



Land Air & Water

Kentucky Environmental and Public Protection Cabinet

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Land Air & Water

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DCA offers one-stop location for environmental compliance assistance

For the past two years, the Kentucky Division of Compliance Assistance (DCA) has been able to assist more than 1,000 entities dealing with waste and water compliance issues. This assistance effort resulted in facilities being able to more easily navigate the permitting process, improve their environmental performance and resolve outstanding regulatory issues.

In July, DCA expanded its services to become a "one-stop" service provider for air, water and waste assistance for all regulated entities within Kentucky. With the expansion, DCA will continue to remain focused on small entities that often do not have the financial or manpower resources necessary to understand and comply with their environmental obligations.

As part of the expansion, DCA has entered into an innovative partnership with the University of Kentucky that will utilize \$2 million in settlement monies to conduct compliance assistance projects. These projects will provide regulated entities with training, research, guidance documents and other resources necessary to better assist them in meeting their environmental obligations.

"These funds, in combination with the university's diverse skill set, create a great opportunity for innovation surrounding environmental compliance assistance in Kentucky," said DCA Director Aaron Keatley, of the expansion.

DCA's expanded services include:

- Implementation of the Small Business Environmental Assistance Program (SBEAP).
- Facilitation and ombudsman services.
- Operation of the Small Business Compliance Advisory Panel and annual small business awards.
- On-site assessments.
- Permit application assistance.
- Operation of a toll-free hotline.
- Regulatory updates and interpretation.
- Inventory of compliance assistance resources and tool development.
- Assistance with recordkeeping and reporting obligations.

For more information on DCA, visit www.dca.ky.gov or call 800-926-8111. For compliance assistance requests, contact Kenya Stump at kenya.stump@ky.gov.

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Printed on recycled paper with state and federal funds

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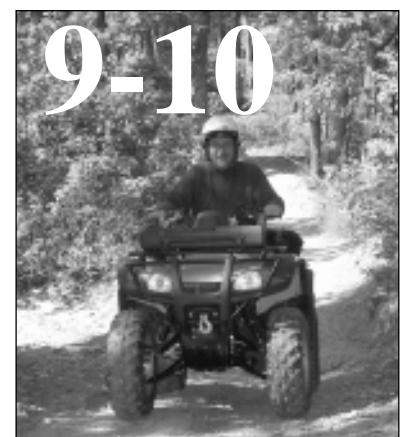
A treeline shows off fall's canvas of brilliant colors.

Photographed by Cindy Schafer on the family farm in Owen County.

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Air & Water**

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The mystique of the commonwealth's unexplored wilderness remains in the unspoiled natural beauty of Kentucky's wild rivers, thanks to the foresight and wisdom of the General Assembly when it passed the state's Wild Rivers Act in 1972.

Wild rivers protect beauty, habitat and diversity

By Allison Fleck
Division of Water

Portions of nine Kentucky rivers of exceptional quality and aesthetic character are protected from development by the wild rivers system. Each wild river is actually a linear corridor encompassing all visible land on each side of the river up to a distance of 2,000 feet. The nine wild river corridors comprise a total of 114 river miles and 26,382 acres of land.

The wild rivers system recognizes those rivers that retain many of their natural attributes and protects them from unwise use and development. These rivers' rights of way are protected from within 2,000 feet of the middle of the watercourses. Some activities strictly prohibited within a wild river corridor are surface mining, clear cutting of timber and construction of dams or other in-stream disturbances. Developments that might impair the rivers' water quality or natural conditions are regulated through a permit system.

The nine unspoiled rivers are rich in recreational opportunities, yet they are also refuges for wild plants and animals. The wild rivers provide living examples of natural ecological processes for nature study and scientific research. Impressions of primitive life can be found in their rock strata, while rock shelters and caves preserve evidence of prehistoric cultures.

One of the best ways to enjoy Kentucky's wild rivers is by kayak or canoe. Some rivers are perfect for the inexperienced canoeist. Others, like the Red River, can provide whitewater challenges to even the most experienced paddler.

The Red River corridor features some of the most spectacular



TOP LEFT: *Red River rocky rapids.* Photo from MountainProject.com
ABOVE: *Kayaking on the Red River.* Photo from VisitUSA.com

canoeing water in the eastern United States. The 9.1-mile segment from the KY 746 bridge to the mouth of Swift Camp Creek was designated a Kentucky Wild River in 1973. The 19.4-mile segment from KY 746 to the ford below Schoolhouse Branch was designated a National Wild and Scenic River in 1993. The river tumbles over huge boulders in the narrow, twisting Red River Gorge lined by towering cliffs with overhanging rock ledges, mature hemlock trees and thickets of rhododendron.



Other Wild River Corridors

Bad Branch—14 miles from the headwaters on Pine Mountain to the KY 92 bridge. The stretch includes a spectacular 60-foot waterfall (Wayne and McCreary counties).

Cumberland River—16.1 miles from Summer Shoals to the backwater of Lake Cumberland (McCreary and Whitley counties).

Rockcastle River—15.9 miles of whitewater from the Old KY 80 bridge to the backwaters of Lake Cumberland (Pulaski and Laurel counties).

Green River—26 miles of classic flatwater run with camping allowed on islands or riverside sites, abundant wildlife and rivers bubbling up from underground caverns (Edmonson County).

Big South Fork of the Cumberland River—10.2 miles of whitewater from the Tennessee border to Blue Heron (Whitley County).

Rock Creek—18 miles of good rainbow trout stream from the Tennessee border to the White Oak Junction bridge (McCreary County).

Martins Fork of the Cumberland River—3.9 miles of shallow, non-navigable crystal clear waters in a grove of virgin hemlock trees (Harlan County).

Little South Fork of the Cumberland River—10.4 miles from the KY 92 bridge in the backwaters of Lake Cumberland (Wayne and McCreary counties).

Kentucky Government Recycles!



Goal is to increase paper recycling

By Eva Smith-Carroll
Division of Waste Management

State workers are being asked to help make our state No. 1 in government employee paper recycling.

The Environmental and Public Protection Cabinet (EPPC) has launched an initiative aimed at boosting paper recycling – Kentucky Government Recycles! Campaign 2007. EPPC Secretary Teresa J. Hill made the announcement during an Earth Week event in Frankfort at the new government recycling warehouse that opened for operation in May.

Last year Kentucky state workers recycled on average about 330 pounds of paper per employee. According to an informal survey, the nearest competition is Minnesota with an employee recycling rate of 340 pounds.

“We are asking all state employees to join in and support the 2007 paper recycling initiative. We need the assistance of every person, every office and every cabinet to make this happen,” said Secretary Hill. “The Government Recycling Section employees in the Division of Waste Management are the guys who make sure that most of the waste paper from government offices goes in the recycling bin and not the trash. Every weekday morning, they get in big box trucks and start making rounds to 100 office locations in Frankfort. They all take their jobs very seriously and deserve a lot of credit for the success of the program,” she said.

The paper recycling program began in December 1980 with one worker and a Chevy LUV truck. It has grown to become a self-sustaining program with six full-time employees who collected more than 3.7 million pounds of white ledger paper, newspaper, mixed paper and corrugated boxes in 2006. The program has already recycled more than 840,000 pounds of paper from state offices the first quarter of 2007.

Since the program is self-funded by proceeds from paper sales, free recycling services—including confidential document destruction—are available to state agencies.

As part of the paper recycling initiative, recycling coordinators have been appointed in state agencies to help educate their



TOP LEFT: Brian Bentley, Government Recycling Section supervisor, talks with Lindsey Hix, recycling coordinator for the Office of Homeland Security, during a warehouse tour.

Photo by Eva Smith-Carroll

ABOVE: The new recycling center at 115 Northgate Drive in Frankfort. Photo by Cindy Schafer

TOP RIGHT: EPPC Secretary Teresa J. Hill and employees in the Division of Waste Management’s Government Recycling Section. (from left to right) Tim Bryant, Glenn Chadwell, Jason Craig, Steven Fox, Secretary Hill and Brian Bentley. Photo by Fred Kirchoff

Continued on Page 3

Record penalties issued in Rockwell settlement

By Mark York
Office of Communications and Public Outreach



Governor Ernie Fletcher announces the civil penalty settlement with Rockwell International. Seated (left to right) are Lloyd Cress, EPPC deputy secretary; Smokey Smotherman, chairman, North Logan Water District; and Dr. Lindell Ormsbee, director, Kentucky Water Resources Research Institute. Standing (left) is Bill Stokes, chairman, East Water District.

Photo by Creative Services

A long-standing pollution case from Logan County has been settled with record penalties issued by the Environmental and Public Protection Cabinet (EPPC).

Governor Ernie Fletcher announced details of a \$10 million civil penalty settlement with Rockwell International Corp. in a pollution case that dates back to the 1980s.

Until the mid-1970s, the Rockwell plant in Russellville used hydraulic fluid containing cancer-causing polychlorinated biphenyls (PCBs). Some of the fluid entered groundwater, streams and rivers beneath and near the facility. Because PCBs persist in the environment, remediating their release is a lengthy process.

The \$10 million settlement includes a record payment to Kentucky of \$2 million in civil penalties and a payment of \$2.5 million in natural resource damages, also a record. The latter payment is in compensation for injury, destruction or loss of natural resources held in trust by the state.

The former Natural Resources and Environmental Protection Cabinet—predecessor of the EPPC—obtained a judgment against Rockwell in Franklin Circuit Court in 1997 that found the company in violation of state environmental laws and regulations. Rockwell had begun cleanup and remediation activities

in the mid-1980s, prior to closing the plant.

A decision on civil penalties was deferred until substantial cleanup and remediation had been accomplished. Rockwell has submitted regular monitoring results and reports to the cabinet.

“Penalties are an important deterrent; however, I am especially excited about the supplemental environmental projects (SEPs) that Rockwell has agreed to perform that will directly benefit this community and the entire state,” Governor Fletcher said. “In addition to the penalties and natural resource damages, the settlement contains \$3.5 million in local water and sewer projects to benefit citizens in the area and \$2 million to improve environmental compliance across Kentucky.”

The SEPs include:

- \$1,625,000 to the city of Russellville to fund a sewer reconstruction project and partially fund a water project.
- \$906,250 to the city of Lewisburg for a sewer reconstruction project and a water distribution system project.
- \$531,250 to the East Logan Water District for system improvements.
- \$437,500 to North Logan Water District for system improvements.

Rockwell also will fund a \$2 million statewide environmental compliance

assistance program to be conducted by the University of Kentucky (UK) under EPPC oversight. This program will provide assistance to small businesses, cities and other organizations in complying with air, water and waste requirements.

“Small businesses across the state will see the value in the collaboration between the University of Kentucky and the Environmental and Public Protection Cabinet,” Governor Fletcher said. “Many small businesses struggle enough with challenges such as capital, research, marketing and customer service. The partnership with UK will provide assistance to small businesses as they make efforts to comply with air, waste and water requirements.”



Kentucky Government Recycles!

Continued from Page 2

co-workers on the benefits of paper recycling.

“Governor Ernie Fletcher and his administration have wholeheartedly supported and encouraged this program. I have sent all the cabinet secretaries a letter and talked with them about our 2007 initiative. We want to recycle all state government paper and eliminate outside contracts with private document destruction companies,” said Secretary Hill. “Tax dollars can be saved by using EPPC’s free destruction services. We are already making progress. Some state agencies, including the Department of Corrections, the Justice Cabinet, Cabinet for Health and Family Services, Personnel Cabinet and the Finance Cabinet have cancelled outside vendor contracts and purchased their own document destruction consoles that will be serviced by EPPC staff for free,” she continued.

For more information, contact Brian Bentley, the Government Recycling Section supervisor, by e-mail Brian.Bentley@ky.gov (EPPC DEP DWM), or by phone, 502-564-8070. Information is online at <http://www.waste.ky.gov/branches/rla/Paper+Recycling.htm>.



Inspections pivotal to dam safety

By Allison Fleck
Division of Water

The Wolf Creek Dam repair project by the U.S. Corps of Engineers at Lake Cumberland has brought the issue of dam maintenance and safety into full focus. The \$309 million rehabilitation project on the 4,000-foot, high-hazard earthen and concrete structure is expected to take seven years.

“When most people think about dams, they picture Wolf Creek or Hoover Dam,” said Division of Water dam safety inspector Marilyn Thomas as she climbed a steeply sloping grass-covered hill. “It doesn’t have to be huge to be a dam, or to be a potentially dangerous dam. Even a



TOP and LOWER RIGHT: Dam safety inspector Marilyn Thomas checks the downstream embankment of Pulliam Dam for slumps and slides that could be symptomatic of seepage. **ABOVE LEFT:** Thomas checks for debris and other obstructions on the trash rack covering the principal spillway on Pulliam Dam. **CENTER:** Thomas evaluates the condition of the drawdown valve at Pulliam Dam. Photos by Allison Fleck

small dam can be considered high hazard. It all depends on how much development has occurred downstream.”

Thomas reached the summit and looked out on a small lake surrounded by new homes. At the far end lay Ducker’s Golf Course. Thomas was standing on top of Pulliam Dam in Franklin County. The earthen dam is 285 feet long, 20 feet wide across the top, 32 feet high and is one of nearly 1,000 state-regulated dams in Kentucky. It is classified as low-hazard, requiring inspection every five years. Moderate-hazard dams are inspected every two years, and high-hazard dams are inspected on an “as needed” basis.

Owners of dams have large obligations to properly maintain and operate

their dams to prevent hazardous conditions that may affect downstream properties and residents. Dam failures can subject owners to liability claims or even criminal charges.

Walking down to the water’s edge, Thomas explained some of the guidelines for proper maintenance and inspection of dams in Kentucky.

“Most dam failures are caused by improper design, construction and maintenance,” she said. “Fortunately the permitting process provides us with detailed information about how the new ones were built. For older dams, we have to depend almost completely on physical and visual clues.”

Thomas began her inspection on the

upstream side of the impoundment to make sure it is well-maintained.

“It has grass cover and has been mowed and no trees are growing,” she noted. “Trees are not good for dams because their roots reach down for water, creating leaks. Mowing also discourages burrowing animals by eliminating bushy groundcover. The rip-rap looks secure and will help stop erosion and will also deter burrowing. Muskrats especially are a dam’s enemy. They can tunnel all the way through a dam.”

Thomas then walked across a grid-covered principal spillway checking for debris and other obstructions. She

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least 50 percent and carbon monoxide emissions by at least 30 percent. The Montgomery County School District is also burning a biodiesel blend in its fleet and has implemented an idling reduction strategy. Air is cleaner for drivers and children aboard the buses, and the community benefits from reduced air pollution.

"I hope that this program will help our students learn the importance of stewardship of the environment," said Montgomery County School Superintendent Daniel Freeman. "I am glad that we are able to do our part in making our community a

Cleaner and greener

Montgomery and Bourbon county school districts awarded funds for clean school buses

By Elizabeth Robb
Division for Air Quality

Two more Kentucky school districts will soon be making strides in lowering emissions from their school bus fleets. On May 24, 2007, federal, state and local officials celebrated the receipt of federal funding that will enable the Montgomery and Bourbon county school districts to reduce pollution from their diesel buses.

Montgomery County School District Transportation Director Karen Gullet took the lead in applying for funds to implement bus retrofits and partnered with the neighboring Bourbon County School District to help secure funds for both school bus fleets.

The school districts, working with the Kentucky Division for Air Quality, won a \$171,000 grant for its project from the U.S. Environmental Protection Agency (EPA). Presenting the funding were Carol Kemker, deputy director of EPA Region 4 Division of Air, Pesticides and Toxics Management, and Lloyd Cress, Kentucky Environmental and Public Protection Cabinet (EPPC) deputy secretary.

The EPA is encouraging school districts across the nation to reduce pollution from school buses, which are the

safest way to transport children to school. It launched the *Clean School Bus USA* program in 2003 with the goal of upgrading the nation's school bus fleet to low-emission buses by 2010 so that buses also will be the cleanest possible transportation for school children.

Clean School Bus USA is a program of the Southeast Diesel Collaborative, a partnership between federal, state and local government, the private sector and other stakeholders in EPA's southeastern region. The collaborative seeks to improve air quality by encouraging the use of clean, renewable energy and reducing diesel emissions from existing engines.

In the next 12 months, Montgomery and Bourbon county schools will retrofit at least 12 buses with diesel particulate filters and 39 buses with diesel oxidation catalysts.

Diesel particulate filters will reduce sooty emissions by 75 percent to 85 percent and hydrocarbon and carbon monoxide pollution by at least 60 percent. Diesel oxidation catalysts will reduce soot by at least 30 percent, hydrocarbons by at



better place to live and work."

Deputy Secretary Cress said the district is to be commended for all its clean-bus efforts.

"Retrofitting bus engines and reducing unnecessary idling will benefit air quality and children's health," Cress said.

For information on clean school buses, go to <http://www.epa.gov/cleanschoolbus/>.



TOP LEFT: *Montgomery County school bus drivers celebrate the funding along with EPPC's Lloyd Cress and EPA Region 4's Carol Kemker.*

ABOVE: *Shanda Brewer, school health director for the Montgomery County School District, speaks about the children's health benefits of the Clean School Bus program.*

Photos by Elizabeth Robb

State, communities reach agreement on CSOs

By Mark York

Office of Communications and Public Outreach

The history of Kentucky and the development of her cities and towns can be traced to a dependence upon fresh, safe drinking water. It should come as no surprise that the commonwealth is the only state with a border determined in three directions by rivers. The eastern border is the Big Sandy River and the Tug Fork; the northern border is the Ohio and the western border is the Mississippi.

But the history of development also reveals the state has not protected these important drinking water supplies from pollution caused by the very sewer systems designed to manage the wastewater we produce. That will change as the Environmental and Public Protection Cabinet (EPPC) and 15 communities have agreed to address the problem of combined sewer overflows (CSOs).

Combined sewer systems collect rainwater runoff, domestic sewage and industrial wastewater in the same pipe. During periods of heavy rainfall, the volume in a combined sewer system may exceed capacity, directly discharging untreated wastewater into creeks, streams and rivers, creating CSOs.

The 15 communities—from Paducah to Ashland—are now required to address CSOs under consent decrees filed in Franklin Circuit Court by the cabinet. The



EPPC has previously filed consent decrees for Louisville and northern Kentucky.

“CSOs have caused significant damage to Kentucky’s most valuable resource, caused property damage and threatened the health of our communities,” said Teresa J. Hill, secretary of the EPPC. “This action marks a truly monumental step to significantly improve water quality in the state.”

Under the settlements, 94 CSOs will be addressed by the communities, along with 77 sanitary sewer overflows, which occur when rainwater or groundwater gets

into sewers designed to carry only wastewater.

Under the consent decrees, the communities will be required to implement nine minimum controls (NMCs) contained in a policy adopted by the U.S. Environmental Protection Agency. The NMCs are minimum, short-term, technology-based controls used to address CSO problems without extensive engineering studies or significant construction costs. They precede the implementation of long-term control measures.

The communities also are to develop long-term control plans that include public participation, cost/performance considerations, operational plans and an implementation schedule for CSO controls that will bring the cities into compliance with the federal Clean Water Act.

More than 246,000 Kentuckians live in the 15 communities affected by the sewer overflows.



TOP: Jeff Perry, with the city of Frankfort Sewer Department, checks a CSO diversion.

FAR LEFT: This combined sewer outfall discharges combined wastewater (stormwater and untreated sanitary wastewater) into the Kentucky River during significant rainfall.

LEFT: The CSO diversion (inside the manhole) has a flow-metering device (blue box) that checks the quantity of untreated wastewater being released into streams.

Photos by Cindy Schafer

The CSOs to be addressed under the consent decrees are located in the following communities:

- Ashland (8)
- Catlettsburg (5)
- Frankfort (16)
- Harlan (1)
- Henderson (11)
- Loyall (8)
- Maysville (10)
- Morganfield (2)
- Owensboro (8)
- Paducah (11)
- Pikeville (3)
- Pineville (3)
- Prestonsburg (1)
- Vanceburg (3)
- Worthington (3)



Task force opens dialogue with increasing funds for land acquisition

By Don Dott

Kentucky State Nature Preserves Commission

In Kentucky, there is an urgency to increase our level of land conservation. To date, some very critical conservation work has been achieved, yet much more is needed. When compared to the seven surrounding states, Kentucky is last in total acreage of land conserved for natural values. This translates to about 1 percent of Kentucky's land mass, or 255,823 acres in state ownership. The amount of federally owned lands in Kentucky, including military reservations, is about average for the seven surrounding states—1,706,562 acres, or about 6.7 percent.

In 2006, the General Assembly enacted House Concurrent Resolution (HCR) 120, creating the Land Conservation and Stewardship Task Force. Co-chaired by Sen. Charlie Borders and Rep. Robin Webb, its directive was to assess the need for land conservation in Kentucky and to investigate ways to finance and expand it.

The task force members met for the first time in January 2007. The informational session was a chance for representatives from existing state conservation programs to describe their accomplishments, needs and goals.

Dr. William H. Martin, a member of the task force, recounted the work of the

Heritage Land Conservation Fund (HLCF), which is the primary source of state funding for the purchase of natural areas. In its first twelve years, HLCF funded the acquisition and permanent protection of 28,937 acres. While this is a substantial accomplishment, considering the fact that Kentucky is a state of 25 million acres, the need for increasing the scale of conservation becomes obvious.

During the second task force meeting, North Carolina's Assistant Secretary for Natural Resources Richard Rogers reported on his state's challenging goal of protecting an additional 1 million acres of open space and farmland by the end of 2009. North Carolina is escalating land conservation to get ahead of a projected 50 percent population increase by the year 2030.

Dr. Jim Farr, of the Florida Division of State Lands, discussed his state's program for land acquisition that is based on \$300 million per year over a 10-year period. Farr also pointed out that Florida's funding has exceeded that of the federal government for land acquisition in all 50 states since 1990. Approximately 25 percent of Florida is managed for conservation or related purposes.

James Aldrich, director of the

Kentucky chapter of The Nature Conservancy (TNC) rounded out the discussion of TNC's work in the state, guided by its ecosystem-based approach and efforts to access more federal funds.

Lynn Garrison, Kentucky Department of Fish and Wildlife Resources, provided a summary of the varied conservation programs in use across the country. Garrison also focused on the variety of funding that has been employed, the most common of which is bonds. Other diverse sources include lottery proceeds, real property transfer fees, recording fees, nature license plates, cigarette taxes, oil/gas/mineral taxes, gasoline taxes, appropriations, environmental fines and state sales taxes, among others.

The task force had its third and final meeting on June 6. Donna Neary, executive director of the Kentucky Heritage Council, spoke of how culturally important sites like Native American archeological and Civil War sites are often found on natural or undeveloped lands that are important for both cultural and biological purposes.

The commonwealth of Virginia plans to protect an additional 400,000 acres of land by the year 2010, as discussed by an

Continued on next page



The Kentucky River (Fayette County/Madison County). Photo by Brian Yahn, KSNPC



Kentucky State Police troopers don protective suits and breathing apparatus prior to meth lab cleanup operations. Photo courtesy of the KSP

Law requires EPPC certification of meth cleanup contractors

By Eva Smith-Carroll
Division of Waste Management

Under a new law passed by the 2007 General Assembly, contractors who decontaminate methamphetamine labs located on “inhabitable properties,” excluding hotels, must be certified by the Superfund Branch in the Environmental and Public Protection Cabinet’s Division of Waste Management.

Chemicals and equipment used to “cook” meth in illegal makeshift labs create an immediate danger of explosion and fire. The process also leaves behind waste that contaminates the site—often a house, apartment or other dwelling—and poses a threat both to the environment and the health of future occupants. The list of potential health hazards is extensive—burns, blindness, birth defects, cancer and damage to the lungs, heart, liver and thyroid. Burying meth waste or pushing it into a sinkhole contaminates the soil, water table and underground streams, and puts people and animals at risk.

The Kentucky State Police has specially trained troopers who remove and properly dispose of the chemicals and equipment found at meth lab sites. However, residual contamination remains that must be addressed.

The new contractor certification requirement and a cleanup standard are aimed at ensuring these sites are properly decontaminated. For more information, contact Kim Leingang in the Superfund Branch by e-mail at Kim.Leingang@ky.gov or by phone 502-564-6716, ext. 236 or go online to www.waste.ky.gov.



A word of warning

If you find what you suspect is a meth lab, do not move, touch or smell any container or its contents. Contact law enforcement. The Kentucky State Police hotline is 1-800-222-5555.

Extensive information on recognizing meth labs, how to protect yourself and who to call is online at the University of Kentucky’s Health Education through Extension Leadership (HEEL) site <http://www.ca.uky.edu/heel/Land/index.htm>.

According to the federal Drug Enforcement Agency, there has been a decrease in meth production in Kentucky due to a couple of factors—a 2005 state law restricting sale of over-the-counter medication used as an ingredient and availability of meth produced in Mexico at super labs. However, there are still an average of three or four new meth labs discovered in Kentucky every week.

Task force opens dialogue with increasing funds for land acquisition

Continued from previous page

Oldham County conservation representative. A major component of Virginia’s plan is a conservation tax credit, which has been very successful in protecting land with conservation easements. A conservation easement tax credit has been before the Kentucky General Assembly twice. In 2007 it was adopted by Gov. Ernie Fletcher as his conservation initiative in coordination with Dr. Jon Gassett, commissioner of the Kentucky Department of Fish and Wildlife Resources.

Hank Marks and Mark Mitchell, of the Legislative Research Commission (LRC), provided information on local approaches and authorities for land conservation. The task force reviewed draft findings, recommendations and concerns, and the LRC will finalize a report for the task force.

If a public survey was conducted, strong support for conservation would likely be revealed. The Trust for Public Land reports that nationwide, 80 percent of ballot initiatives to fund conservation are passed by the public. Often these measures impose taxes to underwrite land conservation projects.

Clearly, land protection and conservation is a national priority. It is certain to be a priority for Kentucky’s citizens, given the very diverse and outstanding natural lands of the commonwealth.

There appeared to be strong sentiment among the task force members for renewing its authority in the next General Assembly. This would be key to sculpting a strategically expanded conservation initiative for Kentucky. If that happens, your support will be needed to gain passage with phone calls, letters or personal visits to your state representative and senator.

Expanded land conservation in Kentucky will not only benefit us in our lifetimes, but even more so the generations who live on this land after us. It will require forward thinking, a great deal of coordinating and strong public support to enact a well-funded land conservation program in Kentucky.



All-terrain vehicles, or ATVs, have become increasingly popular as a means of adventure travel over and through Kentucky's hills and valleys. Whether you ride on your own property or on an organized trail system, responsible riding habits and respect for the outdoors have to become second nature.



Recreation or ruination

By Cindy Schafer
Office of Communications and Public Outreach

ATV use can exact a heavy toll on Kentucky's natural resources. Who's to blame? Riders who wander from designated trails and trespass on public and private lands. The destruction they leave behind remains long after the dust settles.

"No one wants to limit anyone's right to enjoy their favorite recreation," said Joyce Bender of the Kentucky State Nature Preserves Commission (KSNPC). "People must receive permission before they ride on someone's property, and they need to obey the rules."

Kentucky state nature preserves are off limits to ATVs and other off-highway vehicles (OHVs). However, that hasn't stopped die-hard riders in search of new areas to explore.

"Because of the excessive number of ATV and OHV trespassing within the Blanton Forest State Nature Preserve and Bad Branch State Nature Preserve, fragile wetlands, known as seeps located near the top of the mountain, have had their hydrology altered," said Bender.

Plants that naturally occur there are dying

TOP: Riders stuck in a bog are caught in the act at Bad Branch State Nature Preserve.

LEFT (top and bottom): Road damage within the Natural Bridge State Park Nature Preserve. Photos provided by the Kentucky State Nature Preserves Commission

Safety tips and responsible riding habits you should know:

- Learn about the area where you will ride. Understand area restrictions and have permission to ride on private property.
- Obey all trail markers and closure signs.
- Wear protective riding gear.
- Never carry multiple riders on an ATV.
- Do not blaze trails. If a trail is not signed, it is not a legal trail.
- Take your trash with you. "Pack it in, pack it out."



LEFT: A scenic overlook within the Daniel Boone National Forest along the White Sulfur ATV trailhead. Photo by Cindy Schafer

BELOW LEFT: Riders stop to enjoy the fall foliage along a designated trail in Harlan County at the Black Mountain Off-Road Adventure Park.

Photo by the Tourism Cabinet

BELOW RIGHT: One of many designated trails at White Sulfur.

Photo by Cindy Schafer

as the soils dry out when water flow is diverted into tire ruts. Seeps, and the vegetation they support, develop very slowly. Once these sites are disturbed, they may never completely recover.

“Mud bogging” not only causes water quality problems but can spread invasive plants and insects. Caked mud on tires and chassis can contain—and transport—undesirable seeds. Insects, such as the Hemlock woolly adelgid, which has become a major threat to hemlocks in the mountains of eastern Kentucky, also can hitch a ride.

The ill effects are not exclusive to nature preserves. The Kentucky Department of Fish and Wildlife Resources (KDFWR) reports a number of incidents within various Wildlife Management Areas (WMAs).

“Habitat degradation on some of our WMAs has become serious,” said Mark Cramer of the KDFWR. “Illegal use of ATVs often results in erosion and waterway sedimentation.”

Erosion occurs when vegetation is worn away and soil becomes less stable. Plant life, which holds the soil in place with their roots, has a difficult time reproducing, worsening runoff. Erosion also alters the natural flow of water.

WMAs are set aside specifically for wildlife use, and ATVs are prohibited. Conservation officers monitor the WMAs and ticket anyone found in unauthorized areas. But they can’t be in all places at all times.

“It is our responsibility to look out for the proper stewardship of the land,” said

Cramer. “Hunters and anglers help buy these public lands when they purchase hunting and fishing licenses.”

In Kentucky, 94 percent of the land is privately owned. That means there are very few places for the ATV enthusiast who doesn’t own land to ride.

“Because of the lack of trails inventory in Kentucky, people get bored with what’s available and make new ones,” said Kristen Branscum of the Commerce Cabinet. “In 2006, Governor Ernie Fletcher created the Kentucky Recreational Trails Authority (KRTA) to increase land access for recreational use

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Visit these Web sites for more information:

- Kentucky Transportation Cabinet:
<http://www.kytc.state.ky.us/drvmart/atvlaws.htm>
- ATV Safety Institute:
<http://www.atvsafety.org>
- Kentucky Trails Viewer:
<http://kygeonet.ky.gov/kytrails/viewer.htm>
- Kentucky Mountain Trails of Harlan County:
www.harlancountytrails.com

Update on the Southeast Diesel Collaborative

By Elizabeth Robb
Division for Air Quality

The Southeast Diesel Collaborative (SEDC) is a partnership whose members include federal, state and local government agencies, nongovernmental organizations, businesses and other stakeholders in the southeast. Its goal is to improve air quality by encouraging the use of clean, renewable energy and by reducing diesel emissions from existing engines and equipment from the agriculture, heavy construction and on-road sectors.

In June, the coalition of partners met for its second annual meeting. Its goals included:

- Providing a national perspective and spotlighting the nexus between environment, public health, agriculture, construction, energy and transportation.
- Providing an update on the latest clean, renewable diesel and emerging emission reduction technologies and research.
- Highlighting cost-effective strategies for emission reductions while advancing opportunities for regional economic growth and energy independence.

For Kentucky, the conference included many highlights. Lloyd Cress, deputy secretary of the Environmental and Public Protection Cabinet, participated in a roundtable that discussed priorities and challenges for environmental, agriculture, economic, transportation, energy and community development of clean diesel programs. Melissa Howell, of the Kentucky Clean Fuels Coalition (KCFC), discussed recent developments in the renewable fuel infrastructure of Kentucky.

The Association of General Contractors (AGC) of Kentucky was recognized for receiving a National Clean Diesel grant for retrofitting diesel construction equipment.

Cress Emphasizes Childrens' Health

During the roundtable session, Cress emphasized the importance of protecting children—an especially vulnerable population—from diesel fumes. He encouraged EPA to continue to provide funding for school districts to retrofit,

replace and refuel school bus fleets and to encourage the adoption of idle-reduction rules.

“Educating our youth about the importance of clean air, ways that they can make a difference and how the school district is doing its part can make a lasting impression on the leaders of tomorrow,” said Cress. “The potential ripple effects are great.”

KCFC Successes

The KCFC has long led the state in the race to ensure a reliable renewable fuels infrastructure for the commonwealth. Renewable fuels generally benefit air quality because when burned they emit less pollution. KCFC has worked to ensure that clean, renewable fuels (made in Kentucky or imported) meet the high-quality ASTM (American Society for Testing and Materials) standard; that incentives to increase production and availability of renewable fuels abound; and that biofuels are widely available across Kentucky.

Owensboro Grain, a member of the KCFC, opened a 50-million-gallon biodiesel production plant in August. KCFC also collaborated with Marathon Ashland Petroleum to place a biodiesel storage tank in its Louisville terminal, increasing availability of biodiesel for the state. KCFC is currently working to create community biodiesel hubs in Bowling Green, Lexington, Monticello and Winchester. It is also assisting United Parcel Service, the Kroger Co. and Jefferson County Public Schools with their renewable fuel programs.



AGC of Kentucky Receives Award

The AGC of Kentucky received a National Clean Diesel grant for \$50,000 to promote the adoption of clean diesel technology by retrofitting existing legacy fleet construction equipment. AGC's key partner in the implementation of the grant is Messer Construction Co., an AGC of Kentucky member. The funds are being used primarily to purchase and install clean diesel retrofit equipment on 36 pieces of construction equipment—nearly half of Messer Construction's fleet. Equipment will be retrofitted with diesel oxidation catalysts, which reduce tailpipe emissions. The equipment, including cranes, skid steers, rough terrain forklifts and others, will be deployed at various construction projects across Kentucky. The AGC will then monitor and report on air quality improvements to state and federal environmental agencies.

The AGC is the first general contractor's association state chapter in the nation to be awarded funding from EPA for the retrofitting of construction equipment. It won the award in part because of its comprehensive approach to educate AGC members about the benefits of retrofitting heavy equipment.

To join the Southeast Diesel Collaborative, visit www.southeastdiesel.org or contact Elizabeth.Robb@ky.gov.



ABOVE: Lloyd Cress (right) discusses voluntary and regulatory policy shifts in Kentucky that benefit air quality and could serve as model programs for other states during a roundtable session.

Photo by Elizabeth Robb

Mystery of the unhappy nitrifying bacteria

By Kenya Stump, Division of Compliance Assistance
and Larry Sowder, Division of Water

The city of Wilmore, a quaint turn-of-the-century village of 6,000 located in central Jessamine County, was in a quandary. In February 2006, the city's wastewater treatment plant was experiencing problems in complying with the ammonia nitrogen limitations placed on its Kentucky Pollutant Discharge Elimination System permit.

Domestic or sanitary wastewaters have limitations on the amount of ammonia nitrogen that may be discharged. This pollutant in elevated concentrations can cause a number of detrimental effects to the water quality of the stream to which the wastewater treatment plant discharges. Removal of ammonia nitrogen is usually achieved through a biological treatment process in which organisms called nitrifying bacteria consume the nitrogen, thus altering the composition of the ammonia nitrogen and reducing its effect.

The wastewater treatment plant operators began investigating the problem. As this was a problem not previously experienced, they requested assistance from the Kentucky Division of Water and Division of Compliance Assistance. In April 2006 a compliance assistance specialist conducted a site visit to assess the situation. Two possible causes were identified.

First it was speculated that the nitrifying bacteria may have been stressed, thus impairing its effectiveness. Since a customer of the plant had recently replaced an old boiler system, there was the possibility that chemicals used during that process had

stressed the bacteria.

The second possible cause was the decant stream from the mobile belt press. Belt presses are used to reduce the amount of water contained in a wastewater treatment plant's sludge. The water squeezed out of the sludge is usually returned to the wastewater treatment plant for additional treatment. An analysis of the decant stream revealed elevated levels of ammonia.

To rule out other possible causes, the investigating team also evaluated the levels of dissolved oxygen and pH, the sampling location and techniques, and the laboratory analysis procedures.

In May 2006 corrective actions and remedial measures were put in place. The mobile belt press decant stream was redirected to the head of the plant, which provided additional treatment. Re-seeding the plant with activated sludge added more nitrifying bacteria. By the end of May, the bacteria had recovered and the ammonia nitrogen concentrations returned to acceptable levels.

Valuable insights can be gained in how to keep a wastewater treatment plant healthy, in compliance and the bacteria happy—know the optimum conditions for maintaining a happy colony of nitrifying bacteria; exercise proper sampling collection and analysis procedures; practice operational and maintenance procedures in a timely manner; and always know your customers.

For more information, contact the Division of Water at www.water.ky.gov or the Division of Compliance Assistance at www.dca.ky.gov.



Recreation or ruination *Continued from Page 10*

and help counties provide more places to ride, which decreases trespassing."

Consequently, liability is a legitimate concern to landowners who consider opening up their land for recreation. The KRTA will work with landowners by managing their property and taking on those liabilities. The authority also recognizes the importance of trail-related education such as safety, laws, compatibility and abiding by environmental regulations.

For now, there are designated trail systems that are well managed, monitored and readily available for ATV use. Harlan County has about 6,000 acres of mountainous terrain and more than 200 miles of marked coal mining roads at the Black Mountain Off-Road Adventure Park.

"The park is a poster child for responsible riding," said Branscum.

The park's trails are clearly marked with signage that includes information about terrain and appropriate speed.

Helmets are also required.

"These old mining and logging roads provide the perfect opportunity for recreation," said Harlan County Judge-Executive Joe Grieshop.

This "coal mine to gold mine" park, which attracts 3,000 to 4,000 riders on weekends, provides a way to continue using the land and is equipped with a variety of trails for every level of rider.

"Families and individuals can ride these trails, breathe fresh air and view pristine mountainous overlooks," said Grieshop. "ATVs and nature can coexist. If we give people plenty of designated places to ride, they will stay out of the protected areas."

As for the problems still faced at the nature preserves and WMAs, Bender and Cramer predict that surveillance cameras will be installed to catch and prosecute violators.

"One thing is apparent," said Cramer. "There is a tremendous need for more land

for people to ride on. We are fully supportive of places with properly constructed, designated trail systems and the desire to pursue even more appropriate places. Our WMAs are simply not the solution to the problem."

Four-wheeling has the potential to bring big tourism to Kentucky. Black Mountain Off-Road Adventure Park is a testament to this popular pastime. So, whether you're a full-throttle rider or take the slower tourist approach, there are enough designated areas throughout the state where you can legally whet your off-road appetite.

ATVs are sold as being able to go just about anywhere in any condition, but trail riders cannot traverse the laws of property.

"There needs to be a balance," said Bender. "People can have their motorized enjoyment, but they need to be respectful of nature. If they aren't, what will be left for our children and grandchildren to enjoy?"



Make a note: don't waste paper

Reduce, reuse, recycle

By Eva Smith-Carroll and Tom Heil
Division of Waste Management

Recycling illustration provided by Noel Ford
<http://www.ford1.demon.co.uk/>



Since humans came up with the written language, they have scribbled on a variety of materials—cave walls, stone and clay tablets, parchment made from animal skin, silk, bamboo and papyrus made from an Egyptian reed.

The Chinese were the first people to produce paper as we know it today—made with pulped cellulose fibers like wood, cotton or flax. The resulting cheap paper was a boon to writers everywhere. There are 350 million magazines, 2 billion books and 24 billion newspapers published in America every year. Add in packaging, etc., and the average person uses an

estimated 700 pounds of paper products annually.

What happens to all the waste paper that is generated? The good news is a lot of discarded paper goes in the recycle bin and is made into new products. Earlier this year the American Forest & Paper Association (AF&PA) announced that a record 53.5 million tons—53.4 percent of the paper used in the U.S.—were recovered for recycling in 2006. Nearly 360 pounds of paper were recovered for every person, up from 233 pounds per person in 1990.

However, paper still takes up a lot of landfill space. Since the 1950s, paper and paper-

board packaging has been the No. 1 material that we throw away—35-40 pounds of every 100 pounds of trash.

It doesn't have to be that way. Even in ancient times, uses were found for old documents. Linen mummy wrappings were often supplemented with "several layers of papyrus usually discarded by administrative offices," according to "Historical Papyrus" by Jimmy Dunn. If you don't have a mummy that needs wrapped, there are still many ways that you can keep paper out of landfills.

Reduce

Using one less sheet of

paper a day adds up to half a ream, or 250 sheets per year, according to "Use Less Stuff" by Robert Lilienfeld and Dr. William Rathje. That's about 5 pounds. If all the students at an average-sized Kentucky school—around 500 students—saved a sheet a day, it would add up to a ton in less than a year.

Using less or recycling that much paper saves 7,000 gallons of water, 463 gallons of oil and enough energy to heat an average home for six months, according to Quest for Less, an Environmental Protection Agency (EPA) publication.

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Producing healthier hospitals

By Natalie Jensen

Department for Environmental Protection

Hospitals and health care facilities throughout Kentucky provide citizens with important services that would be difficult to live without. However, those same facilities produce an abundance of waste products and consume considerable amounts of energy on a daily basis.

In June, the Department for Environmental Protection (DEP), in collaboration with the U.S. Environmental Protection Agency (EPA) Region 4, Kentucky Hospital Association and Kentucky Pollution Prevention Center, offered an environmental compliance assistance workshop to these facilities, which provided information and resources needed to comply with federal and state regulations.

A broad spectrum of health care service representatives attended including hospitals, nursing homes, mental health facilities, private physicians and medical centers. The one-day workshop highlighted waste reduction opportunities and provided pollution prevention tools that would save money and help facilities to become environmental partners in the community.

The EPA presented information on ways facilities could become more compliant with federal regulations and explained the affects each has on the environment through the generation of large quantities of waste and the consumption of vast amounts of energy.

Kentucky's Department of Labor and

DEP's Water, Waste Management and Air Quality divisions presented information on hazardous waste, biomedical waste, asbestos and the Clean Water Act.

Participants were also introduced to Kentucky's voluntary environmental leadership program—KY EXCEL. A representative from St. Elizabeth Medical Center of Edgewood, one of the founding members of KY EXCEL, spoke regarding the benefits of taking a more active role in the environment.

Saving money has always been a priority for hospitals and health care facilities. The Kentucky Pollution Prevention Center discussed pollution prevention, energy efficiency and environmental management systems that focus on saving money.

At the end of the day, workshop attendees were better informed about the affects their facilities have on the environment and were energized to make improvements at their workplace. The Department for Environmental Protection and the Kentucky Hospital Association plan to hold more workshops concerning environmental influences hospitals and health care facilities have on their community.



Reference document available

By Johnna McHugh

Environmental Quality Commission



The Environmental Quality Commission (EQC) has released its latest publication, a reference guide for annual, biannual and intermittent environmental publications that have been released within the previous two years by the Environmental and Public Protection Cabinet (EPPC). The guide provides reports produced by the Department for Environmental Protection, Department for Natural Resources and the independent commissions of the EPPC.

In addition to providing an introduction to each environmental report published by the cabinet, the guide also provides contact information and Web addresses, if available. As an additional feature, a CD-ROM is included containing the reference guide and each report in its entirety.

The EQC decided to compile these environmental reports at the request of commission member Andrew Ernest. He suggested that many Kentucky citizens are not aware of the plethora of information available through state-published reports. The EQC would like to increase the public's knowledge of this available information through a series of biannual reference guides.

The document has already been mailed to public libraries and schools across the commonwealth. If you would like to receive a copy of the reference guide, contact the EQC by e-mail at EQC@ky.gov or by telephone at 502-564-3410.



Recycling grants awarded

The Division of Waste Management has awarded 26 recycling grants, totaling \$2,297,541, from the Kentucky Pride Fund. The fund, expanded by the General Assembly in 2006 to include funding for recycling, collects a \$1.75 fee for every ton of municipal solid waste disposed of in Kentucky landfills.

The recycling grant program is aimed at enhancing Kentucky's recycling infrastructure and boosting the state's household recycling rate to well above the national average of 28.5 percent. Kentucky's current rate is 27 percent.

The grants require a minimum of 25 percent local match in the form of cash or "in kind" services, materials or equipment.

A list of grant recipients and planned expenditures are online at <http://kentucky.gov/Newsroom/environment/6-28recyclinggrants.htm>.



Make a note: don't waste paper

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What about saving trees? The Paper University, a site sponsored by TAPPI (founded as the Technical Association of the Pulp and Paper Industry), makes the point that whole trees, or "round wood," only make up a third of materials used to make paper (the other two-thirds are wood chips from saw mills and recovered paper), and those trees are grown specifically for the timber and fiber pulp industries. So while some trees are "saved," saving trees isn't necessarily the No. 1 reason for conserving paper.

Reuse

There are a number of ways to reuse paper. Use junk mail as scrap paper. Give your magazines to a nursing home or school. Use both sides when printing or writing. Use paper to make paper (there are several recipes online).

Recycle


It costs about \$30 per ton to dispose of paper in the landfill, but that same ton could bring \$120 per ton in revenue if sold to a recycler. Not recycling means millions of dollars in potential revenue lost in Kentucky alone. In 2004, \$12.5 million for cardboard and \$7 million for newspaper was lost when the paper went to the landfill instead of being sold.

Who is buying waste paper? Paper and paper products manufacturers, including these Kentucky facilities:

- Weyerhaeuser/Henderson Containerboard—a mill that produces linerboard (flat sheets on the outside of a corrugated box) and corrugated medium (used to make the "wavy" paper sandwiched between) from 100 percent recycled containerboard. Annually the mill recycles more than 210,000 tons of old boxes and waste paper collected by its parent company. Weyerhaeuser recycling facilities handle more than 6.7 million tons of paper each year including 83,247 tons in 2006 from Kentucky. More than half is used by company mills and the rest is sold. Weyerhaeuser considers recycling good for the economy and the environment. "A commitment to sustainability is not enough," says Ernesta Ballard, senior vice president of Corporate Affairs. "We need action at every level in companies, communities and government. Recycling demonstrates commitment—good business and good stewardship."

- NewPage/Wickliffe—a mill that produces a high-quality coated paper used by the nation's premier commercial printers, publishers, corporate end users, design professionals and converters for annual reports, magazines, catalogs, direct mail, books/yearbooks and glue-applied labels. NewPage concurs with the EPA recommendation of a minimum of 10 percent post-consumer fiber content for coated papers and offers 10 percent post-consumer on all grades of paper it sells, according to Wickliffe mill spokesman Sandra S. Wilson.

- Temple-Inland/Maysville—a 100 percent recycled linerboard mill that processes 1,300 tons of used boxes per day for a total, since its 1992 startup, of more than 6 million tons of old corrugated containers turned into new brown paper. An estimated 15 percent of the 500,000 tons recycled annually comes from Kentucky. The mill was one of the first Master members in Kentucky's environmental leadership program, KY EXCEL, and has been a member of the National Environmental Performance Track for four years. "At Temple-Inland, we are constantly seeking innovative ways to improve both our environmental and economic performance. Our manufacturing operations have a history of embracing sustainable solutions for product and waste re-use," according to a statement from the company. As with other more consumer-driven recyclables like aluminum, "...every ton of waste paper converted into good usable paper eliminates unnecessary landfill waste that our children's children will have to deal with eventually."

To learn more about recycling and waste reduction, go to the Division of Waste Management Web site—www.waste.ky.gov or call 502-564-6716. AF&PA Tools for Teachers is online at http://paperrecycles.org/tools_for_teachers/index.html. 

Inspections pivotal to dam safety

Continued from Page 4

inspected the drawdown valve and pipe for rust and tampering.


Climbing back to the top of the dam, Thomas noticed a small indentation in the earth that had not appeared on the previous inspection report.

"This could indicate some caving, but it could be left from a repair project," she said. "I'm also on the lookout for patches of bright green grass, which could indicate the site of a leak. During winter, I would look for a snowmelt for the same reason."

Thomas reached the base of the downstream side of the dam and studied the stilling basin where water from the impoundment is released into the outlet channel. Finding no obstructions or cave-ins around the concrete box holding the pipe, she walked the length of the emergency spillway back to the top of the dam.

"The emergency spillway is a critical component of any dam, since it prevents water from overtopping the dam during heavy precipitation," said Thomas. "If left in place, obstructions in the spillway can catch trash and reduce capacity, resulting in hydraulic failure of the embankment."

Thomas completed her inspection notes and took one last look around her, obviously enjoying the warm afternoon.

"This was pretty easy to get to, but dam inspections sometimes take us to wild and wooly places," she said. "I've seen eagles, deer, wild turkey—one time a bobcat jumped on the hood of my car. If I smell cucumber, I know there's a copperhead nearby, and rattlesnakes don't always buzz." 

Marilyn Thomas is an engineer consultant in the Division of Water. She has worked with the dam safety program throughout her 29-year career with the division. In addition, she works with the floodplain management program, National Flood Insurance Program and with Kentucky Emergency Management, Region 4 of the U.S. Corps of Engineers and local governments to develop emergency action plans for communities downstream of Wolf Creek Dam.

Thomas is a member of the Association of State Dam Safety Officials and has served on a task force to develop a model emergency action plan for Natural Resources and Conservation Service dams nationwide. She belongs to the Association of State Floodplain Managers and the Kentucky Association of Mitigation Managers.

In the spotlight: Kentucky's rare species and communities

Clubshell (*Pleurobema clava*)

Kentucky State Nature Preserves Commission Status: Endangered.

U.S. Fish and Wildlife Service Status: Endangered.

General Description: A 2-inch to 3-inch elongate freshwater mussel, one of more than 100 kinds known from Kentucky.

Habitat: Stream bottoms of small to large rivers in sand and gravel.

Range: Formerly widely distributed in Kentucky; now restricted to the upper Green River and the Ohio River.

Reasons for Listing: Habitat degradation and loss.



Photo by KSNPC staff

Kentucky Red-backed Vole (*Clethrionomys gapperi maurus*)

State Status: Special concern.

U.S. Fish and Wildlife Service Status: None.

General Description: A small rodent with short tail and grizzled, grayish fur with a strong reddish-brown tint down the middle of the back.

Habitat: Inhabits moist, high elevation deciduous forest.

Range: Widespread across much of Canada, the northern tier of states in the U.S., and south through the Rocky and Appalachian mountains. However, the subspecies *C. g. maurus* is found only in the Cumberland Mountains of southeastern Kentucky, western Virginia and northeastern Tennessee.

Reason for Protection Status: This small mammal is very restricted in range. The forested areas where it is found are being reduced by surface mining.



Photo by John R. MacGregor

Cumberland Highlands Forest

Kentucky State Nature Preserves Commission Status: Endangered.

U.S. Fish and Wildlife Service Status: None.

General Description: This rare type of northern hardwood forest occurs only on the highest mountain ridges in the Cumberland Mountains of southeast Kentucky. Rich mesic conditions prevail with a cooler climate and as much as 60 inches of precipitation per year. The canopy is dominated by black cherry, yellow birch and sugar maple, with basswood, mountain magnolia, yellow buckeye and beech also present. Understory species include witch hazel, striped maple, mountain holly and alternate-leaved dogwood. A rich herb and fern layer is present with several species that do not occur elsewhere in Kentucky. Dense beds of large white trillium, false solomon's-seal, wild geranium and many other species cover the ground. Rare species that are characteristic include rosy twisted stalk, mountain angelica, Turk's cap lily and small flowered false hellebore.

Range: Occurs primarily on Black Mountain in Harlan and Letcher counties at elevations over 3,400 feet above sea level. Small areas occur scattered on the high north slopes of other nearby mountains.

Reasons for Protection Status: This community occupies a very limited area in Kentucky. High-quality examples are extremely rare due to destruction by extensive mining, logging, oil and gas drilling, and road and power line rights of way.

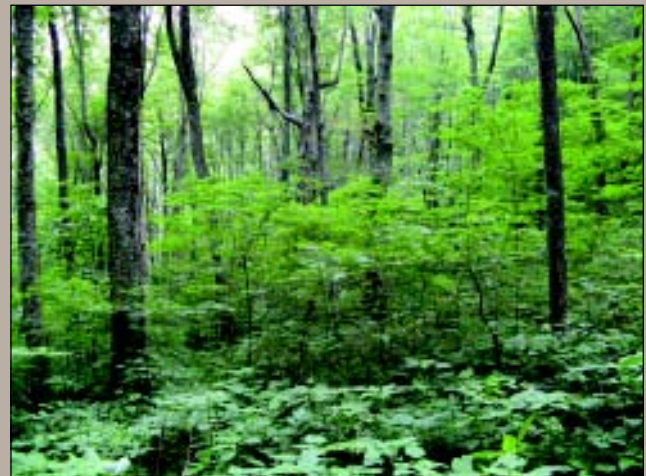


Photo by Marc Evans, KSNPC

Forestry officials plan for the worst, ask for help

By Gwen Holt
Division of Forestry

State forestry officials are having flashbacks of a fall forest fire season that they would soon like to forget. Drought conditions, similar to those we are presently experiencing, occurred in 1999 and contributed to three consecutive years of serious forest fire hazard seasons.



Beginning in the fall of 1999 and continuing through the fall of 2001, the Kentucky Division of Forestry (KDF) battled over 6,000 fires that scorched more than 450,000 acres. Those three years marked the worst time for wildfires in Kentucky in the past decade, costing the state over \$10 million.

The division met in August to begin planning for another worst-case scenario. The meeting focused on essential equipment needs, hiring and training of new firefighters, fire prevention education and additional resource needs. If the current drought conditions continue into fall, the division will likely call upon additional resources such as the Kentucky National Guard and firefighters from other state and federal forestry agencies.

“We have provided several fire crews to other states this year, and in turn these states and others have assured us that they will return the favor if their fire

TOP: This home is built in a wildland urban interface. Leaves and twigs should be kept at least 30 feet away from the structure.

ABOVE: This deck is open construction, which can lead to buildup of leaves and debris, posing a fire hazard.

Photos by the Division of Forestry

conditions have improved,” said KDF Director Leah MacSwords. “We are anticipating a serious fire season and are planning accordingly.”

Division employees will be meeting with local officials, fire

departments and media to increase awareness of the upcoming fire season. Fire prevention education teams are also scheduled to work in several counties where wildfires are expected to be the most serious. These teams will be made up of staff from the Division of Forestry, U.S. Forest Service and possibly employees from other state forestry agencies.

What causes wildfires in Kentucky?

Sadly, wildland arson remains the leading cause of wildfires, but during severe drought conditions KDF sees an increase in accidental fires. Some of these fires are started in unusual ways.

“We see fires caused by farm and construction equipment, sparks from railroads, catalytic converters, electric fences and improperly disposed cigarettes. Under normal weather conditions we would rarely see a fire caused by any of these sources,” said MacSwords.

To combat wildland arson fires, the division will be working with local and state law enforcement agencies, as well as other state agencies, to increase patrols of areas where suspected arson fires are occurring. Citizens can anonymously report suspected arsonists by calling the Target Arson Hotline at 1-800-27-ARSON. Citizens providing tips that lead to an arrest and indictment are eligible for a cash reward of up to \$1,000.

The Division of Forestry prepares communities

Hundreds of communities across the commonwealth are located in areas where homes and forestlands meet, known as the wildland urban interface (WUI). Living in WUI areas places

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Firewise practices: simple steps homeowners can take to reduce wildland fire risks

- Create a defensible space around the home by keeping flammable vegetation and leaves at least 30 feet away. Keep leaves raked, and limbs and branches picked up.
- Remove flammable materials and leaves from roofs and gutters and around liquefied petroleum gas (LPG) tanks.
- Cover attic vent openings with small-gauge wire to keep sparks out.
- Enclose decks to prevent the accumulation of leaves and debris.
- Box in eaves.
- Trim trees of dead and overhanging limbs within 10 feet of a chimney or stovepipe.
- Stack wood at least 30 feet away from the house and drape it with a nonflammable cover.
- Develop a fire emergency plan and discuss what actions will be necessary to ensure the safety of your family.
- Ensure that the address of the home is clearly marked so emergency personnel can locate the property.

Tire collection total is 16.5 million

By Eva Smith-Carroll
Division of Waste Management

Kentuckians brought in 311,630 tires during the spring tire amnesty program bringing the total to 16.5 million passenger tire equivalents collected by the Division of Waste Management during amnesties and other cleanups since 1998.

Tire amnesties are a free service offered by the division with assistance from county governments and the Transportation Cabinet. Waste tires are collected and recycled through “beneficial end use” markets to become products such as tire-derived fuel or crumb rubber mulch.

The Waste Tire Amnesty Program is financed by the Waste Tire Trust Fund, authorized by the 1998 General Assembly and extended in 2002 and again in 2006. Money comes from a \$1 fee on each new replacement motor vehicle tire sold.

An estimated 4 million scrap tires are generated each year in Kentucky and must be managed properly to avoid the risk of fire and to prevent water entrapment and mosquito infestations.

You can get information on upcoming events by going online to <http://www.waste.ky.gov/branches/rla/Tire+Amnesty.htm> or calling 502-564-6716.



Workshops seek to continue brownfield grant success

By Amanda LeFevre
Division of Compliance Assistance

Last year the Kentucky Brownfield Program sponsored events that aided communities in their quest to obtain U.S. Environmental Protection Agency (EPA) brownfield grants. Those efforts paid off, and the state received \$1.4 million dollars in EPA grants for brownfield projects in Louisville and Frankfort.

The program is continuing its educational endeavors with the aid of KY EXCEL member, Malcolm Pirnie Inc. KY EXCEL is an environmental leadership program in which individuals, companies and organizations undertake projects to help improve Kentucky’s environment. Malcolm Pirnie partnered with the Kentucky Brownfield Program to host three grant writing workshops across the state. Frankfort, Owensboro and Prestonsburg played host to the events, and more than 50 people attended the sessions that covered brownfield basics and strategies for successful grant authorship.

Malcolm Pirnie has helped to author and implement more than 25 U.S. EPA brownfield grants for communities nationwide. Betsy Bowe, of Malcolm Pirnie, taught the grant writing portion of the event. With her extensive experience in grant writing, Bowe helped to author \$2 million in grants last year for applicants in the communities of Lorain, Barberton and Sandusky in Ohio, and Tuscola County and Eaton County in Michigan. Each community received \$400,000 in federal funding for brownfields assessment.

“Our overall goal of the workshop was to provide potential grant applicants with all of the tools they might need to author a grant from start to finish,” said Bowe. “We offered examples from various grant applications—from a small rural community to a large industrial community—to help applicants see that answering questions and obtaining as many points as possible in a very competitive process is achievable no matter the size of their community or their previous grant writing experiences. We are hopeful that many of the workshop attendees will want to apply for grant funds to start brownfield programs in their communities.”

For more information, contact Amanda LeFevre at 502-564-0323.



Forestry officials plan for the worst, ask for help

Continued from Page 18

communities at a higher risk for wildfire damage. In recent years, more homes are being built in WUI areas, increasing the number of communities at risk statewide.

Continuing drought conditions, a heavy build up of fuel in Kentucky’s forests and a shortage of experienced wildland firefighters have resulted in the division issuing a cry for help from fire-prone communities.

“We need local citizens and communities to take preventative steps to protect their property,” said MacSwords.

One way to do this is to implement firewise practices. Firewise is a national program that educates communities and homeowners about reducing wildland fire risks.

Firewise USA communities

There are 12 certified Firewise USA communities in Kentucky. Community leaders, fire departments, local citizens and business owners join together to reduce wildfire risks in their area.

Many communities received assistance through the Kentucky Firewise Grant Program, which provides funding for communitywide risk assessments, development of community wildfire protection plans, fuel mitigation and Firewise educational activities. This year, grant recipients will receive \$292,499. The next grant period will be spring 2008.

For more information about the Kentucky Firewise Program visit <http://www.forestry.ky.gov/programs/firewise/> or visit the national Firewise Web site at www.firewise.org.



Kentucky Firewise USA communities

Cunningham – Carlisle Co.
Bardwell – Carlisle Co.
Poplar Springs – Adair Co.
Hickory-Hill Laurel Trace – McCreary Co.
Haldeman Heights – Rowan Co.
Hilltop Estates – Rowan Co.
Lake Lewman – Rowan Co.
Harlan – Harlan Co.
Greensburg – Green Co.
Exie – Green Co.
Grab – Green Co.
Route 504 – Elliott Co.

MacSwords named second in command

By Gwen Holt
Division of Forestry

Leah MacSwords, state forester and director of the Kentucky Division of Forestry (KDF), was recently elected vice president of the National Association of State Foresters (NASF).

MacSwords is the first woman and first Kentuckian to be elected to the vice president's position in the organization's 87-year history. She previously served as the organization's treasurer.

NASF is a nonprofit organization that represents all 50 state forestry agencies, eight U.S. territories (American Samoa, the federated states of Micronesia, Guam, the Northern Marianas Islands, Palau, Puerto Rico, Republic of the Marshall Islands and the U.S. Virgin Islands) and the District of Columbia. Through public-private partnerships, NASF develops, sponsors and promotes programs that advance the practice of sustainable forestry, the conservation and protection of forest lands and associated resources, and the establishment and protection of forests in the urban environment.

MacSwords will serve on the NASF executive committee, which acts on behalf of the association between annual meetings, prepare long-range plans, and set goals and objectives each year. She also will serve on the Budget and Business Committee, which oversees internal operational controls and finances.

"My goal is to ensure that NASF continues to provide a reliable, responsible voice on overall domestic and international forest policy and to spread the message about the environmental and social benefits provided by trees and forests to all our citizens," said MacSwords.

Two important issues remain a priority for NASF—that it continue working with the USDA Forest Service on its redesign of state and private forestry programs to ensure states are treated fairly, that they have access to equal funding, and that its members receive guidance through implementation of the Farm Bill provisions and state assessments. NASF will



Photo provided by the Division of Forestry

also continue spreading the message that forests play a vital role in addressing global climate change and serving as an energy source.

MacSwords is a woman of many firsts. She is the first female director in the 95-year history of the Division of Forestry. She joined the Natural Resources and Environmental Protection Cabinet (now the Environmental and Public Protection Cabinet) in 1985 where her primary responsibilities were in the areas of environmental protection. In 1997, she was appointed deputy commissioner of the Department for Natural Resources. In June 2001, she became division director and state forester.



Storm water erosion prevention and sediment control training available

The Kentucky Transportation Cabinet is offering one-day training sessions around the state designed to qualify individuals in the inspection of erosion and sediment control on construction sites to ensure compliance with state and federal environmental permit requirements.

The Kentucky Erosion Prevention and Sediment Control (KEPSC) training is co-sponsored by the University of Kentucky Transportation Center, the Kentucky Highway Contractors Association and the Kentucky Homebuilders Association. The goal is to provide a basic understanding of the terms and conditions of the Kentucky Pollutant Discharge Elimination System (KPDES) general permit for construction sites.

The language of the KPDES permit states that all storm water erosion prevention measures must be inspected by a qualified inspector. The training is designed to produce qualified inspectors who are knowledgeable about inspection procedures and permit requirements.

"The Kentucky Transportation Cabinet recognizes the importance of erosion control on our highway projects," said Transportation Secretary Bill Nighbert. He said the goal of the program is to build a highway infrastructure that benefits the state's economy while preserving the natural environment.

Bob Weiss, executive director of the Homebuilders Association of Kentucky, said homeowners and building contractors will greatly benefit from the KEPSC training. "We are endorsing a new program to train our contractors how to inspect and comply with U.S. Environmental Protection Agency rules that protect Kentucky's streams," he said.

For more information about KEPSC, a schedule of dates and locations and to register online, visit www.ky12.com or call 1-800-432-0719.



EQC seeks Earth Day nominations

The Environmental Quality Commission (EQC) is seeking nominations for its 2008 Earth Day awards. Persons or entities that display an outstanding commitment to Kentucky's environment are eligible. The nomination form is available on the EQC's Web site at www.eqc.ky.gov or contact Johnna McHugh by e-mail at Johnna.McHugh@ky.gov or by phone 502-564-3410, ext. 194. The deadline for nomination receipt is Dec. 14, 2007. Nominations can be sent electronically to McHugh or mailed to 14 Reilly Road, Frankfort, KY 40601. The EQC Earth Day awards ceremony will be April 18, 2008, at Berry Hill Mansion in Frankfort.



Volunteers make clean sweep of river

By Allison Fleck
Division of Water

A flotilla of ski boats, pontoons and skiffs gathered July 14 in an early morning mist at the Clifton boat dock in Woodford County. The sun was burning through the fog as 48 volunteers boarded 13 boats in search of litter and debris on the banks of the Kentucky River.

"This is a great turnout," said Nola Boggs Server, Woodford County community resource coordinator and local river sweep organizer. "With all these volunteers, we'll get a lot accomplished today."

Nearby was a dump truck with "Tom Rankin Backhoe Service" painted on the driver's-side door. As long as Lindsey Rankin, 24, can remember, her family has participated in the riverbank cleanup.

"I grew up on the river in Clifton, and this is what we do," said the recent college graduate. "We love the river and want to take care of it. Hopefully other people will take a lesson from our actions. So much of what we'll find today could easily have been taken to the county dump or the recycling center."

The volunteers were part of a six-state effort to clean up more than 3,000 miles of shoreline along the Ohio, Kentucky, Allegheny, Monongahela and Beaver rivers—all in one day. The campaign was begun in 1989 by the Ohio River Valley Water Sanitation Commission (ORSANCO) to draw attention to the existing litter problem and foster greater environmental concern. In 1997, the Kentucky River Authority and ORSANCO became partners in a joint effort to clean up the riverbanks.

This year nearly 1,000 volunteers in 22 Kentucky counties collected 1,500 pounds of recyclable material, 7,400 pounds of trash and filled four 30-yard dumpsters.

At the Clifton boat dock, Tom Rankin's dump truck slowly filled with tangled webs of barbed wire, bags of cans and bottles, mud-filled tires and rusted metal parts. Large items included a baby bed, a home

water heater, a mangled grill and a bed liner for a pickup truck.

"You find everything out here," said Jay Wigglesworth, a longtime resident of Clifton. "Last year was a big tire year. People think 'out of sight, out of mind.' We have to change that mentality."

For more information about the river sweep, call the Kentucky River Authority at 502-564-2866.



A participant hauls trash to the Clifton boat dock during the river sweep event.
Photo by Allison Fleck



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