

Volume 18 Number 1
Winter 2007

Land & Water

Kentucky Environmental and Public Protection Cabinet

Land Air & Water

State of Kentucky
Ernie Fletcher, *Governor*

Environmental and
Public Protection Cabinet
Teresa J. Hill, *Secretary*

Department for Environmental
Protection
Lloyd R. Cress, *Acting Commissioner*

Department for Natural Resources
Susan Carole Bush, *Commissioner*

Department of Public Protection
Timothy LeDonne, *Commissioner*

Department of Labor
Philip Anderson, *Commissioner*

Editor
Design and Production
Cynthia Schafer

Agency Coordinators
Martin Bess, Mary Jean Eddins,
Rosetta Fackler, Gwen Holt,
Leslie Isaman, Linda Potter,
Elizabeth Robb, Eva Smith-Carroll,
Rose Marie Wilmoth and Chuck Wolfe

Land, Air & Water is published quarterly by the Environmental and Public Protection Cabinet with state and federal funds. Subscription to this publication is free. Write the Office of Communications and Public Outreach, 5th Floor, Capital Plaza Tower, Frankfort, KY 40601 or phone (502) 564-5525 to have your name added to the mailing list. Address changes and deletions also should be sent to this office or faxed to (502) 564-3354.

The trouble with tires . . .

By Byron Brooks
Kentucky State Nature Preserves Commission

One of the greatest challenges created by our convenience-driven lifestyle is dealing responsibly with the ever-increasing volume of waste we produce. The tires that transport us pose an acutely frustrating problem when they are no longer fit for service. Unscrupulous people may resort to illegal dumping, but the only legal and environmentally responsible way to deal with used tires is to recycle them.

Illegal dumping of tires is not only unsightly, it is a public health hazard. A pile of abandoned tires is like free high-rise housing for mosquitoes that spread eastern equine encephalitis, West Nile virus and other diseases harmful to humans. Water collected in a single tire can produce as many as 1,000 adult mosquitoes.

How serious is the threat posed by mosquitoes? Thirty-four Kentucky counties reported cases of West Nile virus in humans in 2002.

Most people consider it common sense to properly recycle used tires, but a nefarious few seem to believe used tires make a welcome addition to a state natural area.

In August 2006, the Kentucky State Nature Preserves Commission (KSNPC)

discovered a quantity of tires dumped at Tom Dorman State Nature Preserve in Garrard County. The tires were full of rotting leaves and rainwater but fortunately had not been there long enough to harbor mosquitoes.

The tires were loaded up and hauled back to the KSNPC office in Frankfort. S&S Tire in Frankfort agreed to accept and recycle them for the commission. Many thanks to Joe Durkin at S&S Tire for taking them and for waiving the fee charged to recycle each tire. Businesses like S&S Tire make it easy for everyone to do the right thing, legally and environmentally.

For more information visit the following Web sites:

Kentucky Cabinet for Health and Family Services: <http://chfs.ky.gov/dph/epi/westnile.htm>
<http://www.inhs.uiuc.edu/inhsreports/nov-dec96/mosquit.html>

Illinois Natural History Survey:
<http://www.ongov.net/Health/mosquitoborne.html>

Ohio State University Extension:
<http://ohioline.osu.edu/hyg-fact/2000/2148.html>

Centers for Disease Control and Prevention: <http://www.cdc.gov/ncidod/dvbid/arbor/eeefact.htm>



Land Air & Water Online

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

The Environmental and Public Protection Cabinet does not discriminate on the basis of race, color, national origin, sex, age, sexual orientation, gender identity, religion, disability, ancestry and veteran's status and provides, on request, reasonable accommodations including auxiliary aids and services necessary to afford an individual with a disability an equal opportunity to participate in all services, programs and activities. To request materials in an alternative format, contact the Office of Communications and Public Outreach, 5th Floor, Capital Plaza Tower, Frankfort, KY 40601 or call (502) 564-5525. Hearing- and speech-impaired persons can contact the agency by using the Kentucky Relay Service, a toll-free telecommunication device for the deaf (TDD). For voice to TDD, call (800) 648-6057. For TDD to voice, call (800) 648-6056.

Printed on recycled paper with state and federal funds

what's inside

features



Land
Air & Water
Winter 2007
Volume 18 Number 1



2 Twenty-two years of biodiversity protection

Brainard Palmer-Ball Jr. shares his experiences working in the Kentucky State Nature Preserves Commission.

5 Kentucky's ash trees at risk

The Emerald ash borer is expected to find its way to Kentucky in the near future.

13 Aluminum can recycling

Find out why recycling is crucial to the state's aluminum industry.

17 First-time festival brings attention to one of state's rarest plants

Short's Goldenrod Festival provided opportunities to learn about rare plants, address environmental issues.

Printed by Post Printing
Lexington, Kentucky

contents

The trouble with tires	Inside front cover
What does a conservation district do anyway?	4
Kentucky DNR gives citizens 'news to use'	6
New maps provide accurate flood zone data, easy accessibility	7
Mercury collection nets 150 pounds	8
Conference shapes Kentucky's environmental future	9-10
Awards dinner highlights environmental leaders	10
Cleaning up the Salt River	11
Kentucky communities benefit from NPS grants	12
Floyds Fork Watershed: time to get something started	14
Brownfield insurance is hot topic at chapter meeting	16
State forest provides outdoor classroom	18
Awards	19-20
Three honored posthumously for service	20
EQC seeks Earth Day nominations	Back cover

on the cover

Ice formations photographed by Thomas G. Barnes, University of Kentucky, Department of Forestry.

Reflections on 22 years of biodiversity protection in Kentucky

By Brainard Palmer-Ball Jr.
Kentucky State Nature Preserves
Commission

I came to the Kentucky State Nature Preserves Commission (KSNPC) in January 1985. Fresh out of graduate school, I was somewhat familiar with nearly a decade of efforts by the KSNPC and the Kentucky Chapter of The Nature Conservancy (TNC) to protect “the best of what’s left” in the commonwealth. At first, I thought the pace of activity was impressive, but within a couple of years it was apparent this noble effort was in no way growing by leaps and bounds. However, despite insufficient funding and what has seemed like a host of insurmountable obstacles, the commission through sheer determination has compiled an admirable list of accomplishments as it celebrates its 30-year anniversary.

Yes, the face of biodiversity protection in Kentucky has changed dramatically since 1985. When I arrived at KSNPC there was but one computer in our office at 407 Broadway in Frankfort, one agency



vehicle parked outside on the street and the full complement of staff members was a mere six. At that time there was even room to house TNC’s Kentucky Chapter office staff. In 1985 there were only 14 state nature preserves covering just over 5,600 acres. Nearly half of the preserves and a majority of the acreage had been dedicated in cooperation with the Department of Parks. Now staffed with 22 full-time employees and owning and/or managing over 23,000 acres of land in 57 preserves, natural areas and conservation easements, the KSNPC has made great strides in protecting the commonwealth’s biological treasures.

Back in 1985 I had no idea that 22 years later I’d still be here, but it truly has been a blessing to be associated with this effort. As the years have moved along, I have been mentored by many individuals. In fact, one of the most rewarding aspects has been interacting with a myriad of the state’s “authorities” on everything from mosses and mussels to cave beetles and bats. It is no coincidence that of all the impressions I have formed while traveling across this state for two decades, the ones resulting from the people I have met will be the most lasting. Most folks

around these parts are decent people. Of the hundreds of landowners I have encountered, rarely have I run into someone so distrusting of government or downright bitter that I couldn’t have a civil conversation. I have come to realize that most folks are interested in conservation of plants and animals if you can just tell them about it. However, conservation can be a hard sell in the hustle and bustle of the global economy, especially for those who make their living off the land. I cannot count the number of times I have wished our society could ratchet back to a simpler level of existence. I believe most people would welcome it, but fewer and fewer seem to have any say in the matter.

Most of the Kentuckians I have met have been rural folk, and most of them have been farmers. I grew up on a dairy farm in Jefferson County and continue to foster a connection to those in agriculture. Kentucky farmers are a unique lot, typically bonded closely to a conservative family heritage of working the land, respectful of common courtesy and guided by the golden rule. Today’s economy, however, has left many of them behind. Farmers believe – rightly so in my mind – that agriculture should be a respectable and profitable manner in which

Continued on Page 3



OPPOSITE PAGE:

(above) *The northern shoveler*. Photo by Dave Menke

(below) *Red-cockaded woodpecker*. Photo by J & K Hollingsworth

THIS PAGE: (above) *Rose pogonia orchid*. Photo by Thomas G. Barnes

(right) *Northern harrier nest*. Photo by Brainard Palmer-Ball



ABOVE: *High Rock, Bad Branch State Nature Preserve*. Photo by Barry Howard

A few of the “best” days as a KSNPC biologist

June 14, 1986—Former KSNPC employee Wendell Haag and I are hiking in Letcher County. We deviate up a side trail and come upon a scattered patch of some of the most beautiful pink orchids we have ever seen growing in a wet patch of sedges. Knowing just enough to be dangerous and thinking this is something that must be special, we return to the main trail to summon our friends and orchid experts, John MacGregor and Richard Cassell, to tell us what it is that we have discovered. Their oohs and ahhs soon confirm this is something extraordinary, indeed ... the first rose pogonia orchids (*Pogonia ophioglossoides*) observed in Kentucky in more than 150 years. The camaraderie associated with the sharing of such discoveries always leaves a lasting impression.

May 25, 1989—My friend Alan Barron and I had watched a pair of northern harriers (*Circus cyaneus*) fly in and out from the same point on a broad grassland slope in Muhlenberg County until we felt certain they must be involved in nesting. Upon walking up to the spot, I came upon a shallow saucer of neatly arranged dead grasses that held two relatively large, light blue eggs. At that moment I realized I was knowingly setting eyes on the first northern harrier nest in Kentucky since John James Audubon had seen them in the native prairies in the early 1800s.

June 5, 1997—While doing surveys for amphibians in southern Christian County, I found a female northern shoveler (*Anas clypeata*) with a brood of nine small ducklings on a wet-weather pond near Oak Grove. This was the first confirmed breeding record for the species in Kentucky.

A few of the “worst” days as a KSNPC biologist

Sept. 18, 1997—The pond where I had found the family of northern shovelers just three months earlier is completely filled in with dirt as a bulldozer puts the finishing touches on what will soon become the parking lot for a new truck stop along Interstate 24. I had been totally unaware of the proposed land use for the site when I had discovered the shovelers and on this day I was completely shocked to see what had happened.

Feb. 9, 1998—This was the date of my first visit to a certain Breckinridge County cave since the March 1997 flood. Two years earlier, I had counted more than 1,900 federally endangered Indiana bats (*Myotis sodalis*) in a large underground room that I thought at the time must be as fine and safe a hibernaculum as any bat could find. Alas, that day I counted only six; the rest had certainly drowned in the high water, which I could tell had reached all the way to the ceiling.

March 23, 2001—The last Kentucky-native red-cockaded woodpecker (*Picoides borealis*) is trapped in Laurel County by the U.S. Forest Service for relocation to the Carolina Sandhills National Wildlife Refuge in South Carolina. The devastation of the 1999-2000 southern pine beetle (*Dendroctonus frontalis*) outbreak has broken the back of the mixed pine-hardwood forests of the southern Cumberland Plateau and federal officials decided not to allow the red-cockaded to decide for itself if it can still survive here. I know I will never see another in Kentucky.

Reflections on 22 years of biodiversity protection in Kentucky

Continued from Page 1

to make a living and support their families. The combination of global connectivity and the desire of most Americans to pay as little as possible for commodities has made it more and more difficult for the average Kentucky farmer to make ends meet. I suspect many are resentful that such a wonderful way of life is no longer possible in today's corporate-driven world. Unfortunately, the pressure to remain profitable has reduced the ability of most farm families to consider doing more for conservation.


That said, landowners are our most critical partners in achieving success to protect our plants and animals because so many rare species occur on private land. If I've realized one thing in 22 years, it is that significant contributions to biodiversity conservation can come from seemingly the most insignificant of actions. Little things such as allowing a perennially troublesome wet spot along a field edge to revert back to marsh or swamp; leaving a dead tree standing so that a colony of bats can raise young behind the flaking bark; mowing idle areas only once a year after nesting season or in early spring instead of twice

or more a year; or retaining a buffer strip of vegetation along a stream. All can have a positive impact in the long run. When pooled together, many small actions can make a big difference.

Other partners the KSNPC could not do without are our sister agencies in state and federal government. Twenty years ago it was a lot more difficult to bolster support for orchids and salamanders from most other natural resource agencies. However, today the commission has more partners than ever in biodiversity conservation. With help from expanded federal funding initiatives, our friends at the Kentucky Department of Fish and Wildlife Resources are able to place more and more emphasis on cooperative projects that benefit not only native game species but nongame wildlife, plants and natural communities as well. There is certainly a bright future for expanded cooperation on many fronts between our agencies with goals that become more similar with the passing of every year.

While some members of the staff toil with details of budgets, databases and property deeds, like other KSNPC biologists my main responsibilities in

biodiversity conservation have focused on determining the ranges and monitoring the status of various organisms. For most of my 22 years I have been responsible for the terrestrial vertebrate groups (amphibians, reptiles, birds and mammals), but anything in my path that flowers, flies, swims or sings has been a target of my attention. The beauty and diversity of life all around us will never cease to amaze me.

I will close with some reflections on my 22 years at KSNPC. These experiences comprise, of course, only a tiny slice of the memories one takes away from such a stimulating and rewarding endeavor. For everyone involved in biodiversity conservation, no matter how actively or passively, both the high points and the challenges enrich our lives and keep us motivated. Unfortunately, the issues that today are impacting the Earth's creatures the most are the same ones that may eventually threaten our very existence as well, and yet they seem to spread faster and farther across the globe with the passing of every day. It is incumbent on all of us to stay involved as much as we can. 

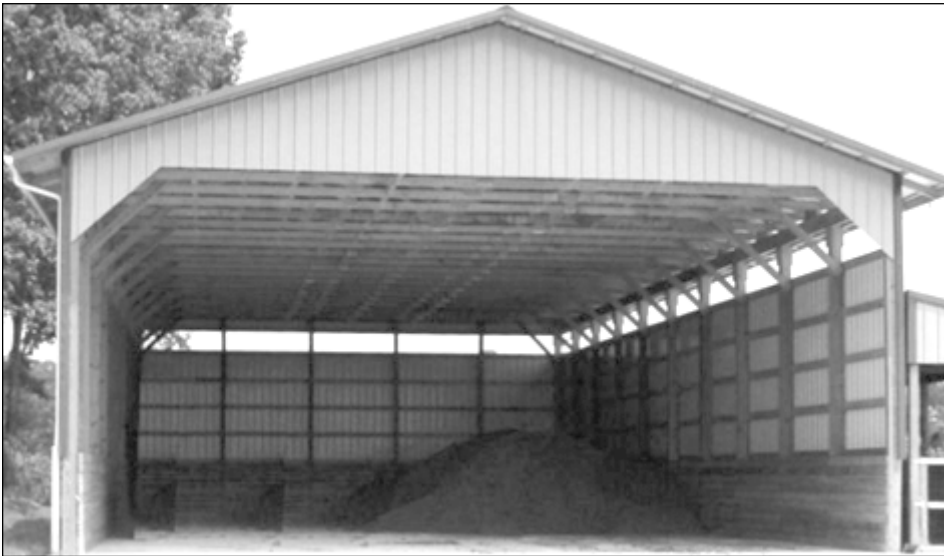
A few of my favorite places in Kentucky:

High Rock, Bad Branch State Nature Preserve, Letcher County:

County: The view is not the most impressive in Kentucky, but to get there you've hiked through 3.5 miles of Appalachian forest. If you can filter out the whine of the coal trucks and look away from the abandoned coal mines to the north and south, and sit there on the warm sandstone watching flocks of broad-winged hawks (*Buteo platypterus*) float by overhead on their way south to Central and South America on a sunny day in late September, it's pretty darned close to perfect.

McElroy Lake, near Woodburn, Warren County: This area is usually nothing more than a corn or soybean field, but at the time of European settlement it was in the heart of the "big barrens" of Kentucky and was likely covered in native prairie grasses. Every few years it is filled with water by overflow from the great underground karst cave systems of southern Warren County. During such times it covers several hundred acres and hosts thousands of water birds, sometimes for months at a time. Standing there watching great flocks of sandpipers and waterfowl wheel in unison as a peregrine falcon (*Falco peregrinus*) cuts through them in search of the weak individual, I am always struck with the impression that it is an instinctual attraction handed down through many generations that draws so many birds to this place. Several million dollars will be needed in the next 20 years to keep this wonderful spot from being lost to development.

Deep inside a cave on Pine Mountain, Letcher County: There are several caves on Pine Mountain that I have visited every two years since the late 1980s to conduct a census of hibernating Indiana bats. Deep inside one is a small passage that has always captured my imagination. I and a small party of biologists have roped our way down a large portion of the north slope of Pine Mountain, scampered over frozen waterfalls, and tip-toed along narrow ledges to reach the entrance. Upon entering this special place we have spiraled our way down through a maze of small passages, several times crawling or shuffling through crevices seemingly too narrow to accommodate our torsos. Having visited this cave on several occasions, I can now accurately navigate my way to a small cavity near the floor of a cramped, moist room. As you wedge your way down through the hole there always seems to be an annoying trickle of water that patters in your face. However, this narrow opening is the gateway to a larger, drier and more horizontally aligned passage that serves as the hibernaculum for more than 2,000 Indiana bats. There deep in the mountain, hundreds of feet and a couple of dozen twists and turns from the entrance, and always in this same little room, are several randomly arranged clusters of tightly packed, sleeping bats perfectly hidden away from the harsh winter weather and disturbance from humans (other than for the 10 minutes we share their space with them every other year).



This litter storage building was constructed in Wayne County by a landowner who received cost-share assistance through the Kentucky Soil Erosion and Water Quality Cost-Share Program.

To date, 128 pipe and tank BMPs have been installed, and 38 heavy-use area BMPs have been constructed. Since 1998, Wayne County has distributed \$98,132 in district funds to landowners.

The district also rents agricultural equipment. Three no-till drills, two lime/litter spreaders and one drainage plow each can be rented for as little as \$10 per day. This year, the drills were used on 2,229 acres, and the spreaders were used 61 days. The plow also was used to install 24,000 feet of tile. Total income from

What does a conservation district do anyway?

By David Keltner
Division of Conservation

I often get the question, “What does a conservation district do anyway?”

This question often comes from landowners and farmers. A farmer may use a conservation district’s services, or that of its partner, the Natural Resources Conservation Service, only once a year. However, there may typically be 800 to 1,000 other agricultural farmers within that county, with each farming operation differing in many ways.

In addition, federal, state and local programs are constantly changing, forcing conservation districts to learn new methods for assisting in the implementation of new programs.

Conservation districts have been around since the 1940s, and each district’s programs differ depending on how each district board chooses to spend its allocated and awarded funds. However, all districts have one goal in mind—to conserve and develop the renewable resources (soil, water, vegetation, wildlife and others) within its boundaries.

The Wayne County Conservation District provides some good examples of how a district uses its funds to help community farmers.

The Wayne County district has operated a cost-share program with local farmers for the conservation of soil and water resources. This cost-share program pays farmers as an incentive to install best management practices (BMPs) on their



ABOVE LEFT: *Lindsey New gives a presentation about point and nonpoint source pollution using the EnviroScape model. RIGHT:* *This no-till drill can be rented from the Wayne County Conservation District.* All photos courtesy of Lindsey New



land. The board chose to use its funds for implementing two best management practices—pipe and tank BMP and heavy-use area BMP. Funding is 50 percent cost-share not to exceed \$1,000 per landowner per year.

A pipeline and tank BMP allows water needed for cattle to be distributed to fenced pastures. This distribution of water allows for rotation of grazing animals, since overgrazed pastures are a major cause of soil erosion. The heavy-use area BMP helps eliminate high concentrations of animal waste in feeding areas. Feeding cattle in one area over a long period of time creates erosion and leads to water pollution from the runoff of animal waste. Applying filter fabric covered with rock to the feeding area reduces erosion and allows waste to be scraped periodically. The waste can then be applied to fields as fertilizer.

usage of district equipment has been \$15,933.50.

Conservation districts across the state organize and conduct educational projects and programs that teach why conservation of renewable resources is important to a healthy society. The Wayne County Conservation District is no exception.

Lindsey New, the district administrative secretary, applied for and received a grant from Eastern Kentucky PRIDE to purchase an EnviroScape model that depicts the landscape in three-dimension and demonstrates how water runs downhill. By viewing this model, observers can appreciate the critical need to control agriculture runoff, which can lead to nonpoint source pollution.

For more information, contact the Division of Conservation at (502) 573-3080.



Lean, mean tree-killing machine targets Ash species

By Tim McClure
Division of Forestry



TOP LEFT: Ash trees were located and girdled in early spring. **ABOVE:** Sara Johns fells the girdled trees in October.

TOP RIGHT: Stewart West debarks and examines the wood for any evidence of emerald ash borer. All photos submitted by Tim McClure

The Emerald ash borer, an introduced insect pest, has been spreading quickly since its initial discovery in Detroit in 2002. The borer is now in five states—Michigan, Ohio, Indiana, Illinois and Maryland—and Ontario, Canada. To date, more than 20 million ash trees have been killed in these infested areas. The borer is believed to have come into the United States in wooden packing crates from Asia. Most introduced pests spread quickly since they have no natural enemies in their new environment. This insect was most recently found in Warren County, Ohio, just north of Cincinnati along I-75.

The borer spreads mainly from ash logs being transported from infested areas, especially in firewood. Due to this method of spread, the U.S. Department of Agriculture implemented a statewide quarantine for Indiana, Ohio and Illinois that restricts the intrastate and interstate movement of ash wood products. This quarantine became effective Dec. 1, 2006. This ban prohibits the transporting of ash logs across state lines. Kentucky has been

spared from the borer to date, but it is expected to enter the state in the near future. The impact could be environmentally and economically devastating. There are approximately 223 million ash trees growing in the commonwealth. In Kentucky, ash logs are sold for sawlogs, veneer logs, rough and grade lumber, pallet lumber, furniture squares, drumstick blanks and tool handles.

Ash is also an excellent main street tree in urban areas. One study estimated it would cost the city of Detroit \$1 billion in additional sewers to handle the rain water runoff previously controlled by ash trees that are now dead and have been removed.

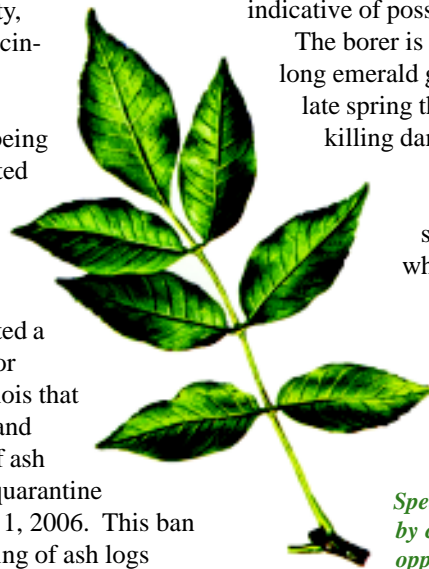
The Kentucky Division of Forestry recently completed a statewide survey for the presence of the borer. The study consisted of girdling two ash trees per site in May, then felling and stripping the bark from the trees in October to look for the presence of larval galleries. The study was conducted in nine northern Kentucky counties, from Bracken County westward to Jefferson County, and in six campground areas across the state. None of the trap tree sites yielded borer infestations.

This study will be repeated next year targeting the I-75 and I-65 corridors as well as campgrounds across Kentucky. Symptoms of the borer infestation include 2-inch to 5-inch vertical splits in the bark, S-shaped larval galleries in the wood just under the bark and small D-shaped exit holes in the bark. Trees may be infested for several years before these symptoms appear. Initially, dieback of branches is indicative of possible infestation.

The borer is a small, one-half inch long emerald green beetle that flies in late spring through summer. The

killing damage is done by the white larval stage located under the bark. Ash species attacked are green, white, blue and black.

If you suspect the presence of Emerald ash borer, call your local forestry or extension office immediately. ❖



Species of ash are recognized by compound leaves arranged opposite one another on the branches.

Kentucky DNR gives citizens ‘news to use’

By Linda Potter

Department for Natural Resources

My brother works in the mines; what are you doing to protect coal miners? I own the surface land where a company is drilling for oil and gas and another wants to mine coal. What rights do I have? My house backs up to woods and with all the people setting fires around here, I want to protect my family and my property. What can I do? Who can I call? I live near a coal mine, and I’m concerned that blasting will damage my well. Can you do anything to help?

These were among the questions addressed during an open house held by the Kentucky Department for Natural Resources (DNR) on Tuesday, Sept. 19, 2006, at Hazard Community and Technical College.

The open house provided an informal atmosphere in which the people of Perry and surrounding counties asked questions and got answers about DNR and the services through which it strives to protect people and the environment.

“I believe that engaging the public is vital, and what we learn from them will be of great assistance to DNR in helping us do our jobs better,” said Commissioner Susan Bush, who was among the DNR personnel on hand. “We want to reach out to the people we serve, to give them news they can use about our activities and who they can contact about concerns.”

The open house featured displays and brief presentations on the department’s various divisions and offices. A quick glimpse of division highlights follows:

Conservation:

- Programs designed to aid farmers through cost-share and equipment lending
- Best management practices that protect land and water resources from adverse effects of agricultural activities
- Local conservation districts and contact information
- Envirothon and essay contests for school children.



Susan Wind, Division of Mine Permits, explains the permitting process and its role in environmental protection.



District Forester Kristy Whitaker discusses forest stewardship.



AML Director Steve Hohmann (left) talks with Kevin Pentz of Kentuckians for the Commonwealth. DNR photos

Forestry:

- Arson prevention
- Firewise program demonstrating ways to protect property from wildland fires
- Forest stewardship program that helps forest landowners manage and care for their property.

Abandoned Mine Lands:

- Restoring the environment through reclamation of abandoned mine sites
- “Stay Out/Stay Alive” campaign focusing on the dangers of entering abandoned mines
- New waterlines for residents whose water source was

contaminated by mining prior to SMCRA (Surface Mining Control and Reclamation Act) of 1977.

Mine Permits:

- Protecting water resources, streams and stream habitat by requiring stream restoration plans and mine reclamation plans
- Protecting threatened and endangered species with biological surveys
- Protecting the cultural and archaeological history of the eastern Kentucky coal fields
- Introduction to coal mining permits.

Mine Reclamation and Enforcement:

- Inspector activities to protect and safeguard the environment
- Snapshot of the mining process—before, during and after
- How to file complaints against mining entities in proximity to homes
- Investigation of water complaints related to mining
- Vital information about mine blasting.

Oil and Gas Conservation:

- Surface owner rights during oil and gas well drilling
- Permitting with increased bonding requirements
- Abandoned well plugging
- Well inspections

Continued on Page 8

Flood maps, or Flood Insurance Rate Maps, have a wide range of users. Private citizens, insurance agents, engineers, surveyors and brokers use flood maps to locate properties and buildings and identify their risk to flood damage. Community officials use them to administer floodplain management regulations and mitigate flood damage. Lending institutions and federal agencies use the maps to locate properties and buildings to determine whether flood insurance is required when making loans or providing grants for the purchase or construction of buildings.

Typically, flood maps contain the following information:

- Physical features, such as major highways, secondary roads, lakes, railroads, streams and other waterways
- Floodplain areas (special flood hazard areas)
 - Base (1 percent annual chance) flood elevations or depths
 - Flood insurance risk zones
 - Areas subject to inundation by the 0.2-percent-annual-chance flood
 - Areas designated as regulatory floodways.

Kentucky has undertaken the task of updating its flood maps statewide. By doing so, more accurate and current flood hazard information will be available, and flood maps will be more accessible and easier to use.

With the advent of new technologies to reduce production time and costs, flood hazards may be identified more efficiently. It is the Kentucky Division of Water's goal to identify flood hazards for areas that drain more than 1 square mile (640 acres). This goal has been established to coincide with Kentucky stream construction permitting criteria as set forth in KRS 151.250 and 401 KAR 4:060.

Through better technology, the new flood maps are likely to show more flood hazards. One common misconception is that the Division of Water or the Federal Emergency Management Agency (FEMA) has "put" someone's house or property in the floodplain. The fact is every stream—large or small—has a floodplain; the capability to identify that floodplain has been limited in the past.

The new flood maps will show areas that have a 1 percent chance of flooding in any given year. This is commonly called



Map modernization

New maps provide accurate flood zone data, easy accessibility

By Carey Johnson
Division of Water

the 100-year floodplain, but that is not a rigid standard. There may be more than one flood in a year or it may be more than 100 years before a 1-percent-annual-chance flood occurs.

Flood maps designate the following zones where flooding is likely to occur:

- Zone AE – areas that will be inundated by the 1-percent-annual-chance flood where base flood elevations have been determined. These zones are generally found on major flooding sources and in areas with high development potential.
- Zone A – areas that will be inundated by the 1-percent-annual-chance flood where no base flood elevations have been determined. Since funding for the Kentucky map modernization effort is limited, the majority of new flood zones as a result of map modernization will be Zone A.
- Zone X – areas that will be inundated by the 0.2-percent-annual-chance (500-year) flood. These areas are only associated with Zone AE. While not a regulatory standard, large floods often occur and require the designation of the

0.2-percent-annual-chance floodplain.

- Zone X – areas outside the 1-percent- and 0.2-percent-annual-chance floodplain.

Keep in mind that approximately 30 percent of all flood insurance claims come from Zone X areas, so even though you may not be in a designated floodplain, there is a chance that flooding may occur in your area.

Communication is critical to ensuring that the map modernization effort is successful. It is the state's goal to communicate widely, effectively and consistently to maximize flood map users' understanding of flood hazards and the risks posed to life and property.

In 1997, FEMA developed a plan to modernize its flood mapping program. The plan outlined steps necessary to update FEMA's national flood maps to digital format and streamline FEMA's operations in raising public awareness of the importance of the maps and responding to requests to revise them. FEMA's plan is to:

- Develop up-to-date flood hazard data for all flood-prone areas nationwide to support sound floodplain management and prudent flood insurance decisions.
- Provide maps and data in digital

ABOVE: This McDonald's in Hazard is a good example of how a properly elevated building can remain high and dry during a major flood event. Division of Water photo

Continued on next page

Mercury collection nets 150 pounds



Carolyn Ann Jennings, environmental awareness educator at the Richmond-Madison County Recycle Center, holds a bucket with vials containing 20 pounds of mercury. About 150 pounds of mercury and mercury-containing equipment were turned in during a collection sponsored by the Environmental and Public Protection Cabinet in conjunction with the Cabinet for Health and Family Services.

Photo by Kerri Cope, Division of Waste Management

Kentucky DNR gives citizens 'news to use'

Continued from Page 6

- GIS schematics of drilling activity and gathering lines in Perry, Harlan and Leslie counties.
- Mine Safety and Licensing:**
- Demonstrations of safety equipment – self-contained self-rescuers (SCSRs) and air quality monitors
 - Room and pillar model of a coal mine indicating mine ventilation and how mining is done
 - Mine rescue team information
 - Kentucky Mine Mapping Initiative showing underground maps of both active and abandoned mines.

While DNR provided information regarding its activities, the staff returned to Frankfort with renewed insight as to how to better communicate with the people of the commonwealth. This exchange between state agencies and the citizens they serve promises to be mutually beneficial. DNR plans to expand its outreach with similar events in other communities during the coming months. DNR can only hope to protect our land and our people by personally involving them and then listening closely to what they say. ❖

New maps provide accurate flood zone data, easy accessibility

Continued from previous page

format to improve the efficiency and precision with which mapping-program customers can use this information.

- Fully integrate FEMA's community and state partners into the mapping process to build on local knowledge and efforts.
- Improve processes to make it faster to create and update maps.
- Improve customer services to speed processing of flood map orders and raise public awareness of flood hazards.

FEMA's map modernization initiative is congressionally supported and requires significant dedication from its mapping partners. FEMA has created a strategy—the Multi-Year Flood Hazard Identification Plan—that details FEMA's five-year plan for providing updated digital flood hazard data and maps for areas with flood risk.

The majority of Kentucky's floodplain maps are badly outdated. Their average age is 15 years or older, and 20 counties

have no maps at all. The new floodplain maps, or digital flood insurance rate maps, will be in a countywide format and depict flood hazards on an aerial photo base map.

The Kentucky Division of Water began its map modernization program in 2004. Kentucky is slated to receive \$18 million through 2008. The Water Resources Branch within the Division of Water has been assigned to manage the map modernization program. However, considerable dedication will be required from other governmental agencies working together to accomplish the goals that FEMA has outlined. The Division of Water has formed partnerships with the Kentucky Transportation Cabinet, the Kentucky Division of Geographic Information Services, the Kentucky Division of Emergency Management, the U.S. Geological Survey, the Kentucky Council of Area Development Districts and the U.S. Army Corps of Engineers. In addition, the Division of Water has

procured the services of two independent mapping contractors—Fuller, Mossbarger, Scott and May Engineers and AMEC Earth and Environmental—to perform mapping activities.

FEMA envisions individual states managing and supporting map modernization by developing the necessary engineering, geography and GIS technologies. Utilizing the products from map modernization efforts will complement other state agencies by serving as a “clearinghouse” for enhanced mapping information and portals that can be integrated into existing programs. The end product will be not only digital floodplain maps, but information that can be used for homeland security, natural resource conservation, emergency management and transportation purposes that promote economic development and maximize mitigation efforts.

For more information, contact Carey.Johnson@ky.gov ❖

Conference shapes Kentucky's environmental future

By Amanda LeFevre
Division of Compliance Assistance

The 30th Annual Governor's Conference on the Environment had plenty to offer the more than 280 people who attended the event in November. The conference was held in Lexington at the Hyatt Regency, which was a perfect venue for the event.

The Hyatt recently became a KY EXCEL member and was honored for its efforts in water conservation during the conference's Leadership Awards Dinner. Tom Webb, environmental compliance coordinator for Lexington-Fayette Urban County Government, was also pleased with the event's location.

"The city of Lexington enjoyed hosting the conference," said Webb. "Not only did it give us a chance to showcase our city, we also got to showcase our involvement in the KY EXCEL program." The city of Lexington is taking on 17 voluntary improvement projects under KY EXCEL.

The diversity of attendees ranged from environmental organizations to private sector industry. Most notably, there were more private sector industries represented than in recent years. Representatives from environmental firms,

nonprofits, professional organizations, universities, the Kentucky Legislature, high schools, city governments and state agencies were also in attendance.

The first evening of the conference was highlighted by the Secretary's Reception and Leadership Awards Dinner. Environmental and Public Protection Cabinet (EPPC) Secretary Teresa J. Hill and Deputy Secretary Lloyd Cress hosted the event, which included remarks from Stan Cave, Governor Ernie Fletcher's chief of staff. The dinner was an opportunity to recognize more than 50 of Kentucky's environmental leaders for their willingness to voluntarily improve Kentucky's environment.

The second day offered conference goers a chance to learn and discuss what lies ahead for Kentucky's environment.

"The interest that was evident in this year's conference was most gratifying," said EPPC Secretary Hill. "There was substance to the agenda, but the value of the conference went beyond that. It was an opportunity for two-way communication with many members of the regulated community—to hear what's of interest to them, to hear about issues coming up in



the legislature and to explain the priorities of our cabinet agencies," she said.

Morning plenary sessions covered topics including EPPC cabinet leaders' perspectives on Kentucky's environmental issues and priorities, legislative updates from Sen. Tom Jensen and Rep. Jim Gooch Jr., a discussion on Kentucky's energy future and the importance of environmental leadership. The morning was topped off with a luncheon featuring speaker Scott Gordon, acting associate director of EPA Region 4's Office of Environmental Accountability.

Afternoon break out sessions fell into three categories:

- the Issues Series allowed participants to engage in dialogues with agency representatives from the Department for Natural Resources and the Department for Environmental Protection.
- The Technical Series covered topics on sustainable buildings, proactive planning and meaningful measurement processes.
- The Excellence Series introduced attendees to KY EXCEL, provided them with strategies for forming productive

Continued on next page



TOP: Keynote speaker Stan Cave addresses attendees at the Leadership Awards Dinner. **LEFT:** EPPC Secretary Teresa J. Hill greets representatives from Trinity Consultants in the exhibition hall. Photos by Creative Services

Awards dinner highlights environmental leaders

By Amanda LeFevre
Division of Compliance Assistance

Blazing a new trail is never easy, but a number of Kentucky's private and corporate citizens have done just that, and in the process they have become environmental role models. The Leadership Awards Dinner, which took place during the 30th Annual Governor's Conference on the Environment, honored 54 citizens that have undertaken voluntary environmental improvement projects through KY EXCEL, Kentucky's environmental leadership program.

The Kentucky Small Business Advisory Panel also recognized the winner of the Small Business Air Quality Stewardship Award (See *SEMICON wins air quality award* on Page 20).

All of these leadership efforts are giving a helping hand to the environment and are producing significant improvements to Kentucky's air, water and land resources.

In his keynote remarks, Chief of Staff

Stan Cave emphasized how important the environment is to our generation as well as to future generations. EPPC Cabinet Secretary Teresa J. Hill and Deputy Secretary Lloyd Cress also took to the podium to honor the attendees and stress the importance of environmental stewardship. But the real stars of the evening were those recognized for their voluntary efforts that will improve the quality of life for all Kentuckians. Their projects, ranging from cave cleanups to reducing waste generation at facilities, were a reminder that when it comes to the environment every little bit helps.

The Mount Saint Joseph Conference and Retreat Center has pledged to build a near-zero energy home in western Kentucky as their KY EXCEL project. Sr. Amelia Stenger, a representative of the center in Maple Mount, was impressed with the long list of volunteer projects.

"Meeting all the people who were working on so many good projects for KY EXCEL gave me hope," said Sr. Stenger. "It reassured me that people are willing to

make a difference by doing things to help the environment. The conference made me more determined to take care of the Earth today so future generations will have what they need," she said.

Lexmark, which has committed to several projects including a stream bank restoration and participation in the Reforest the Bluegrass program, was also honored at the event.

"For Lexmark, KY EXCEL represents a forward-thinking approach to environmental compliance and stewardship that coincides with our core values to develop and implement industry-leading environmental practices," said Frank Whitehouse, environmental program manager for Lexmark International. "KY EXCEL represents a positive reinforcement program that has the opportunity to greatly impact not only Kentucky businesses, but our communities as well," he said.

The Department for Environmental Protection is actively seeking to recognize Kentucky's environmental leaders and encourages their participation in KY EXCEL. The program is open to any individual, business or organization that wishes to voluntarily improve Kentucky's environment. Anyone interested in learning more about KY EXCEL can obtain additional information online at www.KYEXCEL.ky.gov or call the Kentucky Division of Compliance Assistance at (800) 926-8111.



Conference shapes Kentucky's environmental future

Continued from previous page

partnerships and gave them tips on navigating regulatory processes.

The two-day event also featured an area with 32 exhibitors, including consultants, nonprofit agencies, local governments and state agencies. Many KY EXCEL members were exhibitors, which presented them with an opportunity to explain their projects and experiences to conference goers.

Copies of many of the conference presentations can be found on the cabinet's Web site at <http://www.eppc.ky.gov/events/govconference/>.



RIGHT: EPPC Secretary Teresa J. Hill stands with Sr. Amelia Stenger (right). Stenger, from the Mount Saint Joseph Conference and Retreat Center, was recognized during the Leadership Awards Dinner as a KY EXCEL member. **BELOW:** KY EXCEL Advocate members were among a total of 54 KY EXCEL members honored for their voluntary environmental improvement projects.

Photos by Creative Services



Cleaning up the Salt River

Collaborative efforts result in delisting of watershed segment

Cleaning up our rivers and streams is a costly and lengthy process involving many citizen groups, agencies and landowners. From the late 1980s through the 1990s the Upper Salt River/Taylorsville Reservoir watershed was the focus of a multiagency, multifaceted water pollution prevention and remediation effort.

The Salt River watershed originates in Boyle County, west of Danville and flows north, then west to its confluence with the Ohio River. The Upper Salt River watershed, with a drainage area of 354 square miles, ends at the Taylorsville Lake Dam Reservoir. The principle land-use activity upstream of the Taylorsville Lake watershed is approximately 74 percent agriculture, 22 percent forest and 4 percent urban/residential. Dairy operations and row cropping of tobacco, soybeans and corn dominate land use along the mainstem.

The Upper Salt River/Taylorsville Reservoir (USR/TR) Watershed Nonpoint Source Demonstration Project, funded through §319(h) of the Clean Water Act, was initiated in 1989. The goal of the project was to effect measurable improvements in water quality by implementing best management practices (BMPs) on agricultural operations in the watershed. This effort consisted of three major components—installation of agricultural BMPs, monitoring of water quality, and education and outreach efforts. In addition, the USDA funded a five-year Hydrologic Unit Area (HUA) Water Quality Project in the watershed to implement BMPs to abate or prevent identified water quality degradation in both surface and groundwater sources of the watershed.

Agricultural BMP implementation began in 1991 and continued through 1995. Thirteen types of BMPs were installed, ranging from fencing livestock out of water bodies and stream bank stabilization to rotational grazing systems employing alternative livestock watering systems and pasture seeding. During the installation period, approximately \$3.5 million was utilized for BMP implementation, technical assistance, monitoring and administration of the project. All BMPs were installed prior to the commencement of post-BMP monitoring.

Nonpoint source educational activities included newsletters, newspaper articles, radio programs, informational displays and field day events involving nine agencies and organizations. Nonpoint

source pollution education was also included in numerous activities involving a variety of audiences ranging from 4-H clubs to farmers.

Two watershed watch groups, volunteer water quality monitoring groups organized through the Division of Water, conducted monitoring throughout the project. Twenty-nine sampling stations were chosen based upon land-use activities, Kentucky Pollutant Discharge Elimination System permit locations, U.S. Geological Survey gauging station locations, accessibility, stream channel characteristics and aquatic habitat diversity.

The initial 1998 303(d) listing for pathogens was based on data collected during the summer recreation season from 1995 to 1997 in the Salt River at Glensboro. Data collected during this period indicated excessive fecal coliform in about a third of samples taken.

Activities to date, including the HUA project, indicate that continued agricultural BMP implementation through USDA and state cost-share programs, and a reduction in agricultural production, have improved the water quality in the Upper Salt River watershed. A comparison of 1991 and 2005 Kentucky Agricultural Statistics shows a reduction of 44,400 combined dairy and beef cattle for the counties that make up the Upper Salt River watershed. Reduction of cattle waste has resulted in a decline of the pathogen load entering the river and its tributaries.

From 1999 to 2004, in sampling for May through October at Glensboro, six of 43 samples indicated excessive fecal coliform—a 14 percent rate. Based upon this information, the Division of Water requested of the U.S. Environmental Protection Agency that the segment of the Salt River from RM 78.0 to RM 88.5 be removed from the 303(d) list of impaired streams. The segment had been listed as being impaired for primary contact recreation use because of pathogens.

Cooperating agencies leading the effort included landowners, the Kentucky Division of Water (KDOW), the Cooperative Extension Service, the U.S. Department of Agriculture--Natural Resource Conservation Service (NRCS) and the Concerned Citizens of Taylorsville Lake-Upper Salt River Watershed.

Literature Cited

- Kentucky Dept. of Agriculture. 1992 Kentucky Agricultural Statistics 1990–1991. Kentucky Agricultural Statistics Service, Louisville, Ky.
- Kentucky Dept. of Agriculture. 2006 Kentucky Agricultural Statistics and Annual Report 2004–2005. USDA, NASS Kentucky Field Office, Louisville, Ky.
- Kentucky Division of Water. 1998. State of the River: A report on the condition of the Salt River Watershed, Kentucky, and the minor Ohio River tributaries in the area. Kentucky Department for Environmental Protection. Frankfort, Ky.
- Kentucky Division of Water. 2000. Upper Salt River/Taylorsville Reservoir Watershed NPS Demonstration Project – Final Report. Kentucky Department for Environmental Protection, Division of Water, Water Quality Branch, Nonpoint Source Section. Frankfort, Ky.
- Kentucky Division of Water. 2004. 2004 303(d) List of Impaired Waters for Kentucky. Kentucky Environmental and Public Protection Cabinet. Frankfort, Ky.
- USDA–Natural Resources Conservation Service. 1995. Taylorsville Lake–Upper Salt River Hydrologic Unit Area, Annual Report Fiscal Year 1995. USDA–Natural Resources Conservation Service. Lexington, Ky.

By James Roe, Division of Water



Kentucky communities benefit from NPS grants

By Rosetta Fackler
Division of Water

Three communities in Kentucky are planning for and working toward implementation of plans to improve water quality in Kentucky's streams and rivers. With the help of \$2.4 million in U.S. Environmental Protection Agency Nonpoint Source (NPS) grant funds, these communities and their partners will see improved water quality. These federal funds will be matched by the recipients with \$1.6 million in nonfederal funds.

- The Ebenezer Slurry Reclamation Project is an extensive coal processing refuse area with 80 acres of fine refuse and an additional five acres of coarse refuse. The abandoned slurry impoundment drains to a breached spillway and into Pond Creek. Downstream of the spillway, 50 acres of floodplain have been impacted by acids and sediments draining from the site.

The project will eliminate the current impacts of toxic coal processing refuse eroding directly into Pond Creek. By reclaiming the site, nonpoint source pollution in the form of sediment and acid-forming material entering Pond Creek from the area will be minimized. Federal funds totaling \$1,171,884 will be matched with \$781,256 in nonfederal matching funds. For more information contact Mark.Meade@ky.gov.

- Curry's Fork, which runs through the heart of Oldham County, has been impacted by recent growth that has altered the habitat of the stream. In addition, the stream is included on Kentucky's list of impaired streams for nutrients, siltation, organic enrichment and pathogens. The



Looking upstream, barren acidic coal refuse and slurry along Pond Creek result in high metal and sediment loads. Nearly all of the material in the photo is proposed to be reclaimed as part of the Ebenezer project. Photo provided by the Division of Abandoned Mine Lands

goal of the project is to improve the water quality of the stream through the development and implementation of a watershed based plan, which may include purchase of conservation easements, streambank restoration, buffer zone creation and channel restoration. Curry's Fork will benefit from \$970,500 in federal funding and \$647,000 in matching nonfederal funds. For further information contact Valerie.Lucas@strand.com.

- The McCreary County Water District will receive \$280,978 in federal funds and will match that amount with \$187,319 in nonfederal funds. These funds

will help eliminate nonpoint source pollution in three subwatersheds of the Big South Fork of the Cumberland River. The river is an Outstanding National Resource Water, the highest classification given to U.S. waters. The Big South Fork stream is unique in that it lies both in Kentucky and Tennessee. Historically, the water quality of the Big South Fork has been primarily impacted by mining and other resource extraction. In order to address these impairments, the McCreary County Water District is developing a watershed based plan to begin the process of restoring the water quality in this stream. For more information contact Steve Owens at MCWD@HIGHLAND.NET.

Additional funds will be awarded for assessment and monitoring of various streams across the commonwealth. Grant applications for 2007 are in process. Requests for funding for 2008 will begin in February 2007 (see shaded box). Information on the Nonpoint Source Implementation Grant program can be found at www.water.ky.gov/publicassistance/funding/nps.

Kentucky DOW will begin 2008 grant funding activities

The Division of Water will begin accepting requests for funding projects that improve water quality in the waters of the commonwealth in February 2007.

Funding priorities will be posted on the Nonpoint Source Web page at <http://www.water.ky.gov/publicassistance/funding/nps/>

In order to be considered for funding, an Initial Interest Form must be received by close of business Feb. 14, 2007. The form can be found at <http://www.water.ky.gov/publicassistance/funding/nps/Initial+Interest+Form.htm>

The Nonpoint Source Section staff will contact every person who submits an Initial Interest Form to discuss their proposal prior to final application.

Final applications must be received by close of business May 18, 2007.

Kentucky CAN do

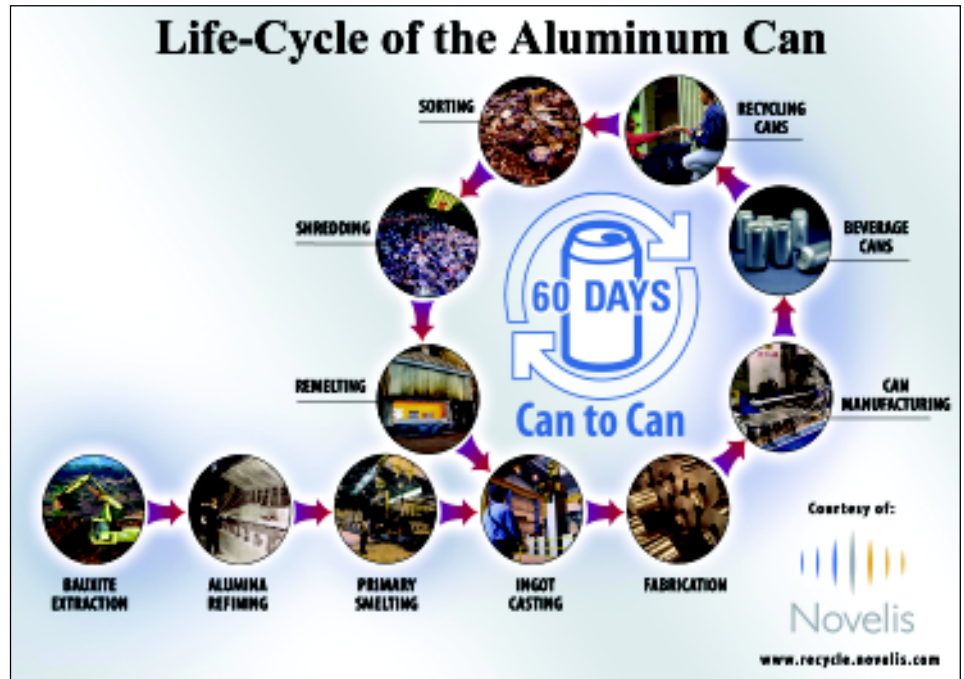
Recycling 'crucial' to state's aluminum industry



Aluminum CAN facts

- The average American drinks at least one beverage in a can per day.
- When a Kentuckian has a beverage in a can, it is likely that the can was made here and, if put in a recycling bin, will be recycled at the Novelis plant in Berea.
- Recycling one can saves enough energy to run a 100-watt bulb for 20 hours, a computer for three hours or a TV for two hours.

Sources: U.S. EPA, Container Recycling Institute.



By Eva Smith-Carroll
Division of Waste Management

Reclaimed aluminum is the star of the recycling industry. Recycled or secondary aluminum is:

- **Infinite.** There is no limit to the number of times aluminum can be recycled.
- **Cheap.** Recycling aluminum takes 5 percent of the energy and, according to industry estimates, 10 percent of the labor and capital costs used to produce primary aluminum from bauxite ore.
- **Good for the environment.** Recycling aluminum avoids the environmental impacts associated with primary production. Recycling a ton of aluminum conserves up to 8 tons of ore, according to the Institute of Scrap Recycling Industries Inc. (ISRI). Recycling also keeps a valuable resource from going to a landfill.
- **Good for the nation.** Recycling reduces the trade deficit and dependence on overseas sources of bauxite and alumina refined from the ore.
- **Good for the economy.** Can recycling has created about 30,000 new jobs at recycling centers, aluminum companies

ABOVE: This graphic shows how an aluminum can starts out from extraction of bauxite to re-entering the manufacturing stream.

LEFT: Bales of crushed aluminum fill an area of the Novelis facility in Berea. Graphic and photo provided by Novelis

and in the transportation support industries, according to the Aluminum Association.

- **On the rise.** Aluminum recycling has become the leading source of aluminum supply in the United States, according to Secat Inc., an aluminum research firm based at the University of Kentucky.

“An increasing amount of the aluminum going into the production of aluminum alloy products for many applications is coming from recycled products,” said Dr. Subodh K. Das, president and chief executive officer of Secat.

Thirty-three percent of the U.S. aluminum supply comes from recovered materials, according to ISRI. In addition to beverage cans, aluminum is recovered from manufacturing processes, recycled automobiles and construction materials.

Continued to Page 15

Floyds Fork Watershed:

Time to get something started

By Angela Kessans and Karen Schaffer
Division of Water

Floyds Fork is one of the few navigable streams in the Salt River Basin. It has long been cherished, not only by citizens who reside there but also by visitors who come to canoe and fish.

The 284-square mile Floyds Fork watershed drains parts of Henry, Oldham, Shelby, Spencer, Jefferson and Bullitt counties. About 42 percent of this watershed is characterized by karst, with sinkholes, springs and caves. Pollutants are transported rapidly between the land surface and ground water in karst areas.

Extensive watershed monitoring has been conducted by the Kentucky Division of Water (DOW) to determine whether these waters meet designated uses—aquatic life support, recreation, fish consumption and water supply—specified by Kentucky's Surface Water Standards.

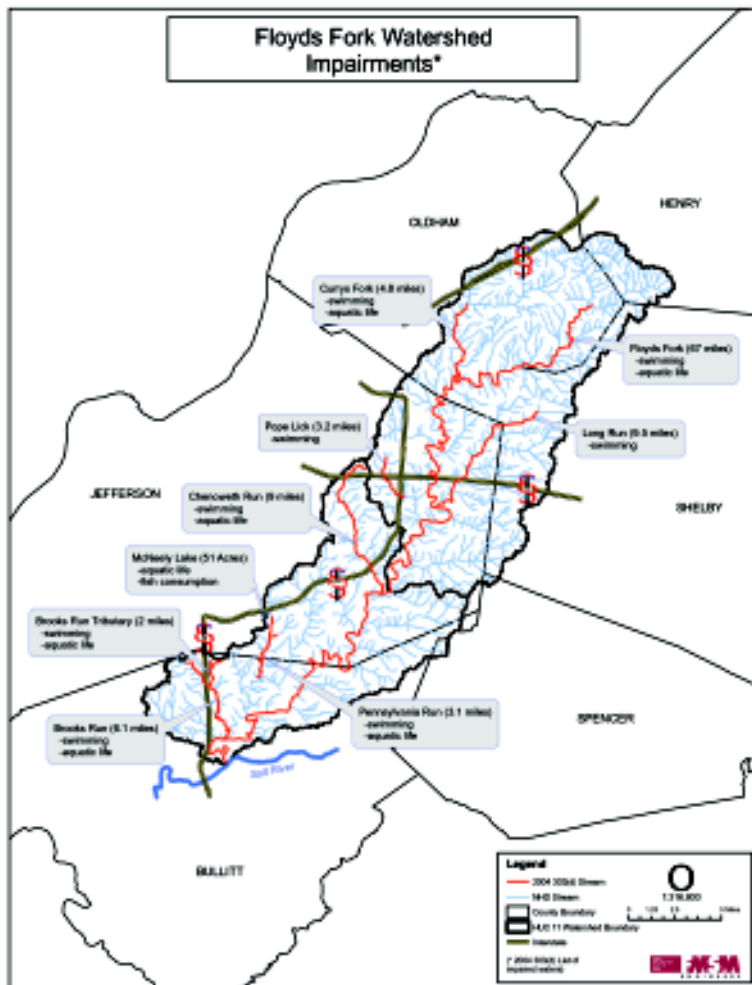
The entire mainstem, several tributaries and McNeely Lake, in Jefferson County, have been identified as impaired because they do not meet all designated uses. Impairments are attributed to pathogens, low dissolved oxygen, nutrients, siltation and habitat alteration. Suspected pollution sources are sewage treatment plants, failing septic systems, and runoff from urban areas, construction sites and agricultural lands. The impairments in McNeely Lake are attributed to nutrients and mercury.

To address these impairments, DOW developed water quality cleanup plans called TMDLs (Total Maximum Daily Load), which limit the amount of pollution a stream can receive from any given source and meet its designated uses. In addition, the division has required improvements in sewage treatment plant discharges. More recently, Future Fund, Metro Parks, 21st Century Parks and other entities have invested significantly in land conservation in this watershed. They are creating a new "ring of parks" around Louisville, including the Floyds Fork watershed, and are bringing national attention to urban conservation efforts.

With the goal of addressing nonpoint sources, the Floyds Fork Environmental Association (FFEA), Kentucky Waterways Alliance and Fuller, Mossbarger, Scott and May Engineers have teamed to develop a watershed based plan for Floyds Fork.

FFEA, a longstanding group of concerned citizens, works hard to protect the streams of Floyds Fork. Teena Halbig, executive director of FFEA, believes the Floyds Fork watershed based plan grant will be "a springboard to enhance future endeavors to help return Floyds Fork Creek to a more pristine condition in all counties. We are looking forward to community meetings with the public."

The team received funds from a federal grant to develop the watershed based plan by early 2010. As this watershed transitions from agriculture and forest toward an urban landscape, the plan will provide a roadmap of specific strategies to reduce point and



Map provided by the Division of Water

nonpoint source pollution and restore the Floyds Fork watershed.

Three committees have been formed to evaluate current policies and plans, develop recommendations to improve water resource protections, evaluate water quality and use those findings to develop a watershed based plan.

Through the leadership and guidance of these committees, the plan will include recommended strategies to improve water quality and have the broad acceptance and momentum necessary to be implemented throughout the watershed. In addition, further funding will be sought to continue implementation after the plan is completed.

A Web site and other forums, such as roundtable workshops, will be used to raise public awareness and encourage involvement in the project. If you are interested in getting involved or wish to learn more about Floyds Fork, contact Judy Petersen, Kentucky Waterways Alliance, at (270) 932-2884 or Karen Schaffer, Fuller, Mossbarger, Scott and May Engineers, at (812) 206-0100.

Mark your calendars for the Floyds Fork Roundtable, which is tentatively scheduled for Feb. 23, 2007, at the University of Louisville, Shelby Campus.



Kentucky CAN do

Continued from Page 13

The issue of aluminum recycling is of particular interest to Kentucky. The state has a high concentration of aluminum facilities—142 with 17,639 employees according to Secat figures—and recycling is good for the industry.

One of the Kentucky facilities is the world's largest dedicated aluminum can recycling plant, operated by Novelis in Berea.

In the commonwealth, "Novelis plays a key role in aluminum sheet production and recycling. Through our joint venture with Logan Aluminum, aluminum can sheet used for the production of beverage cans is made here," said Chris Anderson with Novelis Corp.

"At our Berea, Kentucky facility, Novelis recycles aluminum beverage cans—an important source of metal that is used to make aluminum sheet," he said.

Das said creating a more "recycling friendly world" would result in "massive economic, energy and ecological advantages to communities and to the aluminum industry."

Recycling of the aluminum beverage can is crucial, he said. "Increasing the recycling rate will grow existing jobs and bring high-paying, knowledge-based jobs and modern aluminum plants to Kentucky."

According to the formula used by the Container Recycling Institute, excluding

imported cans, the U.S. aluminum can recycling rate dropped to 45.1 percent in 2004—20 percentage points below the 1992 peak at 65 percent.

If the aluminum recycling rate, specifically of the aluminum beverage can, doesn't pick up there won't be enough aluminum to sustain Kentucky's and the United States' economy, Das said.

"This would amount to huge job losses for society and loss of income in terms of taxes for the government," he said. "Recycling used to be an environmental issue in the 70's, but today, it is more of an economic and societal issue."

Jim Wiseman, who buys cans from throughout the eastern United States for Midwest Metals in Louisville, agrees that recycling is important to about every facet of the economy. He credits can recycling with being the catalyst for the upsurge in recycling around 20 years ago—getting money for cans made the average person realize that there is value in items ordinarily thrown away.

Anderson said, "Novelis believes it is important to educate the consumer about the long-term economic, environmental and social benefits to using and recycling aluminum. That is why Novelis has committed to many national recycling initiatives—to reach the consumer about the overall value of the lifecycle of aluminum."

Aluminum is BIG in Kentucky

Kentucky is home to several aluminum facilities including:

■ Logan Aluminum, Russellville. This Novelis facility produces around one-third of the aluminum sheet for all beverage cans made in the United States and ships out 35,000 truckloads each year.

■ Alcan Primary Metal Products, Sebree, and Century Aluminum, Hawesville. Two of only 14 aluminum smelters in the country.

■ Aleris International, formerly Commonwealth Aluminum, Lewisport and Louisville. One of North America's leading manufacturers of common-alloy aluminum sheet from recycled metal.

■ Hydro Aluminum Metal Products, Henderson. The first "remelt" plant in the country to recycle scrap into primary quality metal using new energy-saving technology.

Aluminum companies are attracted to Kentucky because of Ohio and Mississippi river ports, cheap electricity, central location, a quality workforce and the presence of the auto industry, the industry's fastest-growing customer. Two-thirds of the aluminum in vehicles is from recycled metal.

Sources: Profile of Kentucky's Aluminum Industry, July 2005, edited and compiled by Rich Hall, Kentucky Cabinet for Economic Development; Aleris.com; Autoaluminum.org



Doing the math – it costs to toss

A ton of aluminum cans in the hands of a recycler is valued at \$1,120/ton (\$1,200 less \$80 for processing). According to U.S. Environmental Protection Agency estimates, there were 16,733 tons available in Kentucky in 2004 with a potential worth of more than \$18.7 million. But only 4,630 tons were recycled and the remaining 12,103 tons were trashed. Here are figures on what could be and what is:

+ \$18,740,960 - potential revenue if 16,733 tons of cans are recycled

- \$21,159,068 - lost revenue plus \$28/ton disposal fee when 12,103 tons are trashed

Sources: Emerging Trends in Aluminum Recycling: Reasons and Responses by Dr. Subodh K. Das, SECAT Inc.; Profile of Kentucky's Aluminum Industry, July 2005, compiled and edited by Rich Hall, Kentucky Cabinet for Economic Development; The Economic Importance of Aluminum Primary Processing and Production in Kentucky by Dr. Paul A. Coomes, University of Louisville, and Dr. Kenneth R. Troske, University of Kentucky; Greater Aluminum Use Creates Major Economic And Environmental Benefits, http://www.aleris.com/benefits_aluminum.php, Accessed Nov. 8, 2006; The Aluminum Page, <http://www.rocksandminerals.com/aluminum/aluminum.htm> Accessed Nov. 8, 2006. Life Cycle Studies: Aluminum Cans, by Jennifer Gitlitz, research director for the Container Recycling Institute, World Watch, May/June 2006; Novelis Recycles More Than 35 Aluminum Cans in 2005, June 26, 2006, press release; Top 10 Reasons To Recycle Aluminum, http://www.aluminum.org/ACBHTemplate.cfm?Section=Top_10_Reasons_To_Recycle Accessed Nov. 14, 2006.



LEFT: *Maysville Mayor and Kentucky NBA Chapter President David Cartmell points out structural problems at the old Hayswood Hospital site.*

BELOW: *Herb Petitjean, state brownfield coordinator, asks the insurance panel about policies and coverage for brownfield redevelopment.* Photos by Amanda LeFevre

Brownfield insurance is hot topic at chapter meeting

By Amanda LeFevre
Division of Compliance Assistance

The Kentucky chapter of the National Brownfield Association gathered in September to reiterate the importance of brownfield redevelopment.

Brownfields are abandoned or underutilized industrial or commercial properties where development is hampered due to the real or perceived presence of environmental hazards.

The day's meeting was started off with encouraging words from both Sen. Charlie Borders and Rep. Mitchell B. Denham who stressed the importance of brownfield redevelopment and their continued support of the program.

"In Kentucky, we are making progress," said Denham. "We have a long way to go, but we have had some successes."

On the slate for discussion was environmental insurance as it pertains to brownfield redevelopment in Kentucky. Environmental insurance helps cover some of the unknowns in the redevelopment process.

"Environmental insurance is just like

any other kind of insurance product," said Kevin Matthews, director of Governmental Relations at AIG Environmental. "It takes care of unforeseen events."

Brownfield policies, which generally cover a 10- to 15-year time frame, can insure unexpected cleanup costs as well as the cost of remediating unknown pre-existing contamination.

The problem with brownfield insurance is cost. The minimum premium for many policies can run \$300,000. This is not a cost-effective avenue for properties that cost less than \$1 million to remediate. In Kentucky, this is an issue because few sites are considered large-scale cleanups. Many sites are small, and unexpected costs can bring redevelopment to a halt.

In addition to brownfield insurance, other innovative financing options were brought to the table. One such example was how Wisconsin grants liability protection to developers who clean up

brownfield sites. A fee is charged, but it is less than the cost of a brownfield insurance policy.

The chapter meeting participants used part of the day to visit two brownfield sites in the area—Hayswood Hospital and the former Silgan facility, where evaporated milk was once canned for consumers. Lead was used during the canning process. However, the property has been remediated and is now in productive reuse.

Hayswood Hospital has been in



disrepair for many years and is an eyesore in an area that is experiencing rebirth. Charming houses on one side of the street face a dilapidated hospital on the other side. The old hospital building is filled with asbestos and mold and is a hangout for kids.

State Brownfield Coordinator Herb Petitjean stressed that Kentucky will continue to search for viable ways to provide liability protections as it can be a useful tool in encouraging the redevelopment of these types of properties.

For more information on brownfield insurance and brownfield redevelopment, contact the Division of Compliance Assistance at (800) 926-8111.



The weather could not have been better in September for the Kentucky State Nature Preserves Commission's (KSNPC) first attempt at hosting a large-scale outdoor event. The Short's Goldenrod Festival, a partnership between KSNPC and Blue Licks Battlefield State Resort Park, was not just about one of Kentucky's rarest plants. It was also an invitation to get outside and celebrate the natural beauty around Blue Licks, the uniqueness of the land and the people living in the surrounding communities.

The park's nature preserve was dedicated in 1981, and the commission wanted to look back at 25 years of



KSNPC hosts first Short's Goldenrod Festival

By Alice Mandt
Kentucky State Nature Preserves Commission

successful restoration efforts and to recognize the people who had helped during those years--past and present park employees, neighbors who protected the Short's goldenrod growing on their lands and all the volunteers who assisted with habitat restoration at Blue Licks.

There was no official head count, but there was a steady flow of visitors to the festival all day.

The morning began with 54 people participating in a 5K run and one-mile walk. Tim Brett, of Georgetown, finished first with a time of 18:09. He not only finished the race first, but he ran the



course a second time. A number of walkers crossed the finish line just as the farmer's market opened for business. Tables filled with mums, pumpkins, salsa and buffalo burgers were scattered among displays of fossil art, chair caning and wool-spinning demonstrations.

Throughout the day, workshops gave festival participants the opportunity to find out what local groups were doing to address environmental issues.



Kentucky author George Ella Lyon provided storytelling and read from her book, *Who Came Down that Road?*, which highlights the bison trace at Blue Licks.

Nature walks provided hikers with views of the festival's namesake and other late-blooming plants, while canoe rides offered glimpses of animal species that make the Licking River their home.

The day came to a close with exceptional music provided by The Reel World String Band.

Park Manager Stefanie Gaither as well as several festival attendees have already asked about the event next year. It looks like there may be a second annual Short's Goldenrod Festival, so watch the KSNPC's Web site at <http://www.naturepreserves.ky.gov/> for details.

A special thanks to all the participants, workshop presenters, farmer's market vendors, guides and the Blue Licks Battlefield State Resort Park and park staff who worked hard to make this festival a success.



TOP: *The festival's namesake, Short's goldenrod (*Solidago shortii*).*

UPPER RIGHT: *River Valley Agritourism Alliance members staff their craft booth at the farmer's market.*

LEFT: *Chair caning was demonstrated by Lana Bare from Elm Spring Boer Goat Farm.*

Photos provided by the Kentucky State Nature Preserves Commission



State forest provides outdoor classroom

Knobs State Forest is Kentucky's first Forest Legacy Project

By **Gwen Holt**
Division of Forestry

Kentucky is blessed with special outdoor classrooms—our state-owned forests. A new “classroom” was added to the state forest program this summer.

Knobs State Forest, in Bullitt County, covers more than 1,500 acres. The Division of Forestry purchased the first 1,110 acres in July from Dr. Greg Kuhns and his sister, Ann van der Steur, for more than \$3.3 million. An additional 429 acres were purchased in December from the estate of W. Stephen Aaron for \$1.14 million. The majority of the funding was made available through the U.S. Forest Service’s Forest Legacy Program and the Kentucky Heritage Land Conservation Fund. The Knobs State Forest is Kentucky’s first Forest Legacy Project.

The Forest Legacy Program is designed to protect environmentally important forest areas threatened by conversion to nonforest uses. The Forest Legacy Program is a voluntary program that supports state and federal efforts to protect environmentally important areas through the direct acquisition or the purchase of conservation easements from willing sellers of privately owned forestland.

The acquisition of the new forest was celebrated during a ceremony on Aug. 24.

U.S. Sen. Mitch McConnell, who helped secure funding for the acquisition through the federal Forest Legacy Project and has demonstrated a commitment to habitat and nature preservation throughout his public service, was the featured speaker.

“Conserving the natural resources of Kentucky has been one of my priorities as a senator,” McConnell said. “I am pleased to be here today for the dedication of the Knobs State Forest and know that it will be enjoyed by generations of Kentuckians to come.”

LaJuana S. Wilcher, the former secretary of the Environmental and Public Protection Cabinet (EPPC), said Knobs

State Forest will be another jewel adding to Kentucky’s “common wealth” of natural areas.

“This is what makes Kentucky special,” Wilcher said. “The beauty of a forest – its sights and sounds and sheer wildness – cannot be equaled or duplicated by any TV show or video game or computer special effects ever devised.”

The primary mission of the State Forest Program is education and demonstration of sound forest management practices in Kentucky. The property will be managed as a working forest, demon-

can only reach their potential with a public knowledgeable and supportive of forest management. The state forests are their classroom.

Leah MacSwords, the Kentucky state forester and director of the EPPC’s Division of Forestry, said the Knobs State Forest enjoys a prime location.

“We are pleased to have a new state forest so close to a large metropolitan area and hope that visitors enjoy all the gifts that this forest provides,” MacSwords said.

The six state-owned forests are open to the public for hiking, fishing, wildlife

“Conserving the natural resources of Kentucky has been one of my priorities as a senator. I am pleased to be here today for the dedication of the Knobs State Forest and know that it will be enjoyed by generations of Kentuckians to come.”

U.S. Senator Mitch McConnell



strating sustainable forest management practices that preserve ecosystem integrity.

These forests teach the citizens of Kentucky the benefits of sound forest management principles that include the right and sustainable way to plant, thin and harvest trees.

A state forest is the only place in Kentucky that the public is and will always be welcome to learn about proper forest management and witness a sustainable working forest. The forests of Kentucky

viewing and limited hunting.

For information about the Forest Legacy Program visit <http://www.fs.fed.us/spf/coop/programs/loa/flp.shtml>. For more information about the state forest program visit the division’s Web site at www.forestry.ky.gov. 

U.S. Senator Mitch McConnell spoke during the Knobs State Forest dedication ceremony. Division of Forestry photo

Awards

Conservation district recognized for beneficial county programs

By **Connie Gray**
Division of Conservation

The Todd County Conservation District was selected this year as the southeast regional winner for the Collaboration Conservation Award. The award was presented during the National Association of Conservation Districts meeting in Asheville, N.C.

The Todd County Conservation District was organized in 1946 to promote and encourage voluntary wise use, management and general conservation of the natural resources of the county. The board of supervisors works with the Todd County Fiscal Court, Todd County Board of Education, local civic clubs, business firms, local radio and newspaper outlets, USDA agencies, state divisions of Conservation, Forestry, and Fish and Wildlife agencies and the residents of Todd County.

The district:

- Concentrates on water quality and controlling erosion on sloping cropland. Assistance was provided to 600 cooperators and municipalities with planning and implementation of conservation practices; 244 acres were enrolled in the Wetland Reserve Program; nine applications were approved for EQIP funding; and 26 applications were approved for state cost-share conservation practices.

- Helps landowners in Spa Lake address atrazine problems in the local water supply—891 acres were treated.

- Participates in the “Trash to Cash” program—more than 750 appliances were picked up and disposed of properly this year.

- Assists landowners in the establishment of agricultural districts for the protection and enhancement of agricultural land.

- Administers a county model program, which provides cost-share



(Left to right) Todd County Conservation District staff Nick Christian, Austin White, Misty Barbagallo and Donnie Owen proudly display the plaque honoring their district office.

Division of Conservation photo

incentives and educational training to more than 60 producers on improving forage quality and installation of tile drainage systems.

- Assists and promotes the “Rinse and Return” program for the proper disposal and recycling of farm chemical containers.

- Assists landowners in establishment of native warm-season grasses.

- Offers a quarterly newsletter to landowners in the county; publishes articles in the local newspaper promoting programs, sign-up dates, current events and educational information; and updates a public display that promotes programs and accomplishments of the district.

- Provides teachers and students a local conservation learning library filled with valuable conservation resources.

- Supports a high school team in the Kentucky Envirothon competition.

- Provides financial assistance to

4-H and other youth groups in the community in attending educational camps.

- Hosts a middle school Agriculture Awareness Day on a local farm, where students learn the importance of protecting and conserving natural resources. The district also participates in the community’s Farm Safety Day.

- Sponsors writing and art contests with The Courier-Journal, KACD and Kentucky Farm Bureau. Todd County had 100 percent participation in three local schools last year.

- Hosts an annual farm tour that highlights on-farm drainage, forage practices, animal waste storage facilities, watering facilities, ponds, cattle handling facilities and grade stabilization structures.

Todd County board members are Phil Templeman, Kelvin Greenfield, Craig Berry, Jeff Penick, John Coots, Kent Smith and Michael Wiles.



SEMICON wins air quality award

By Rose Marie Wilmoth
Division of Compliance Assistance

It takes a lot of brainstorming and determination to make a company environmentally friendly. That dedication to environmental stewardship has made SEMICON Associates, of Lexington, the clear choice for this year's Small Business Air Quality Stewardship Award.

Founded in 1953, SEMICON's primary product is dispenser cathodes, which emit electrons and serve as a power source for high-frequency microwave power tubes. This product has applications in missiles, satellites, medical devices, communications and energy. SEMICON won the award due to its significant

reduction in the use of perchloroethylene, a hazardous air pollutant. ment for our employees and safe air for our community, while seeking a suitable cutting lubricant replacement without jeopardizing product quality or added cost," said Jeff Waldal, president of SEMICON Associates. "We proved this could be accomplished, and SEMICON Associates is honored to receive the Small Business Air Quality Stewardship Award," he said.

The company is now using a replacement cutting lubricant that doesn't evaporate like perchloroethylene and has a longer life. Operational benefits include decreased need for air quality regulation

due to the reduction in emissions, disconnection of vents in production areas and a decline in energy bills due to the decrease in air loss through vents. These benefits allow SEMICON to maintain its competitive advantage and significantly reduce its impact on air quality. This was a voluntary decision by SEMICON's management. No federal or state regulations or laws require a facility to make these changes.

SEMICON, like all previous award winners, is using technologies, operating practices or educational leadership that may be imitated by other businesses and has exceeded the minimum requirements to comply with air quality regulations.

SEMICON, the 21st recipient of the award, was chosen by the Kentucky Small Business Air Quality Compliance Advisory Panel. The first award was presented in 1998. SEMICON was nominated by Sree Kesaraju, Min Wang and Mike Toncray from the Division for Air Quality.

Three honored posthumously for service

By Gwen Holt
Division of Forestry

Tragedy struck on March 16, 1965, in Fairview Hollow near Harlan. Three firefighters for the Kentucky Division of Forestry became trapped while battling a forest fire. The winds shifted rapidly causing the brave men to be overtaken by flames. Billy Lee Brock and James "Buck" Shepherd lost their lives that day, and Kenneth McKnight died the following day.

When an organization called Supporting Heroes learned that the three were never honored as firefighters, and that one was lying in an unmarked grave, it acted quickly to schedule a ceremony to honor these fallen heroes and to provide a headstone for Shepherd's grave. The ceremony took place in October in the Harlan cemetery where all three men are buried. Family members, Division of Forestry personnel, local firefighters and others gathered to pay proper respects to the men who lost their lives.

Supporting Heroes is based in Louisville and was established Sept. 11, 2004. Its mission is to demonstrate to the men and women of police, fire and EMS services that the citizens they serve care about and appreciate what they do. The organization provides financial support to the loved ones of those who make the supreme sacrifice.



Scott Roberts and Mike Effgen, of SEMICON, accept the award from Jean Watts, Small Business Air Quality Compliance Advisory Panel, during the Governor's Conference on the Environment Leadership Awards Dinner. Photo by Creative Services

reduction in the use of perchloroethylene, a hazardous air pollutant.


SEMICON has been using perchloroethylene as a lubricant for machining metal parts. Usage averages around 50 tons per year. The product requires an extremely high surface smoothness. SEMICON spent four years researching an equivalent cutting lubricant alternative due to emissions associated with perchloroethylene.

"Our intent during these challenging years was to assure a safe work environ-

EQC seeks Earth Day nominations

The Environmental Quality Commission (EQC) is seeking nominations for its 2007 Earth Day award ceremony. Persons/entities that display an outstanding commitment to Kentucky's environment are eligible.

To nominate, please submit a one-page summary of the candidate, along with your name, phone number and e-mail address to EQC, 14 Reilly Rd., Frankfort, KY 40601 or submit your nomination electronically by e-mailing Johnna.HcHugh@ky.gov

The deadline for nomination receipt is March 9, 2007. The EQC awards ceremony will be held on April 20 at a location to be determined. 



This publication is recyclable. Please share it with a friend.



Environmental and Public Protection Cabinet

Office of Communications and Public Outreach
5th Floor, Capital Plaza Tower
Frankfort, KY 40601

Address Service Requested

EPPC reference document available

The Environmental and Public Protection Cabinet (EPPC) publishes many reports throughout the year. But have you ever wondered just what reports are available and where can you find them?

The Environmental Quality Commission (EQC) is here to help.

The EQC has compiled the most recent reports from the Department for Environmental Protection, the Department for Natural Resources and the independent commissions of the EPPC. Included in this reference document is the introduction, or executive summary, from the reports as well as contact information for obtaining a copy of the report.

If you would like to receive information about this reference document, contact the EQC by e-mail at EQC@ky.gov or by phone (502-564-2150).

**Presorted Standard
U.S. Postage
PAID
Permit #1
Lexington, KY**