



# Cumberland HCP

NEWSLETTER VOLUME 5, ISSUE 1 WINTER 2012

## ITEMS OF INTEREST:

Notes from The Director	1
Continuing Education for NCHCP Team Members	1
Cumberland HCP Update	2
HCP Spotlight: Eric Brady	2
The Nashville Crayfish HCP	3
Critter Corner: Hellbender	4
Upcoming Events	5

## Notes from the HCP Director, Katherine Medlock

The New Year is a good time to reflect on progress and celebrate success. This year the Northern Cumberland Forest Resources Habitat Conservation Plan was completed and submitted to the US Fish and Wildlife Service for review. The NCFRHCP covers four of TWRA's Wildlife Management Areas. Though the HCP is not complete until it is approved by the US Fish and Wildlife Service, and there may be a need for some changes based on their review, this is a major milestone that should be celebrated.

On the Cumberland HCP front, we have made huge strides forward by convening the Permitting Partnership Coordination Committee

(PPCC). The Conservation Measures have been drafted and are currently (at the time this letter was written) in the process of being reviewed. We anticipate that they will be finalized early in 2012. Additionally, progress on the Take Model has been equally swift and we anticipate that we will have a working draft of the numbers before midyear.

The New Year is also a good time to look forward. We are planning a lot of work in the coming year. We anticipate that many of the major elements of the Cumberland HCP will be produced and finalized in the coming year including the Conservation Measures, the Take model and the monitoring plan, just to name a few. We have

a great team working on these items and, along with help from the applicants (the City of Crossville and Cumberland County) and our many partners, we anticipate completion of many critical HCP elements this year. You can also expect to hear more from our Outreach team as we gear up to share all this progress with the wider world.

I hope you are also looking forward to a wonderful 2012 and we would love to hear about your projects as well.

Katherine Medlock

## Continuing Education for HCP Team Members

This past December, Teresa Payne and Chris Burcher, Outreach and Science coordinators on the Cumberland HCP project, attended a USFWS sponsored course entitled "Habitat Conservation Planning for Endangered Species." This week-long intensive learning took place at the National Conservation Training Center in Shepherdstown, WV. Teresa and Chris learned a great deal about the HCP process and shared their experience on the Cumberland Plateau with USFWS employees and agency per-

sonnel from all over the United States. Teresa and Chris also brought questions specific to Cumberland HCP to more experienced USFWS folks who have worked on many other HCPs, mostly in the Western U.S. The NCTC training was a great experience for Teresa and Chris as well as other staff on the HCP project and came about at a perfect time in the project development where we are looking to the next phase of project development and planning the next year of work. In addition to learn-

ing more about the HCP process and the future direction of the Cumberland HCP, Teresa and Chris received great feedback on progress over the last year and returned to the plateau reassured that we are all moving in the right direction, avoiding many of the common pitfalls, and making good progress. The general agreement among the USFWS, the HCP team, and the stakeholders of the Cumberland Plateau suggests the HCP is in great shape!

FOR MORE INFORMATION ABOUT THE CUMBERLAND HCP CONTACT TERESA PAYNE. E-MAIL: TPAYNE11@UTK.EDU PHONE: (931) 229-0811

# Cumberland HCP Update:

## Above and Beyond: the City of Crossville's Stormwater MS4 Program

Having a Stormwater MS4 (Municipal Separate Storm Sewer System) Program means that a community has separate sanitary and storm sewers. There are Phase I and Phase II Stormwater MS4 Programs. Phase I programs include large cities, such as Nashville, Knoxville, and Memphis. Phase II programs include smaller cities, such as Athens and Crossville. Triggers of a Phase II program include a certain number of impaired streams or a population of 10,000 people or more. Crossville has had a Phase II program for five years.

Benefits of having a Stormwater MS4 Program include: improvement in water quality for plants, animals, and people; improvement of aquatic habitat for plants and animals; improvement in the community for erosion protection and sediment control, which means that there are even cleaner streets next to

construction sites because the sediment stays on the site; a greater understanding of water movement in the community; and a faster response time for spills. Phase II programs must be designed to reduce the discharge of pollutants (e.g., oil, pesticides, sediment, and trash) into local rivers and streams, protect water quality, and comply with the appropriate water quality requirements of the Clean Water Act.

Crossville has a cutting edge Stormwater MS4 Program due to its monitoring capabilities, such as being able to gather water chemistry readings and having a fully functional Geographic Information System (GIS) database of 125 visually-assessed streams. Staff conducts inspections of construction sites twice weekly; gathers temperature, pH, electro-conductivity, dissolved oxygen, and E. coli readings for streams; and

monitors stream flow. Staff can show the severity ranking and correctability options for streams when asking City Council for funding to improve sections of streams.

The Program is involved with Stone Memorial High School, and assisted them in winning the 2011 Green Schools K-12 Governor's Environmental Stewardship Award (<http://www.tn.gov/environment/awards/11awds/11winners.pdf>, p. 7). The Program sponsors an annual litter pick up and stream pick up, a 15-km trail run at Cumberland Mountain State Park, and a Junior Rangers Camp. Staff also provides guidance for erosion protection and sediment control to all contractors within the City limits or on City projects.

Crossville's Stormwater MS4 Program is successful because of the common sense approach used in water quality management, and it is

*cont. on page 4*

## HCP Spotlight: Eric Brady

On December 14th Samantha Wyatt sat down with Eric Brady, a native resident of Cumberland County and the Stormwater Coordinator for the City of Crossville, to get his opinions on the Cumberland HCP. The following is a synopsis of their conversation.

Q1: What is your involvement in the HCP?

A1: I volunteer time to attend HCP meetings and to give feedback on HCP documents, including the Conservation Measures, from the City's Stormwater MS4 Program's point of view. I am also a member of the Steering Committee, which helps to guide the direction of the HCP.

Q2: How do you think the HCP will benefit the City of Crossville and Cumberland County?

A2: It will benefit the development community by potentially streamlining the permitting process with regulatory agencies, attracting buyers interested in living in an environmentally conscious community, and providing a mechanism for compliance with the Endangered Species Act. It will also provide much needed environmental protection for future generations by maintaining or improving water quality and intact forested lands, which are essential to a good quality of life.



*cont. on page 3*

# The Nashville Crayfish

## An HCP Success Story

Nashville, Tennessee is synonymous with many things – country music, the Grand Ole Opry, Vanderbilt University and more! But a crayfish? The Nashville crayfish (*Orconectes shoupi*) is a critically imperiled, federally endangered crayfish that is only present in a small area (100-400 square miles) within the Nashville city limits. As you might guess, its remaining populations are threatened by residential development in the area, specifically the degradation of water quality due to water pollution, road and bridge construction, channel modification, and impoundment. A little over 10 years ago, one specific population of the crayfish was found in a five-acre farm pond, isolated decades previous when a dam was built on a tributary of Mill Creek. The dam that had isolated this population of crayfish was now failing and Tennessee authorities told the landowners that it had to be repaired or replaced. The new owners of this property, Regent Develop-

ment, had plans to create Lennox Village, a development that would mix commercial spaces and neighborhood retail in a residential setting. With the discovery of the Nashville crayfish on their property, Regent Development began working with the Tennessee Wildlife Resources Agency, the Tennessee Department of Environment and Conservation, and the U.S. Fish and Wildlife Service to develop an HCP. An HCP plan was developed for 101 acres including an intermittent stream within the development. A permit was issued in 2002, and as specified in the plan, the development company restored the stream to follow a more meandering path near a forested hillside, creating pools and riffles. They established a permanent streamside buffer, protecting the crayfish habitat as Lennox Village was built and into per-

petuity. Trees native to Tennessee provide a buffer along the stream and signs are posted to let residents know about the crayfish. Biologists expect the stream restoration to encourage Nashville crayfish to recolonize downstream of the restored habitat. The Nashville crayfish HCP is a successful example of how an HCP can allow for the integration of land development activities while conserving at-risk species of plants and animals.



Photo by Dick Biggins

## HCP Spotlight: Eric Brady *continued from page 2*

Q3: Why do you support the HCP?

A3: There is currently a lack of environmental protection in the County, and that combined with the large size of the County is unsettling. The City limits are in the middle of the County, and a lot of water flows from the County into the City and back out into the County. The City's Stormwater MS4 Program is held accountable for the water leaving the City; therefore, it will be beneficial if we can improve water quality through the HCP.

Q4: How does the HCP relate to the City of Crossville's Stormwater MS4 Program?

A4: The HCP is inclusive of Cumberland County and the Stormwater MS4 Program boundary and will allow us to make stormwater improvements throughout the County.

Q5: What have you learned from the HCP process?

A5: I have gained an understanding and appreciation of how large the County is and how many stream miles that actually flow through it.

Q6: What else would you like others to know about the HCP?

A6: The HCP itself will be beneficial to future generations. "We do not inherit the Earth from our ancestors; we borrow it from our children (Native American Proverb)." It is our duty to protect it.

## Critter Corner: Hellbender *Cryptobranchus alleganiensis*



Animals fascinate people in many ways. Some are beautiful (for example, peacock). Others exhibit a mesmerizing behavior (Pacific salmon migrating hundreds of miles). And people may also get attracted to animals because they taste great (blue-fin tuna). Yet, certain animals get our attention because they look bizarre.

The hellbender (*Cryptobranchus alleganiensis*) fits into the last category. It is arguably the most bizarre-looking species among 23 covered species considered in the Cumberland HCP. Adult hellbenders have a characteristic large, flat head

with very small eyes. Their body is coated with wrinkled folds of skin, and this slimy salamander can attain nearly 30 inches! Hellbenders have various common names including “grampus,” “alligator,” “snot otter,” “devil dog,” “mud evil,” “mollyhugger,” and “giant salamander”; these names are not pretty, but certainly speak of this impressive species.

Unfortunately, hellbenders appear to be very rare in our HCP area. Sporadic observations of this species were all made in the last century, although finding them in boulder-cobble dominated streams where they inhabit is not an easy task. Hellbenders have suffered range-wide population declines in the eastern U.S., and the species is considered in need of conservation management in Tennessee. Causes of their imperilment include siltation, pollution and habitat fragmentation. Anglers can also impact the fate of individual hellbenders that were unintentionally caught.

You may have noticed that these human-caused threats are, not by coincidence, being addressed in various conservation measures in the Cumberland HCP. Not only should we aim to conserve and restore ecological condition that allows for the persistence of hellbenders in the wild, we could also make anglers aware of hellbenders in a potential rare encounter (and encourage the “catch-and-release” practice). Because of their high ecological sensitivity, the presence of hellbenders in our streams and rivers indicates good water quality and environment, from which local residents also benefit. The hellbender may be bizarre-looking, but its presence in our waters means our rivers and streams are in good shape for humans as well as salamanders.

## Cumberland HCP Update:

### The City of Crossville’s Stormwater MS4 Program *continued from page 2*

well received by the development community. It goes above and beyond the normal working relationships with contractors in explaining the importance of properly installed Erosion Protection and Sediment Control Plans. Mayor J.H. Graham and City Council are very supportive of the Program’s regulations and enforcement. Staff also has great working relationships with the Tennessee Department of Environment and Conservation (<http://www.state.tn.us/environment/>) and the Obed Watershed Community Association (<http://obedwatershed.org/>).

The public can get involved by calling the Stormwater MS4 Program office at (931) 456-6947 with questions or concerns or by volunteering with the Obed Watershed Community Association [Contact Dennis Gregg at (931) 484-9033]. To learn more, visit the City of Crossville’s Stormwater MS4 Program website at [http://www.crossvilletn.gov/departments/engineering\\_and\\_planning/stormwater.cfm](http://www.crossvilletn.gov/departments/engineering_and_planning/stormwater.cfm).



Annell Fields, Principal Scott Maddox, Eric Brady, Clint Ulmer, and Heath Blaylock

Information was provided by Eric Brady, the City of Crossville’s Stormwater Coordinator, and gathered from the U.S. Environmental Protection Agency’s website (<http://www.epa.gov/>).

## Upcoming Events

### Mayor's 2012 Sustainability Fair

Thursday, May 10 at the Cumberland County Fair Grounds in Crossville—for Cumberland County school children



Some of the Cumberland HCP staff.

**The Cumberland HCP Project includes state and local governments, state agencies, organizations, landowners, and other private citizens working together to address issues of growth and conservation of the forests and waters of the Cumberlands of Tennessee.**

## HCP Staff

Have you ever wondered who works on the Cumberland HCP? Staff members names and titles are listed below the logo for their respective organizations. Contact information for each individual can also be found on our website, [www.cumberlandhcp.org](http://www.cumberlandhcp.org).



- Katherine Medlock: Project Director
- Trish Johnson: Science Advisory Committee Forest Resources Coordinator
- Paul Kingsbury: Technical Writer



- Dr. Dave Ostermeier: Project Advisor
- Dr. Chris Burcher: Science Coordinator
- Teresa Payne: Outreach Coordinator
- Dr. Karen Lannom: GIS Specialist and Website Support



- Dr. Hayden Mattingly: Science Advisory Committee Advisor
- Dr. Yoichiro Kanno: Postdoctoral Research Associate (Quantitative Aquatic Ecologist)
- Samantha Wyatt: Research Technician
- Chuck Sutherland: GIS Specialist

**We'd like to hear from you! For more information about**

**the Cumberland HCP**

**contact Teresa Payne:**

**E-mail: [tpayne11@utk.edu](mailto:tpayne11@utk.edu)**

