kenton and Daniel Boone, described large populations of buffalo, elk and deer, which were capable of trampling and disturbing the vegetation and soil. To some degree, natural communities and the overall landscape were impacted by these large herbivores. Use of the land by Native Americans to establish villages, croplands and hunting grounds also had an impact on the landscape. Cutting trees and using fire to clear fields or open forests were common techniques used by Native Americans. Before European settlement, though, Native American populations in the Bluegrass were decimated by a European pandemic that was brought by Spanish explorers. To what extent these factors influenced the structure and function of the natural landscape is unknown.

The gently rolling plain of the Inner Bluegrass is thought to have supported a

globally unique, natural community often referred to as the Bluegrass savanna-woodland. This unique woodland was thought to have been dominated by large, open-grown chinkapin oak (*Quercus muhlenbergii*), blue ash (*Fraxinus quadrangulata*), bur oak (*Quercus macrocarpa*) and white oak (*Quercus alba*) trees. Many of these massive trees can still be seen scattered throughout the landscape of the Inner Bluegrass, usually in clustered groups. The original composition and structure of this system is not known, but the woodland is thought to be associated with the described canebrakes and clover meadows. Because of heavy clearing and development of the Inner Bluegrass, all high-quality occurrences of this savanna-woodland type have been destroyed.

Continued on Page 15



Watershed protection roundtable

By Amanda Waters
Office of the Secretary

Every Kentuckian lives in a watershed and relies on it as the sole source of water. Watersheds are areas in which all water running off the land drains to a specific creek, river system or body of water. There are 12 major watersheds in Kentucky. Watersheds and human lives are interconnected—almost every action we take on the land affects our water systems. A healthy water system is vital for economic growth and our quality of life.

Protecting our creeks, streams and rivers at the watershed level was the focus of a roundtable held in February in northern Kentucky. The roundtable, which brought together more than 75 people representing a broad spectrum of interests, was sponsored by the Kentucky Environmental and Public Protection Cabinet (EPPC) and featured presentations from the U.S. Environmental Protection Agency (EPA). Other federal, state and local officials, municipalities and representatives of environmental organizations also participated.

The purpose of the roundtable was to gain a better understanding of what watershed protection means in Kentucky and to discuss the tools available for implementing a watershed protection approach—a form of coordinated community-based environmental management that focuses public and private sector efforts to address the highest priority problems within a hydrologically defined geographic area.



TOP LEFT: *Environmental and Public Protection Cabinet Secretary LaJuana S. Wilcher stressed the watershed protection approach as an environmental, financial and social obligation.*

TOP RIGHT: *A map of major river basins in Kentucky. Map created by James Seay*

ABOVE: *EPA Assistant Administrator for Water Benjamin Grumbles talked about the importance of watershed protection and commended Kentucky's efforts to restore its watersheds. Photos provided by Creative Services*

“Watershed protection identifies and targets the most significant threats to water quality,” said EPPC Secretary LaJuana S. Wilcher. “Conventional water quality initiatives are more narrowly focused, while a watershed approach manages pollution on a prioritized basis. Managing water resources on a watershed basis

makes sense environmentally, financially and socially.”

Recognizing that water does not obey political boundaries, EPA embraces a watershed approach and encourages states to manage their water resources on a watershed basis.

Benjamin H. Grumbles, EPA’s assistant administrator for water, gave an overview of the watershed protection approach describing it as ‘a hydrologically focused, citizen-centered, results-oriented and market-based approach.’ “EPA appreciates Kentucky’s leadership in accelerating watershed protection and sustainability through innovation and collaboration,” Grumbles said. “We’re excited about the Commonwealth’s efforts and believe they can become a national model for restoring, protecting and sustaining watersheds across America.”

General Manager Jeff Eger, Sanitation District No. 1 (SD1), and Executive Director Bud Schardein, Louisville and Jefferson Metropolitan Sewer District (MSD), also participated in the roundtable.

The EPPC has entered into consent decrees in federal court with SD1 and MSD to address the issue of combined sewer overflows (CSOs). The two settlements will address more than half of the CSOs in Kentucky. (See *State, EPA stress correction, elimination of combined sewer overflows* on Pages 9-10). The SD1 settlement is significant as it marks the first time that watershed planning has been incorporated in a long-term control plan for CSOs. SD1 lies in four watersheds. ❖

Cleaning up Carlisle County

By Deborah Hinton
Division of Conservation

Located on the banks of the mighty Mississippi River sits Carlisle County. This far western Kentucky county is trying to clean up its countryside.

For the past 15 years, the Carlisle County Conservation District, along with assistance from the Kentucky Department of Agriculture, has been involved in the Rinse and Return recycling program. This program has made it easy for row crop farmers to recycle empty pesticide containers.

The Carlisle County Conservation District holds two collection dates—one in the spring and one in the fall for returning empty containers. The district cooperates with the Carlisle County Fiscal Court to use the county garage as a drop-off site. According to the Department of Agriculture, the Carlisle County Rinse and Return program is the most successful countywide program of its kind in the state. Approximately 6,000 containers are collected annually through this program, and more than 6,750 pounds have been recycled from the containers.

Greg Terry, Carlisle County Conservation District supervisor, approached the conservation district board to see what assistance he could offer regarding white goods being disposed of on roadsides throughout the county. Since the county was also receiving many calls from residents about the removal of white goods from their property, the conservation district felt that this was a mounting problem and something needed to be done.

In 2002, the conservation district applied for an environmental grant that would be used to address the white goods pickup in the county. The grant was offered through the Kentucky Soil and Water Conservation Commission state cost-share program. Since then the conservation district has reapplied and received the grant.

The response from the community has been overwhelming. The Carlisle County garage is open five days a week to collect white goods. After closing time, white goods may even be left outside the gates for collection in the morning.

The Carlisle County Emergency Operations Center keeps track of the amount of white goods collected. In 2004, it reported more than 29,375 pounds of white goods collected, and in 2005 saw an increase to 38,115 pounds. The county knows that this program is working. Fewer stoves, refrigerators and water heaters are found these days along the roadsides and in the ditches.



Carlisle County cleaned up its landscape by collecting more than 38,115 pounds of white goods last year. Photo provided by the Division of Conservation

Farmers utilize best management practices to improve operations

By David Keltner
Division of Conservation

To many Kentuckians, farming is a way of life. Whether it is a full-time job or provides a supplemental income, farming affects the landscape.

In Jackson County, the landscape is extremely dissected with many steep slide slopes. Over the years farmers have cleared and seeded the land for use as pastures to run cattle and other grazing livestock. Because vegetative growth is at a minimum during winter months, runoff due to livestock feeding habits can cause water pollution.

This year marks the 11th anniversary of the Kentucky Soil Erosion and Water Quality Cost-Share Program. The Jackson County Conservation District has aggressively pursued funding through this program, which was created to assist landowners in complying with the Agriculture Water Quality Act.

The cost-share program provides best management practices designed to reduce erosion, sedimentation and water pollution from agricultural runoff. The majority of landowner applications submitted have been for animal waste storage structures. To date, more than \$1 million has been allocated to Jackson County farmers to address these concerns.

Farmers who have installed best management practices have been satisfied with how implementation of these practices has affected their farming operation. Anna Murray operates a 112-cow dairy in the Moore's Creek community of Jackson County. A covered stack pad was installed at the dairy in 1997.

"Production has increased because they have been able to keep the loafing area and holding pen cleaner. This has resulted in a lower incidence of mastitis," said Murray of the installation of the animal waste stack pad. Murray also said that by being able to store the manure and

Continued on Page 7

Action plan initiated for restoration of Banklick Creek

By Lajuanda Haight-Maybriar
Division of Water and Licking River Basin coordinator

"In contrast to the idea of unlimited natural resources...is a growing recognition that natural resources need to be protected and sustained, not only for our enjoyment and use but for that of future generations."

*Lorna Herrell
Banklick Watershed
Council*

The residents of the Banklick Creek watershed knew their stream had problems. Flooding problems were increasing, banks were eroding and sample results showed the water wasn't safe for humans or animals. In an effort to reclaim their creek, a group of volunteers formed the Banklick Watershed Council in 2002. They also had participation from the Licking River Watershed Watch, Kentucky Waterways Alliance, Kentucky Division of Water, Northern Kentucky Area Planning Commission and Kenton County Conservation District. Their mission has been "to restore, protect and promote Banklick Creek and its watershed."

The Banklick Creek watershed, which covers more than 58 square miles in Kenton and Boone counties in northern Kentucky, is a tributary of the Licking River. The land use in the watershed is agricultural in the headwaters and becomes urbanized downstream. The creek, which is polluted from multiple sources, has been identified as a high-priority watershed for cleanup in the Licking River Basin.

Working through the Kentucky Waterways Alliance, the Banklick Watershed Council applied for and received a 104(b)(3) grant from the U.S. Environmental Protection Agency to develop a plan and conduct activities on water quality and quantity issues in the Banklick Creek watershed. The council completed its grant, and to celebrate hosted a dinner to highlight accomplishments in the



watershed and to present the Banklick Watershed Action Plan.

The action plan identifies four goals for the watershed. They are:

- Improve water quality through implementation of a 20-year plan to eliminate combined sanitary and storm sewers.
- Reduce flooding through restoration of wetlands and purchase of vegetated riparian areas along creek banks.
- Restore banks through restoration of forests and riparian areas.
- Honor the heritage by raising awareness of the stream and inviting local civic organizations to participate in restoration activities.

Anyone interested in helping the council complete its goals for the watershed should read the Banklick Watershed Action Plan and contact the council. The plan is available at www.banklick.org. To order a hard copy, write to the Banklick Watershed Council, 927 Forest Avenue, Covington, KY 41016 or telephone (859) 380-2528. For further information contact Kay.Harker@ky.gov or Lajuanda.Haight-Maybriar@ky.gov



TOP: Fowler Creek is a tributary of the Banklick Creek. Photo taken by Marc Hult, chair of the Banklick Watershed Council

RIGHT: This illustration is a small stream ecosystem poster created by Rick Hill, Kentucky Department of Fish and Wildlife Resources

Superfund helps get the lead out

moves Habitat for Humanity project forward



By Kenneth Logsdon
Division of Waste Management

In January, 30 volunteers for Habitat for Humanity of Metro Louisville framed a house in downtown Louisville that will eventually house a family of nine. It is the first of eight homes that Habitat is planning to build on the 700 block of Finzer Street, an ancient-looking brick paved section of Finzer known as "Short Finzer" to the people in the neighborhood.

On the day the house went up, cars were parked bumper to bumper halfway around the block and spilled over into an adjacent parking lot. Groups of volunteers were framing up the walls while some were nailing on the sheathing. Another group took a short break for lunch, eating sandwiches and chips and resting on a stack of plywood. A handful of Habitat for Humanity employees kept the flow of people, machines and supplies moving.

However, the project has not always gone so smoothly. For a time there was a likelihood that the entire project would have to be scrapped because of environmental concerns. The Superfund

Branch of the Division of Waste Management, along with several members of the environmental community, was able to provide equipment and assistance to keep the project moving.

Habitat for Humanity has been working on the 700 block since 2002. Most of the initial hurdles involved working with city planners to organize development and come up with various plans for traffic flow, housing density and other concerns. However, in mid-2005 a study contracted by the Louisville Metro Housing Authority determined that there were some environmental problems with the property. It turned out that most of the lots were affected to varying degrees by lead contamination. It is difficult to pinpoint the source, but some probable sources are decades of burning trash, coal and other historical activity. Cleanup costs threatened to derail the entire project—leaving almost half of a city block empty and a number of people without homes, not to mention the loss of all the hard work and planning already committed to the project.

Wanda Ballard Repasky, an environmental attorney providing Habitat with pro bono counsel, contacted Tim Hubbard of the Superfund Branch to see how to proceed. Superfund personnel evaluated the available data and tried to find a way to help Habitat clean up the sites and keep the project on track.

Superfund was able to provide personnel and the use of an XRF (X-ray Fluorescence) analyzer to provide highly accurate,

real-time results for metals analysis.

The XRF is a hand-held unit that looks like a cross between a big cordless drill and a prop from a science fiction movie. The device works by focusing a weak X-ray beam (approximately 1/100th the strength of a dental X-ray) on a sample and measuring the fluorescence of the sample. Each soil sample takes approximately three minutes, and results are displayed on a Pocket PC mounted on top of the analyzer. By using this piece of equipment,

Superfund personnel were able to provide a precise map of the levels of metals in the soil.

Continued on Page 11



TOP: Kenneth Logsdon, Superfund Branch, prepares the XRF analyzer, which focuses an X-ray beam on a soil sample to determine the level of metals in the sample.

ABOVE: Habitat volunteers build a house at 724 Finzer St., in Louisville. Photos provided by the Habitat for Humanity Metro Louisville



The Kentucky Chapter of the National Brownfield Association hopes to bring together interested parties who can help remediate and redevelop brownfield properties like this former industrial site in Louisville. It is estimated that there are about 8,000 brownfield sites across the state. Photo by Amanda LeFevre

Kentucky chapter focuses on brownfield blight around the state

Kentucky has worked diligently to bring attention to abandoned and contaminated industrial sites during the past several years, proving that urban blight can be redeveloped into something good for the community. Louisville's own Slugger Field is proof of that.

Consequently, the National Brownfield Association (NBA) launched its Kentucky chapter at Slugger Field in October. The Kentucky Inaugural Reception provided a forum where property owners, government representatives, developers, investors and professional service providers could exchange ideas and facilitate more brownfield transactions in the state.

For the past year, the NBA has worked closely with the Kentucky Department for Environmental Protection (DEP) to establish a local chapter. Mayor David Cartmell, city of Maysville, agreed to serve as chapter president, and Aaron Keatley, director, Division of Compliance Assistance, will represent the DEP.

The NBA is an elite, nonprofit educational organization that serves as the focal point for the wide range of government, nonprofit and business entities that participate in and support the

redevelopment of brownfields.

Brownfields are typically abandoned or underutilized industrial or commercial properties where redevelopment is hampered due to either real or perceived presence of environmental hazards. Putting these properties back into productive use provides both environmental and economic benefits — it creates jobs, restores local economies and cleans up impacted soils and groundwater.

Louisville Slugger Field offers a perfect example of brownfield redevelopment. It is part of the Louisville Riverfront Development Project, which won the Phoenix Award Grand Prize in 2002. The Phoenix Award recognizes innovative yet practical programs that remediate environmental contamination at brownfield sites while stimulating economic development and jobs.

For more information about the NBA and the Kentucky chapter visit www.brownfieldassociation.org.

See *Brownfield Basics* on Page 11 for more information about what the Environmental and Public Protection Cabinet is doing toward educating community leaders about brownfield redevelopment.

Farmers utilize best management practices to improve operations

Continued on Page 4

apply it to the land at the appropriate time of the year, she has seen improved production from crop and hay fields where the manure was applied.

Jimmy K. Wells built an animal waste covered stack pad and feeding area on his farm in 2003 with financial assistance from the cost-share program. He runs approximately 45 mixed beef cattle on his farm.

"Prior to building the stack pad, I was not able to capture and store the animal waste my cattle generated. It was a resource that was getting away from me," said Wells. "Since building the stack pad and storing the manure, I do not worry about the quality of the water that runs off of the farm." Wells also states that he is very impressed with production from the fields where he has applied the manure.

During the life of the program, Jackson County farmers have submitted 283 applications, 87 of which were funded. Best management or conservation practices installed on Jackson County farms with financial assistance from the Kentucky Soil Erosion and Water Quality Cost-Share Program have provided an opportunity for farmers to protect and enhance water quality while improving their farming operations.





KY EXCEL workshops offered statewide

By Rose Marie Wilmoth
Division of Compliance Assistance

Last fall, Governor Ernie Fletcher announced the formation of KY EXCEL—a voluntary program designed to recognize and encourage voluntary projects that benefit Kentucky's environment. The program is administered by the Kentucky Division of Compliance Assistance (DCA). All individuals, organizations, communities and businesses are encouraged to participate in this program.

As a way to kick off the program, the DCA, Kentucky Pollution Prevention Center (KPPC) and the Kentucky Business Environmental Assistance Program will be co-hosting a series of free one-day workshops to demonstrate how KY EXCEL can provide opportunities for you, your business or organization to receive public recognition, networking opportunities, enhanced agency services and other incentives.

KY EXCEL workshop dates and locations are:

- May 16—Louisville
- June 20—Prestonsburg
- July 11—Somerset

To obtain more information or to register for one of the KY EXCEL workshops, call the KPPC at (502) 852-0965, send an e-mail to Libby Clem at eaclem04@gwise.louisville.edu or access the KPPC Web site at www.kppc.org.



Old black water Stemming the flow

Continued from Page 1

or other coal mining-related activities. Black water and AMD are easily discernible by the dramatic colors they deposit into the streams they foul. Many substandard discharges are originally described as “black,” when in fact they are brown or gray. While the color of the water is an easy way to describe a discharge, what really matters is the total amount and type of solids suspended in the discharge that affect water quality. Civil penalties and violations are based on the amount of solids discharged, the acidity of the water and the levels of iron and manganese.

The following definitions clarify the distinguishing characteristics of each:

- **Black water**—water containing coal particles or fines.
- **Brown water**—generally associated with soil. The water contains sand, silt and clay-sized particles.
- **Gray water**—generally recognized as being associated with coal production and preparation. The water contains silt and clay-sized particles washed from the shale or siltstone placed in disposal sites.
- **Acid mine drainage**—usually red in color. The mine water contains free sulfuric acid, mainly due to the weathering of iron pyrites.

The DMRE closely monitors spills of all types. The table (on Page 1) compares the number of spills for 2004 and 2005. Using data from the Martin County Coal Corp. slurry spill, the Black Water Task Force found:

- Concentrations of metals in slurry are similar to mean values in soils in Kentucky, but are higher than values typically observed in stream sediment in eastern Kentucky.
- Ambient concentrations of metals tested in eastern Kentucky stream sediments are typically higher than values of statewide conditions.
- **Slurry samples from the Martin County spill were found to be nontoxic.**
- Impacts on animals and plants due to loss of habitat and smothering are directly proportional to the size of the release and the concentration of individual contaminants.
- Impacts to humans can be loss of drinking water sources and property damage.

The task force recommendations to alleviate the threat of further spills are in place, and Kentucky regulatory agencies are in high gear with their inspection and enforcement actions. The task force has alerted the citizens of the Commonwealth to the importance of their role in reporting substandard discharges. Much of the success in minimizing environmental damage is due to this crucial citizen involvement. It translates into faster response by DMRE personnel, the Division of Water's Emergency Response Team and Department of Fish and Wildlife Resources staff.

“The dedicated field inspection staff of the Division of Mine Reclamation and Enforcement is prepared to investigate all water-related citizen's complaints, regardless of the time of day, weekday or weekend, or weather conditions,” said Paul Rothman, director of Mine Reclamation and Enforcement. “We believe that the coalfield citizens fully expect this level of response and commitment from our staff and, as a result of our heightened efforts, the public appears willing to assume a more significant role in the reporting of these events.”

Coal operations have been put on notice that discharges that pollute the waters of the Commonwealth will result in substantial fines. The increased mining activity due to a booming coal market will also increase the potential for spills; however, the Environmental and Public Protection Cabinet intends to keep this from becoming reality.

In 2006, we don't want that “old black water” rollin' anywhere.



State, EPA stress correction, elimination of combined sewer overflows

By Maleva Chamberlain
Division of Water

Combined sewers, a lingering problem symptomatic of the country's early urban growth, are being addressed through an aggressive enforcement policy by both the U.S. Environmental Protection Agency (EPA) and the Kentucky Environmental and Public Protection Cabinet (EPPC).

Combined sewers were designed to carry both sewage and storm water directly to streams and rivers. The combined sewage was discharged at various outfalls instead of at just one point to minimize the chance of human contact with the waste.

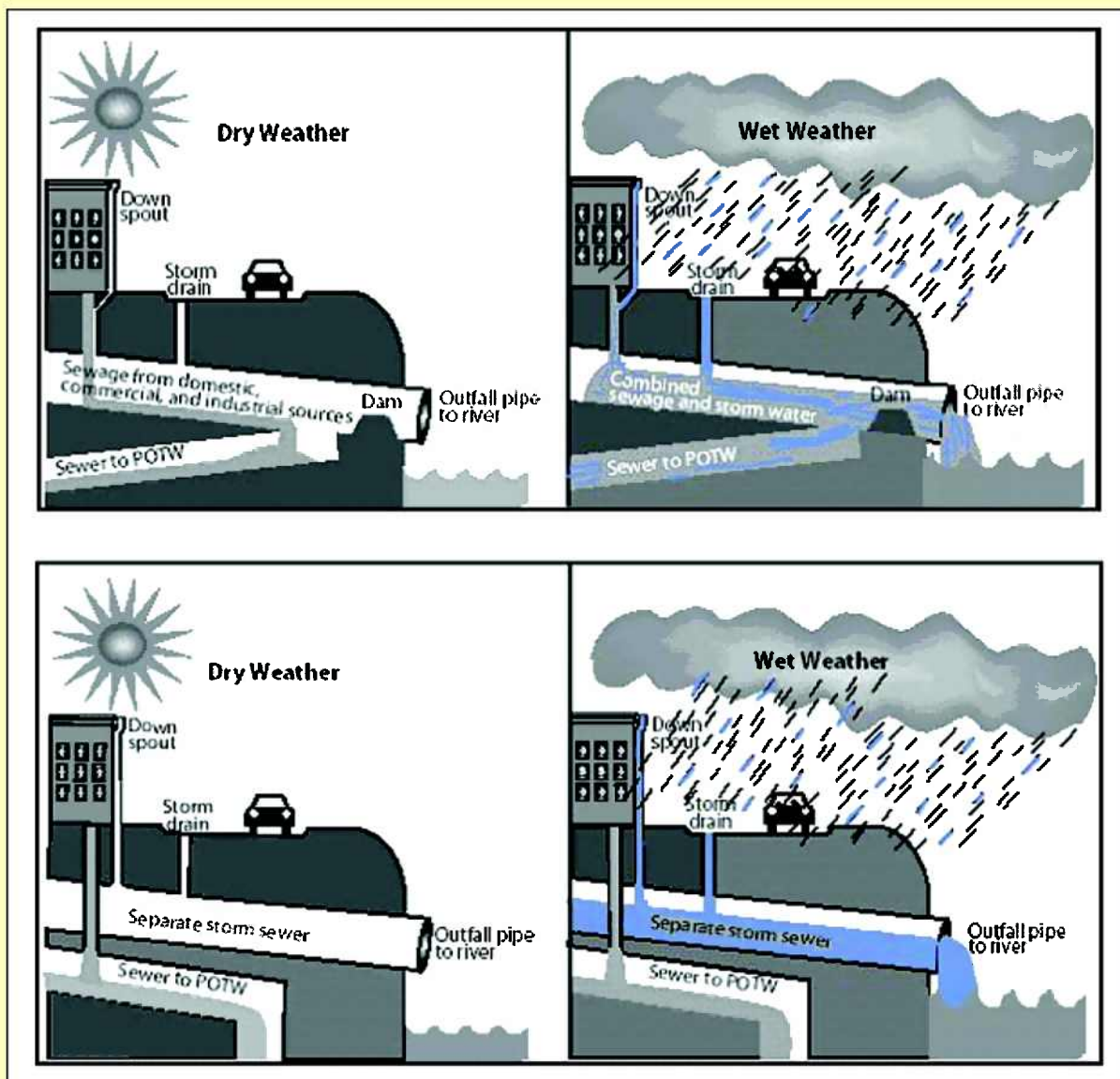
These systems existed in the mid-to late-19th century until centralized wastewater treatment was developed to protect the public health of a growing population. Sanitary sewers, which are now the standard, carry domestic, commercial and industrial sewage to wastewater

treatment plants before being discharged to rivers and streams. Stormwater is collected separately and generally sent to the nearest surface waterbody.

Cities with combined sewers made adjustments to direct the flow to wastewater treatment plants. However, the old surface water outfalls were left in place with diversion structures such as dams to create "relief" points during heavy rainfall. If the flow during heavy rain is too much for the sewer system to handle, the wastewater will spill over the dam to an outfall. When this happens it is called a combined sewer overflow, or CSO.

Without the CSO, wastewater and stormwater would back up into people's homes and businesses.

Most combined sewer overflows occur during rain and are therefore diluted by rain and river water. There is still the potential for health and environmental hazards, though. Raw sewage can carry human bacteria and viruses, and stormwater flowing across parking lots, roads and lawns can carry chemicals, oils and other wastes. Depending on the concentration of these contaminants and the manner in which a person could be exposed, there is the possibility of



The graphic depicts best- and worst-case scenarios. The top-right illustration shows a failing combined sewer where sewage pours into the river during wet weather. The lower-right illustration shows the preferred system where sewage travels to a treatment center in a separate sewer.

Illustration provided by EPA

contracting various illnesses. Particularly because of the growth of population and the increasing amount of sewage, it has become unacceptable for these combined systems to continue to discharge.

The EPA established a CSO control strategy in 1989 and expanded upon it in 1994. The 1994 policy set out a design to reduce and eliminate combined sewer overflows nationwide. It contains provisions for site-specific permit requirements for all combined sewers that overflow during wet weather, and it establishes an enforcement initiative that requires the immediate elimination of overflows that occur during dry weather.

Most communities with CSOs are in the Northeast, the Great Lakes region and the Pacific Northwest. In Kentucky, the majority of CSO communities are along the Ohio River. Therefore, when the EPPC's Division of Water updated its CSO policy in 1997, it incorporated EPA's 1994 CSO control policy as well as the Ohio River Valley Sanitation Commission's Strategy for Monitoring Impacts of Combined Sewer Overflows on the Ohio River.

To implement these strategies, EPA and the EPPC are establishing formal enforcement agreements that spell out what CSO communities must do and that set a timetable for accomplishing each initiative. The first consent decree was entered into with Jefferson County's Metropolitan Sewer District (MSD) in April 2005 and another with Northern Kentucky Sanitation District No. 1 in October 2005.

These agreements imposed penalties on each system for violations of the Clean Water Act and their Kentucky Pollutant Discharge Elimination System permits. For MSD, the penalty amounted to \$1 million, with an additional \$2,250,000 in supplemental environmental projects (SEPs); for Northern Kentucky, it was \$476,400, plus \$311,000 for SEPs.



This CSO warning sign is posted on the banks of the Kentucky River in Frankfort. Photo by Cindy Schafer

Kentucky Combined Sewer Systems			
NAME	Associated KPDES Permit	Number of CSOs Listed on Permit	Population Served
Louisville - MSD	KY0022411	115	430,000
Northern KY - Sanitation District No.1	KY0021466	74	335,000
Owensboro	KY0020095	8	54,000
Frankfort	KY0022861	15	50,611
Paducah	KY0022799	11	34,500
Ashland	KY0022373	8	30,000
Henderson	KY0020711	14	29,500
Pikeville	KY0025291	3	10,000
Pineville	KY0024058	3	9,111
Maysville	KY0020257	11	8,950
Prestonsburg	KY0027413	1	4,800
Cadottsburg	KY0035467	17	4,100
Morganfield	KY0021440	2	3,850
Harlan	KY0026093	1	3,786
Worthington	KY0022926	3	2,168
Vanceburg	KY0021512	5	2,038
Loyal	KY0026115	6	1,332

The agreements, each of which runs in excess of 50 pages, also require:

- submission of an Early Action Plan documenting compliance with EPA's Nine Minimum Controls, measures that can reduce the prevalence and impacts of CSOs and are not expected to require significant engineering studies or major construction.
- a list identifying projects that will mitigate or remove the overflows, along with costs and dates for completion.
- a plan which evaluates and recommends improvements.
- long-term control

plans.

- specific SEPs.
- regular reporting of all activities.

These two agreements address 63 percent of the CSO outfalls in the state. Currently, there are 17 communities with a total of 298 permitted outfalls for CSO

discharges in Kentucky. At least 20 of those CSOs have been eliminated or separated in the last five years.

To prepare the other 15 CSO communities, EPPC officials have been meeting with local officials from those communities to make them aware of the need to formalize enforcement agreements.

Preventing stormwater runoff from entering sanitary sewers is an enormous and expensive project. Solutions and their expense depend on what percentage of a city's sewers are combined sewers and the design and location of those sewers. The majority of the combined systems are in historic districts, riverfront areas or downtown.

The solutions a city chooses will depend on factors unique to the local situation. Any solution will likely require major construction. In some cases a city may have the added expense of upgrading its wastewater treatment plant.

You can read the consent decrees at <http://www.csop.com/>. Read more about combined sewers and CSOs on the Division of Water Web site at <http://www.water.ky.gov/permitting/wastewater/permitting/KPDES/seweroverflows/>. ☒

Brownfield basics

By Amanda LeFevre
Division of Compliance Assistance

Mention the word brownfield, and most of the time the term will elicit a blank stare. The Division of Compliance Assistance and its brownfield program team are trying to change that. In February, the Division of Compliance Assistance, along with the National Brownfield Association (NBA), sponsored a workshop to help educate representatives of cities across the state about brownfields, their potential and the redevelopment process. (Find out more about the NBA on Page 7).

Brownfields are properties that are abandoned or underutilized due to real or perceived contamination. Sites can include abandoned factories, gas stations, old dry cleaning establishments, properties contaminated by illegal drug labs or mine-scarred lands. They are often eyesores for a community, can pose a public health threat and decrease property values of the areas around them.

In the past, it has been easier for companies to locate on properties that have never been developed. Consequently, it has left many towns and cities with old buildings and industrial sites, lying fallow, despite the fact that they often have desirable locations and existing infrastructure. The risk, costs and work involved in purchasing a property with contamination was not worth it. Kentucky has worked to put together an incentive package for developers and communities so that brownfields are a much more attractive proposition. Grants, tax incentives, liability coverage and a host of other benefits have been developed to encourage redevelopment of brownfield properties.

Robert Colangelo, executive director

of the National Brownfield Association and moderator for the event, agrees that the business climate that surrounds brownfield redevelopment has definitely changed over the past 10 years. Colangelo explained that a site cleanup today costs much less than a site cleanup 10 years ago because of advanced cleaning techniques, better tools and greater experience of practitioners in the field. Today, there are fewer unknowns and the fear of purchasing a brownfield has greatly diminished.

"Brownfields are just real estate deals with environmental personality," stated Colangelo.

Also present at the workshop were representatives from the Cabinet for Economic Development, the U.S. Environmental Protection Agency, Louisville's

Metro Development Authority and private industry firms with experience in brownfield redevelopment. This panel of experts provided advice and insight from their own experiences in dealing with brownfields.

This is the first of many informational opportunities that the brownfield team will be presenting.

A brownfield grant writing workshop for nonprofits and municipalities will be coming up in the future. If you are interested in the grant writing workshop, a presentation by the staff, general information or want to receive future news releases regarding brownfields, contact

Robert Colangelo, National Brownfield Association, presents a chart explaining the economics involved in a brownfield transaction. Photo by Division of Compliance Assistance



Superfund helps get the lead out

Continued from Page 6

The ability of the XRF to quickly produce accurate results literally provides "the best of both worlds" for an environmental cleanup involving metals. Costs are reduced by saving time and focusing the cleanup efforts on the most contaminated areas and excluding areas with clean soil. Additionally, the results inspire a great degree of confidence that the cleanup is thorough and the standards have been met.

Several private environmental companies donated critical time and personnel to the effort.

Shield Environmental Associates assisted Habitat in evaluating the options available for remediating the site. Based on the XRF analysis and the advice of Shield, Habitat decided to try to pursue a clean closure by removing the contaminated soil entirely. This would ensure that the future owners would not have to deal with the headache of restrictions on their properties.

Habitat began cleanup of three of the lots with their own excavating equipment. Chase Environmental Group donated personnel and equipment to excavate the additional four lots. Waste Management Inc. donated dumpsters, transportation and disposal of the contaminated soil. State Superfund personnel followed up with confirmatory XRF readings to be certain that the remaining soil on each individual lot was safe.

Thanks to the participation of the environmental community and the XRF equipment of the Superfund Branch, the project has been able to keep moving.

The rest of the houses will be going up throughout spring and summer. Anyone interested in lending a hand may contact Habitat for Humanity of Metro Louisville at (502) 583-6599 or by browsing the Web site at <http://www.hfhloouisville.org>.



EPPC employees earn distinction of certified environmental educator

By Kate Shanks

Office of Communications and Public Outreach

The environmental education community is 70 stronger since the inception of a certification program for nonformal environmental educators in 2004.

Among the 2005 graduates are five employees of the Environmental and Public Protection Cabinet (EPPC). Elizabeth Robb, Division for Air Quality; Dara Carlisle, Tom Heil and Eva Smith-Carroll, Division of Waste Management; and Belinda Smith, Division of Forestry, graduated from the program in February.

The certification program is a standards-based, rigorous training for environmental educators.

"This course has real value in training nonformal educators how to present the environmental message to school students, communities and other groups with environmental interests," Heil said.

During the year-long program, participants studied environmental systems and learned education design strategies. They also trained to provide education



ABOVE: *Elizabeth Robb studies wildlife of the forest system.*

LEFT: *Tom Heil takes soil samples to better understand environmental systems.*

Photos provided by Debra Spillman

without bias, which is a component of environmental education that distinguishes it from environmental advocacy. Participants had to successfully complete assessments to graduate from the class.

In addition, participants became knowledgeable about the application of the Kentucky Educational Reform Act (KERA) standards, which enables them to incorporate environmental education into the classroom more easily.

"I have learned that air quality is a great subject for K-12 education because it touches all aspects the KERA requires teachers to teach and students to learn—not only science but also practical living, social studies, writing and math," said Robb.

The certification program also provides an opportunity for educators from



Training catalogs now available


By Lisa Butler

Division of Compliance Assistance

The Operator Certification Training Catalog for 2006-2007 is now available from the Division of Compliance Assistance. The catalog will be mailed to every permitted water and wastewater facility in the state.

The catalog contains operator certification course and exam dates, as well as continuing education course offerings for 18 months. Additional information about the Kentucky Operator Certification Program is included that will be helpful to operators and other individuals. The forms for certification applications, renewal of certificates and changes in employment information are also located in the catalog.


The catalog is available by calling (800) 926-8111 or by downloading a copy at www.dca.ky.gov and clicking on Forms Library – 2006-2007 Training Catalog.

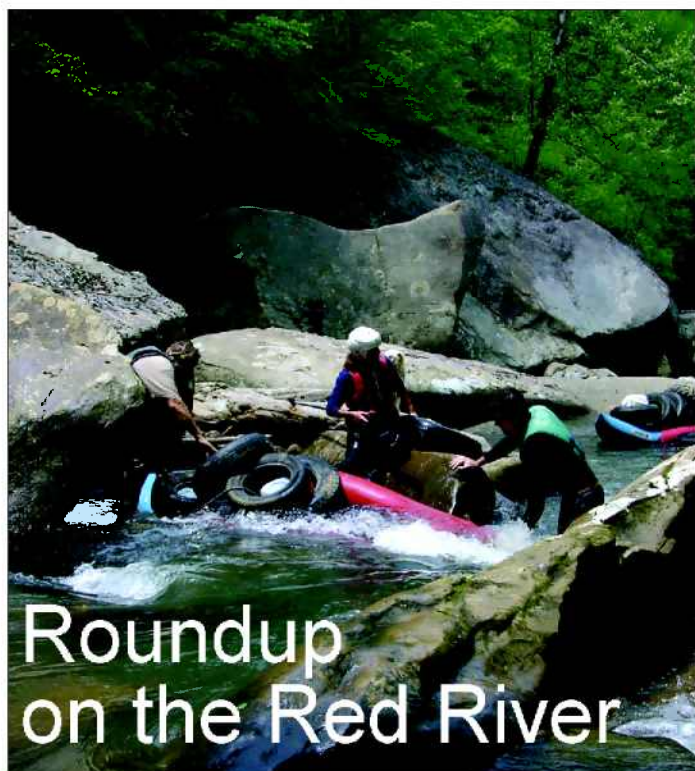
Contact information and e-mail addresses for all operator certification staff are included in the catalog. If you have any questions or have information that needs to be included in the catalog, contact Lisa Butler at (800) 926-8111 ext. 317 or by e-mail at lisa.butler@ky.gov. 

around the state to network and build partnerships.

"This class was an opportunity to meet a wonderfully diverse group of Kentuckians bound together by their common dedication to environmental protection," Smith-Carroll said.

The Kentucky Environmental Education Council administers the program and enrolls students in the fall. To find out more about becoming a certified environmental educator and to sign up for the 2007 program visit <http://keec.ky.gov/certification.htm>.

Congratulations to all the graduates. 



Roundup on the Red River

*Volunteers
make a
difference in
protecting
a valuable
watershed.*

Article and photographs
provided by John Webb,
Kentucky River Basin
Coordinator



For years, Russ Miller of Wolfe County has been working to clean up the Red River. This year he got a little extra help from the Red River Task Force, a group of concerned citizens in the area, and a grant from the Kentucky River Authority.

The Appalachian Heritage Alliance, a local nonprofit group, administered the grant project, which provided funding to feed the cleanup volunteers and purchase supplies, including four inflatable rafts for trash transport. Volunteers focused their efforts on upper sections of the river in Wolfe, Menifee and Powell counties.

The Red River Task Force was organized in early 2005 to protect and improve watershed

conditions in the Red River Gorge Watershed. It is composed of federal, state and local government representatives, a nonprofit organization and local citizens who have interests in watersheds. Several local businesses also donated their time and services to the cleanup efforts. Together, they made the 2005 Red River cleanups a reality.

Under the Kentucky Watershed Management Framework, the Red River Gorge Watershed was selected as a priority because of its extremely good water quality, unique habitat and a high diversity of aquatic species relative to other watersheds in the basin.

During weekends in April, May and June volunteers got together to clean up three sections of the Red River, beginning near Hazel Green and finishing in the community of Bowen. This 29-mile section

of the Red River flows through the Daniel Boone National Forest. It includes a 9-mile Kentucky and National Wild River section, a 10-mile National Wild and Scenic River section and concludes in the farming community of Bowen.

High waters canceled the first cleanup effort on the lower section of the Red River. However, a local landowner managed to salvage nearly 30 collected tires from the banks before floodwaters could wash them downstream. Two subsequent cleanups of the upper Wild River section and the heavily accessed Middle River section, flanked by state Highway 77, were well attended and very successful. On the Wild River section, approximately 100 tires and one truckload of trash were collected. Everything (including a refrigerator) was floated downstream over huge boulders and through narrow, towering limestone cliffs.

The final cleanup yielded the largest quantity of tires and trash, totaling more than 130 tires and a couple truckloads of trash and another refrigerator. At the conclusion of the three cleanups, the 29-mile stretch of the Red River was nearly trash-free.

Part of protecting the watershed is maintaining the physical habitat within the river corridor. Trash discarded by humans clogs the waterways, alters flow patterns, changes the light regime and leaches chemicals into the river. Larger items such as tires can dramatically alter the stream bed through scouring in high-flow events. Through local efforts by groups such as the Red River Task Force, we can maintain and preserve our valuable water resources in Kentucky.



Christian County meets ozone standard

By Elizabeth Robb
Division for Air Quality

On Feb. 24, 2006, the U.S. Environmental Protection Agency (EPA) approved Kentucky's request to designate Christian County's air quality as being in attainment for the 8-hour ozone standard. Kentucky submitted the original request for attainment status to EPA on March 14, 2005.

The 8-hour standard, adopted in 1997 by the EPA, underwent substantial court review. Ultimately, EPA had to alter implementation plans for the standard before designations could be made. Christian County was designated as not meeting the 8-hour ozone standard in June 2004 – the first designations EPA had made since the standard was adopted. A total of eight counties in Kentucky were designated as not meeting the standard at that time.

When EPA designated Christian County as nonattainment in 2004, the designation was based on air monitoring data for 2001-2003. At the end of the 2004 monitoring season in October (2004), it became evident that air quality in the area had improved to the point that Christian County was meeting the ozone standard.

The Division for Air Quality worked diligently over the next four months to develop the documentation that ultimately allowed EPA to take this action. Kentucky's request for a change in Christian County's status was the first in the nation to be submitted for the 8-hour ozone standard.

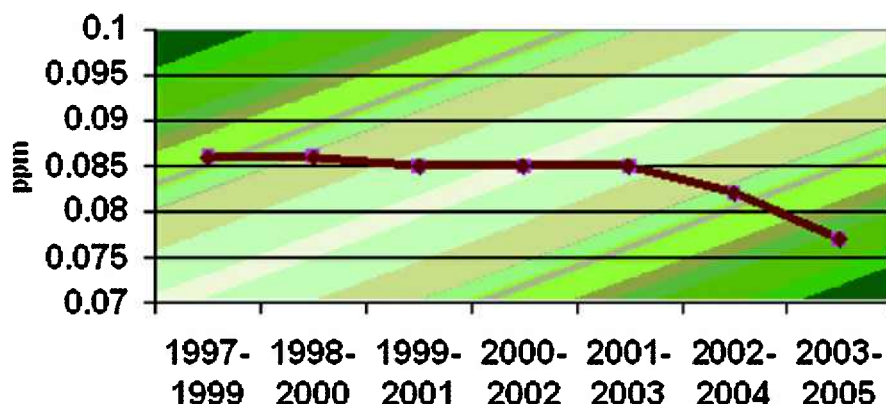
A request for redesignation must contain baseline emission inventories, a maintenance plan (to include projection

inventories for the next 12 years), and contingency measures in case subsequent violations of the standard occur. Kentucky was able to document that local and regional emission reductions led to improved air quality in the area. Those improvements continue despite exceptionally dry conditions and high temperatures normally associated with ozone formation. Christian County recorded only one exceedance of the 8-hour standard in 2005.

The public hearing to take comment on Kentucky's action was held on April 18, 2005, in Hopkinsville, Ky., and the final version of the documentation was submitted to EPA Region 4 on May 20, 2005.

EPA Region 4, anticipating no adverse comments, published a direct final ruling in the Federal Register on Sept. 22, 2005. However, adverse comments were received, so EPA published a withdrawal of that approval on Oct. 21, 2005. The adverse comments received by EPA on that action included questions surrounding procedural requirements of the Clean Air Act requirements and EPA's guidance for developing maintenance plans and approving requests for redesignation. EPA responded to those adverse comments and published a new approval notice in the Jan. 25, 2006, Federal Register, which included the previously mentioned effective date of Feb. 24, 2006. ❖

Christian County 8-Hour Ozone Design Values



Data from 2002-2004 and 2003-2005 show that recorded ozone levels in Christian County have dropped below the National Ambient Air Quality Standard threshold. Graphic by Division for Air Quality

8-hour ozone standard

The "old" ozone standard was a 1-hour standard set at .120 PPM (parts per million). A monitor could record up to three exceedances of this standard in three years and still remain in compliance with this standard. If a fourth exceedance was monitored, the area was considered in violation.

The new standard is more stringent than the old 1-hour standard and was designed to add a level of protection for children, the elderly and people with respiratory problems. It is an 8-hour standard, set at .08 PPM. Monitoring data is averaged over a different time period and the fourth-highest 8-hour level for the monitoring season is used to help determine whether an area is meeting the standard. That fourth-highest average for each year is used for three consecutive years in determining the final average. The area is meeting the standard if the final average for that area is .084 PPM or less. If the three-year average is .085 PPM or greater, the area is considered in violation.

Salt River Basin Team goes a courtin'

By Angela Kessans, Salt River Basin Team coordinator
Maleva Chamberlain and Rosetta Fackler, Division of Water

Based on a perceived need for local officials to understand water quality issues in their counties and a desire to increase participation in the basin team's activities, the members of the Salt River Basin Team have begun visiting county judges and other government officials in all 19 counties of the Salt River Basin. The team begins by asking, "Do you know what's in the water in your streams?" The team is finding eager audiences.

Through a presentation covering unsafe water conditions to overcapacity wastewater treatments plants, the team is providing information on federal and state policies and the condition of the streams in each county.

At the first presentation in Bullitt County in November, local officials learned that while some streams are still not safe for fishing and swimming, Rolling Fork and Cedar Creek (tributaries of Floyd's Fork) were recently taken off Kentucky's official list of impaired streams and are in fair condition. The 303 (d) list is part of a biennial report to Congress on the quality of the waters in the Commonwealth. Listed streams do not meet their designated uses for swimming, fishing, aquatic life habitat or drinking water. The basin team was able to assist Bullitt County Judge-Executive Kenneth Rigdon with information that will help him meet the development goals for the county.

Through the presentation sessions, the team is also learning how it might be more helpful to local officials by providing

resources and information local and county officials indicate that they need.


In January 2006, the team visited Oldham County, where Judge-Executive Mary Ellen Kinser, her staff and a public audience were curious and eager to learn more about karst and groundwater in the county.

In Breckinridge County, participants, including Judge-Executive George E. Monarch III, asked for more information on logging, karst and groundwater, and monitoring. As in the previous two counties, the team was greeted with enthusiasm and a readiness to start the process of correcting the damage done to local streams through stormwater and sewage pollution. All have asked for additional presentations, in more depth, about the quality of the water in their counties.

During the presentations, it became apparent that because the population of the Salt River Basin is growing rapidly, information on low-impact development needed to be added. The team has since developed a presentation that addresses both the need to plan for sewage treatment and to plan for growth that would not adversely impact water quality. Visits to Jefferson, Spencer and Shelby counties are planned soon.

The Salt River Basin Team is one of eight basin teams that are part of the Kentucky Division of Water's Watershed Management Initiative. The initiative seeks to coordinate existing programs and

build new partnerships that will result in more effective and efficient management of the state's land and water resources. The teams, made up of representatives of local, state and federal agencies, organizations and interested members of the public, are essential to carrying out the initiative at a local level.


For more information on the Salt River Basin Team and its activities visit www.watersheds.ky.gov or contact Kay Harker, basin teams coordinator by e-mail Kay.Harker@ky.gov or Angela Kessans, Salt River Basin coordinator at kessan00@earthlink.net. 

Bluegrass savanna-woodland

Continued from Page 2

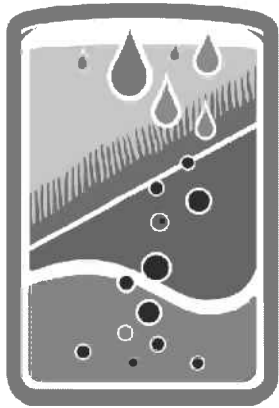
Over many years, the Kentucky State Nature Preserves Commission has collected information on the existence of trees thought to have been once a part of this woodland community. A project has been established to document the location, number of trees and species that are found across the Bluegrass. So far, 672 sites have been identified, mostly within the Inner Bluegrass. Of these 672 sites, 162 were sampled in 2005 to verify location and count the number of trees by species.

Fifteen percent of the sampled sites were declining or destroyed. The distribution of these sites is continuous throughout the range of the Inner Bluegrass and suggests this savanna-woodland community might have been widespread and dominant.

It is important to science and our natural heritage to understand the roles of past, present and future ecological processes. These old savanna-woodland trees will continue to decline in the years to come, but the information collected can stand as insight into what natural communities once thrived in the Inner Bluegrass. 



Participants of the Oldham County meeting listen as a basin team member discusses groundwater issues in the county. Photo provided by Angela Kessans



If it's on the ground it's in your water

The Commonwealth Water Education Project

By Kate Shanks

Office of Communications and Public Outreach

In a 2004 survey administered by the Kentucky Environmental Education Council, only 17 percent of respondents could correctly identify the primary source of water pollution in the state, yet the majority of those surveyed said that water pollution was the number one problem in Kentucky.

It is puzzling that people are concerned about water pollution yet they are unaware of what causes it. The public's perception of the cause of water pollution will soon change now that the Commonwealth Water Education Project (CWEP) is underway in Kentucky.

CWEP is a statewide, federally funded project designed to educate Kentuckians about the impact of nonpoint source water pollution. Nonpoint source (NPS) pollution is the primary cause of water pollution in the state. NPS is often called runoff pollution because it is characterized by the movement of pollution running off the land by rain and snow melt.

The CWEP program will teach people that "if it's on the ground, it's in the water."

Anything from pet waste, to bare soil to motor oil on the ground will eventually be carried by rain and snow into nearby creeks and rivers. Pollution doesn't disappear when it is left on the ground; it moves to water.

The goal of CWEP is to use the talents, resources and knowledge of the project's more than 20 partners to provide Kentuckians with the cause and effects of water pollution.

There are several components to CWEP including professional development for educators; a Kentucky standards-aligned curriculum for grades K-8 based on the "living stream" at the Salato Wildlife Education Center; a documentary and virtual field trip produced by Kentucky Educational Television; the Kentucky Growth Readiness Project for public officials, developers, farmers, builders and consumers; and a media campaign produced by Western Kentucky University, WKU-PBS.



ABOVE: "Don't feed the storm drain." Yucky stuff like oil, lawn chemicals and paint goes down a storm drain, making its way into our streams.

LEFT: Animal waste from farm animals and pets can be washed by storms into streams where children play, which can make them sick.

Graphics created by Western Kentucky University WKU-PBS as part of the CWEP media campaign



It is important for Kentuckians to be knowledgeable about nonpoint source water pollution. Not only is it the primary cause of water pollution in the state and nationally, it is caused by everyone. This type of pollution can not be regulated in the same way as point sources of pollution such as storm water utilities or factories.

CWEP is funded in part by a grant from the U.S. Environmental Protection Agency under 319 (h) of the Clean Water Act through the Kentucky Division of Water to the University of Louisville.

Citizens can visit the CWEP Web site at www.inyourwater.org to learn about their contributions to nonpoint source pollution and to learn about solutions.



Time for a change?
Tried and true? Oldie
but goodie? Old
news?

There are any number of expressions one can use to describe something that has been around for awhile. In this case, we're referring to Kentucky nature license plates. Do you like the current offerings, which include a bobcat, cardinal and viceroy butterfly? Would you like to see something new?

The Kentucky Heritage Land Conservation Fund Board, which administers the nature license plate program, wants to know what you think represents "Nature's Finest."

Are you currently satisfied

Picture your plate



with the choices and wonder why a design change is even being considered? Conversely, have you wanted something different for more than 10 years and refused to buy a nature plate because of it? Or maybe you like the viceroy butterfly, but you simply don't understand the appeal of a cardinal or bobcat plate. Whatever you think, we want to know about it. And if you think the design should be changed, then you need to let us know what you want to see. Better yet, send us a sketch of your idea.

There are several things to keep in mind. The design needs to reflect the concept of "Nature's Finest," so a suggestion (or sketch) of Churchill Downs or the state Capitol

Thanks to all those who have purchased a nature license plate during the past decade. Because of you:

- **more than \$6.5 million has been raised since 1995.**
- **more than 25,000 acres have been purchased.**
- **nature plates are the most popular specialty plate in Kentucky.**

**By Mary Jean Eddins
Kentucky Heritage Land Conservation Fund Board**

simply won't do. The design is limited to three colors (and black is not considered a color), and fine detail is difficult to depict on a license plate.

If you are asking how you benefit from nature license plates, then ask no more. Nature license plates provide more than \$1 million annually for the purchase and protection of selected natural areas and wildlife habitat across Kentucky.

We all benefit, whether directly or indirectly. Some of us might be using these lands to go hiking, hunting or fishing. Other purchases have helped with water quality issues, especially adjacent to

Kentucky's wild rivers. Nature license plates cost an additional \$10, and we need to sell as many of them as we can. That is why we need your ideas.

There won't be any prizes awarded for the "winning" ideas. However, if your suggestion is used, you'll be satisfied with the knowledge that you're helping preserve Kentucky's natural heritage.

So go ahead, send us a note or e-mail and let us know what you think. Send your suggestions to Mary Jean Eddins, Kentucky Heritage Land Conservation Fund Board, 375 Versailles Road, Frankfort, KY 40601, e-mail MaryEddins@ky.gov, phone (502) 573-3080 or fax (502) 573-1692.



Permits issued for \$2 billion chemical destruction plant at depot

By Eric D. Ringo
Division of Waste Management

Initial construction of the Blue Grass Chemical Agent-Destruction Pilot Plant at the Blue Grass Army Depot (BGAD) in Richmond reached a major milestone recently with the issuance of two key permits by the Kentucky Department for Environmental Protection.

BGAD is a 14,596-acre facility used by the Army for storage and management of conventional and chemical munitions.

The Division for Air Quality issued an air quality permit and the Division of Waste Management issued a Research, Development and Demonstration (RD&D) permit to BGAD and contractor Bechtel Parsons Blue Grass.

These permits will allow for the construction and demonstration of a \$2 billion plant to destroy assembled chemical munitions containing nerve agent VX and GB (sarin), and the blister agent H (mustard). There are 523 tons of chemical agents stored at BGAD.

In addition to the RD&D permit, the Division of Waste Management issued a modification to the existing BGAD hazardous waste storage permit. The modification adds 46 hazardous waste storage areas in the Chemical Limited Area (CLA) to the two storage areas outside of the CLA. These additional areas are permitted to hold chemical munitions and chemical-related hazardous waste.

The RD&D permit issued to the depot is more rigorous than a typical RD&D permit. When all additional documents are submitted according to the incorporated compliance schedule, the permit will closely resemble a full Hazardous Waste Treatment and Disposal Facility (TSDF) permit. The comprehensive compliance schedule requires BGAD and Bechtel Parsons Blue Grass to submit additional documentation to the Division of Waste

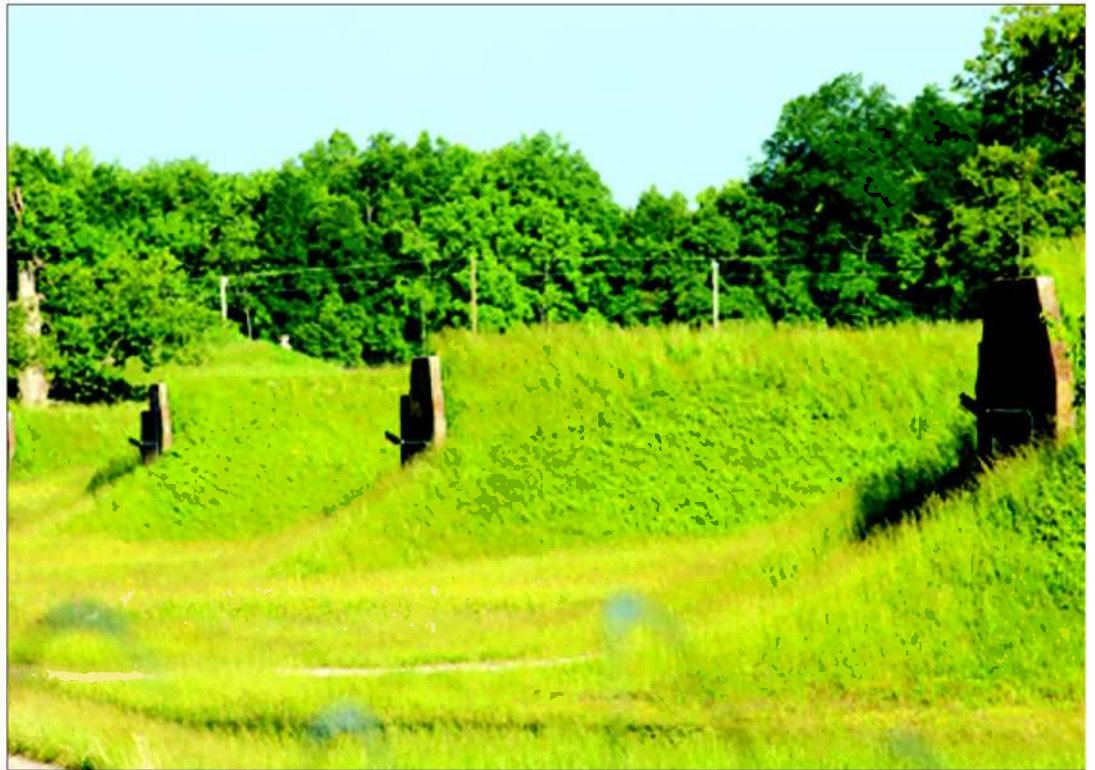
Management prior to the receipt of hazardous waste at the facility.

The RD&D permit will only allow for the treatment of GB. A standard TSDF permit will be required prior to the treatment of the nerve agent VX and blister agent H.

Public involvement was a large part of the process leading to the issuance of the permits. "We had many meetings and

project all the way through closure.

Significant components of the facility design will be completed this year. Building construction is scheduled to begin in 2007. The facility will be fully operational by 2012. Closure is scheduled to begin by 2014, according to information on the Bechtel Parsons project outreach Web site at <http://www.bchtelparsonsbgcapp.com>



correspondences with Blue Grass Army Depot and Bechtel Parsons Blue Grass," said Shannon Powers, program coordinator for the BGAD project for the Division of Waste Management. "We attended [citizen group] meetings and participated in working groups. The agency also held a public hearing and sought public comment concerning those permits."

Issuance of the permits is just one of many steps. There will be oversight and compliance throughout the life of the

The Army's Blue Grass Chemical Activity stores its chemical weapons stockpile safely, as the Blue Grass Chemical Agent—Destruction Pilot Plant team develops a neutralization facility to efficiently destroy it. Shown here are storage igloos. Photo courtesy of the Blue Grass Chemical Stockpile Outreach Office

Awards

Air quality stewards recognized for taking initiative

By Elizabeth Robb
Division for Air Quality

Local agencies taking initiative to improve air quality deserve to be commended. In February, the Division for Air Quality issued its first Air Quality Stewardship Awards.

The recipients "have gone above and beyond in efforts to protect local ambient air quality and public health," said John Lyons, director of the division, which plans to make the awards an annual event.

In Oldham County, which historically has had ozone problems, Judge-Executive Mary Ellen Kinser and the Fiscal Court approved an ordinance extending restrictions on open burning to the entire county from May through September. State law required the restriction for only a portion of the county. The new ordinance also requires county permits for certain types of burning.

In Spencer County, Fire Chief Nathan Nation and the fire department were responding to numerous, illegal open burns. In order to be more proactive in addressing these issues, letters were sent to every household and business to inform them of regulations and fines. The fire department also sends an annual newsletter to constituents, and open burning is always a topic. The number of illegal open burns in the area has since decreased dramatically.

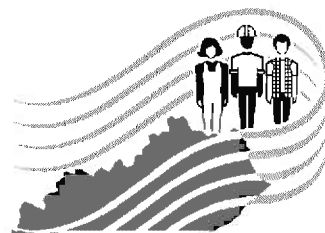
This year's recipients confronted open burning issues, which coincided with the division's renewed commitment to end illegal open burning through a comprehensive education and outreach campaign.

The Division for Air Quality has launched an open burning hotline 1-888-BURN-LAW. Callers can ask questions, file complaints or seek help in starting a local campaign to limit illegal open burns.

If you know of a community leader or organization that is going "above and beyond" to improve air quality at a local level, you may nominate them for an award by contacting Elizabeth Robb at (502) 573-3382 or by e-mail at Elizabeth.Robb@ky.gov.



Division for Air Quality Director John Lyons (center holding plaque) presents the Oldham County Fiscal Court and Judge-Executive Mary Ellen Kinser (center) with the first Air Quality Stewardship Award. Division for Air Quality photo



Air Quality Stewardship Awards being accepted

By Rose Marie Wilmoth
Division of Compliance Assistance

Do you know a small business that has gone the extra mile to minimize the impact of its operations on air quality? If so, you have an opportunity to nominate the owner for a unique award. Nominations for the 2006 Small Business Air Quality Stewardship Awards are being accepted by the Air Quality Small Business Compliance Advisory Panel through Aug. 1, 2006.

The awards acknowledge outstanding performance by a small business in pollution prevention, reducing emissions or community air quality leadership.

Last year's winners included Covenant Industries of Jefferson County for reducing its air emissions by 80 percent due to a change in technology; and North American Auto Parts of northern Kentucky for leadership in community education by organizing a seminar of business owners to discuss a new air quality regulation that would affect their businesses.

Individuals, businesses and organizations may nominate themselves or others. A committee of advisory panel members will evaluate the nominations and select a winner or winners. The awards will be presented at a date yet to be announced.

Nomination forms may be requested in writing from Rose Marie Wilmoth, Division of Compliance Assistance, Department for Environmental Protection, 14 Reilly Rd., Frankfort, KY 40601, by phone at (800) 926-8111 or by download from www.dca.ky.gov/smallbusinessairquality/stewardshipaward

Nominations should be received by the Division of Compliance Assistance no later than Aug. 1.



Landowners receive conservation award

By Pam Williams
Division of Conservation

Running a family farm is a tough job. For the Lewis family of Morgan County, it also instills pride in the land, provides a steady income and reaps rewards in more ways than one.

The Lewises have owned and worked the land for more than 25 years. Not only have they harvested years of productive crops and a growing cattle population, they were recently presented the Small/Limited Resource Farmer Award. This award is given annually to recognize small or underserved landowners that receive assistance from the USDA/NRCS and local conservation districts in planning and applying conservation practices.

Dennis and Marilyn Lewis' farming operation consists of 148 acres in the rolling hills of northwest Morgan County. They have relied solely on the income produced from their farming activities to earn a modest living and raise their two children. The overall operation consists mainly of a 60-unit cow/calf beef operation and the production of approximately 40,000 pounds of tobacco. In addition, Lewis and his brother Robert own a 46-acre farm that produces the corn and hay for winter feeding. He also sharecrops approximately 25 acres from which hay is sold to help support expenses from other farming activities. He has invested in mowing equipment to aid in the management of some of the steeper terrain of his farm. With this equipment he also contracts with other landowners to produce additional income.

Lewis has worked with the Morgan County Conservation District in completing his Agriculture Water Quality Plan. By implementing and complying with his plan, he utilizes his farm to its fullest potential. Lewis utilizes a rotational grazing system and crop field rotation. He has also been approved for a livestock

Dennis and Marilyn Lewis accept their award during the recognition ceremony.

Photo by Division of Conservation



waste storage structure under the Kentucky Soil Erosion and Water Quality Cost-Share Program. These conservation measures are just another assurance of quality and quantity of crop and livestock production. By following the plan, he also manages to protect the environment and wildlife.

"I really appreciate the assistance that has been provided by the Morgan County Conservation District and NRCS," Lewis said.

Lewis is proud of the appearance and production of his small farm, and he never guessed that 25 years ago he would have

received such an honor for doing something he loves. He credits his success to skill, hard work, proper management and the utilization of all available resources on the farm, and his love of the land.

Lewis has worked hard to make his farming operation profitable, and his family will continue to work the farm with pride.

The Kentucky Chapter of the National Organization of Professional Black Natural Resource Conservation Service Employees sponsors the award. ❖

Versailles plant reduces production of mercury in fluorescent lamps

The Osram Sylvania fluorescent lamp plant in Versailles, Ky., was recognized by the Environmental Protection Agency (EPA) for joining the National Partnership for Environmental Priorities (NPEP) and committing to significantly reduce elemental mercury in linear fluorescent lamps produced at the plant. Osram Sylvania is working to reduce mercury levels for OCTRON 800 series lamps by 50 percent, along with reductions in 700 series lamps. Osram Sylvania pledges to save more than 300 pounds of mercury annually during lamp production.

"EPA commends Osram Sylvania for its commitment to reducing the release of a priority chemical like mercury into the environment," said EPA Regional Administrator Jimmy Palmer. "By joining this voluntary program, Osram Sylvania is demonstrating how innovation in production of its lamps can lead to increased public health protection and environmental improvement."

NPEP is a voluntary program in which private and public organizations work with EPA to reduce the use or release of 31 priority chemicals beyond regulatory requirements. Reducing the use or release of these chemicals will help to better protect human health and the environment, since chemicals such as mercury can end up in fish and other aquatic life and transfer up the food chain to humans. For more information visit <http://www.epa.gov/epaoswer/hazwaste/minimize/partnership.htm>.

Information courtesy of EPA ❖

Surf for facilities

By Eva Smith-Carroll
Division of Waste Management

The Division of Waste Management (DWM) has added a feature to its Web site: the Recycling Facility Search—a database that allows you to search for recyclers in your county.

You can access this information from the division home page at www.waste.ky.gov or go directly to <http://eppcapps.ky.gov/DWM%20Recycling/default.aspx>

“We encourage those who wish to learn more about recycling to visit the DWM site,” said R. Bruce Scott, division director. “Recycling is both an environmental and economic issue. We can all help our state by recycling waste material.”

Kentuckians recycled 22 percent of common household recyclables in 2004, compared to the national rate of 26.7 percent. Lost revenue from recyclables—aluminum cans, cardboard, newspaper and plastics—that went into Kentucky landfills has been estimated at \$70 million a year.



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