

## **Cumberland HCP Science Advisory Committee**

### **Summary and Minutes**

**September 15, 2009**

#### **Summary**

The Science Advisory Committee (SAC) met at Cumberland Mountain State Park near Crossville, Tennessee, on 15 September 2009 from 9:00 a.m. to 3:30 p.m. Forty people were in attendance: Paul Ayers, Steve Bakaletz, Robert Baker, Andrea Bishop, Sean Blomquist, Than Boves, Dave Buehler, Margot Carter, Geoff Call, J.R. Candlish, Johnathan Davis, Malissa Davis, Frank Fiss, Mark Gumbert, Evan Hart, Mick Harvey, Jeff Hawkins, Hill Henry, Jeff Hughes, Trisha Johnson, Paul Kingsbury, Richard Kirk, Hayden Mattingly, Katherine Medlock, Kirk Miles, Dave Pelren, Katie Percy, Pat Rakes, Ron Saunders, Ed Scott, Chris Simpson, Katrina Smith, Mark Thurman, Zebulon Turrentine, Jake Tisinger, Ed Warr, Melinda Welton, Joey Wisby, Pete Wyatt, and Alex Wyss. The main goals for the meeting were to (1) inform SAC members with past, present, and future research goals; (2) summarize the results from the species working group survey; (3) summarize the results of Structured Decision Making and Adaptive Management Workshop attended by HCP Team at USFWS National Conservation Training Center; (4) assess monitoring to address each of the six communities in the Northern Cumberlands Forest Resources (NCFR) HCP; and (5) delineate the next steps for upcoming months.

After a welcome from Hayden Mattingly and introductions, Alex Wyss began the meeting with an update on the status of the HCP development efforts. The main updates included (1) the HCP development team has recently focused its efforts on the NCFR HCP; (2) the Core Team completed a draft of the biological goals, objectives, and conservation measures for both Catoosa, Luper Mountain, Mt. Roosevelt, and North Cumberland Wildlife Management Areas (3) Tennessee Wildlife Resources Agency (TWRA) Region III staff conducted a preliminary review, made comments, and are awaiting the next draft from the Core Team; (4) the HCP SAC will develop a Core Team for TWRA Region IV to enhance biological goals and objectives prior to Region IV staff review; (5) three water protection workshops were held with the Water Resources (WR) HCP Technical Team members to project growth in the three-county area, evaluate efficiency of existing conservation measures concerning development, and discuss new conservation practices to ameliorate impacts associated with growth; (6) the University of Tennessee held a practicum with the Law School and Department of Forestry, Wildlife, and Fisheries which developed 6-7 products including analysis of funding, take, and adaptive management; (7) Katherine Medlock has been working on developing draft activity accounts for the WR HCP; and (8) three new staff members have been hired to aid in the development of the Water Resources HCP including Malissa Davis (SAC Assistant Coordinator) at Tennessee Tech University, Jake Tisinger (AmeriCorps Volunteer to assist with outreach), and Jennifer Gihring (Outreach Coordinator replacing Emily Woodle) at University of Tennessee. Alex Wyss reiterated that the HCP team appreciates each SAC member's time and effort working on the HCP project by filling out surveys, providing guidance to the HCP team, continuing research efforts to support the HCP, and attending meetings. A question was asked: "Where in the timeline is the Forest Resources HCP"? Alex responded and said that

we are a little behind schedule for the December 2009 deadline, but will probably be finished early in 2010. We are currently working on monitoring and adaptive management planning and need to complete the review of the biological goals and objectives.

Next, seven researchers working on HCP-related projects gave short presentations on completed and/or current research. Presentations listed on the agenda included: Relationship between Stream Discharge and Recruitment of the Cumberland Elktoe, Tennessee, Dr. Jim Layzer and Kendall Moles; River Habitat Mapping and Endangered Species Habitat Determinations in the Obed Wild and Scenic River, Paul Ayers and J.R. Candlish; Monitoring Protocols for Two Rare Fishes of Cumberland Plateau Streams – the Spotfin Chub and Tuxedo Darter, Johnathan Davis; Distribution of Habitat for Two Dusky Salamanders on the Cumberland Plateau, Katrina Smith; Cerulean Warbler Response to Experimental Forest Management, Dave Buehler and Than Boves; Status of Golden-winged Warblers in the Cumberland Mountains and Cumberland Plateau, Dave Buehler and Katie Percy; Spring Radiotelemetry and Habitat Characterization Study of Indiana bats (*Myotis sodalis*) on the Northern Cumberland HCP, TN, Jeff Hawkins, Piper Roby, Mark Gumbert; and Use of Stable Isotopes to Determine Female Indiana Bat Migration, Eric Britzke (presented by Mark Thurman). Speakers presented in the following order: JR Candlish, Johnathan Davis, Katrina Smith, Than Boves and Dave Buehler, Katie Percy, Jeff Hawkins, and Mark Thurman standing in for Eric Britzke. Jim Layzer and Kendall Moles had to withdraw their presentation on the Cumberland Elktoe, but will report to the SAC Coordinator within the next two months. The presentations or an abstract will be available on the Cumberland HCP website by mid-October: [www.cumberlandhcp.org](http://www.cumberlandhcp.org)

After lunch, door prizes were given to SAC members. Trisha Johnson presented the preliminary species working group survey results. The goals of the survey were to acquire expert review of the biological goals and objectives and comment on their scientific soundness, assess the confidence in how biological goals and objectives were made, and rank the conservation measures. Thirty-five surveys were completed with a total of review time of 150 hours. The goal of having five people from each species working group complete the survey was met. Results showed that 91% were confident to very confident that the habitat-based approach is scientifically sound, while 100% were confident to very confident that the approach is logical, and more than 75% were confident to very confident that the biological goals and objectives for each community within each wildlife management area are scientifically valid. The results were filtered using only experts who described themselves as confident to very confident in their knowledge of each community. The filtered results were compared to non-filtered results. This filtering process yielded an increase in the percent of survey participants that were confident to very confident that the approach was scientifically sound and the biological goals and objectives are scientifically valid. In other words, there was more support from those who are knowledgeable of the community. All filtered participants felt that the communities were divided into logical groups. Trisha Johnson will be incorporating survey responses into the biological goals and objectives document, documenting changes that are made/ not made based on survey results, and may be contacting survey participants if questions arise. The Cumberland HCP team may use similar surveys in the future to review other portions of the NCFR HCP and WR HCP. SAC members were thanked for their time and effort reviewing the literature and completing the survey.

Sean Blomquist gave a presentation on the adaptive management process, which is a required and challenging component of HCPs. Adaptive management can be used when management choices are available, objectives have been identified, uncertainty can be expressed as testable models, monitoring data can be used to learn about the system, and the information value is high. PROACT is an important aspect to structured decision making that includes: 1) work on the right decision Problem; 2) specify your Objectives; 3) develop creative Alternatives; 4) understand the Consequences; and 5) grapple with your Tradeoffs. There are three adaptive management topics within the NCFRHCP: 1) hemlock woolly adelgid *Adeleges tsugae* in riparian buffers; 2) natural disturbance in reserves (e.g., pest outbreaks – gypsy moth); and 3) identification of the best stands for TWRA to harvest based on covered species habitat requirements and TWRA forest management objectives. Sean used the hemlock woolly adelgid in the riparian areas of the NCFRHCP as an example using PROACT. Sean summarized several points: (1) Adaptive management sensu stricto is part of a larger decision making toolbox and is not always appropriate but is required in an HCP; (2) The Core Team is taking a topic-based approach for the NCFR HCP based on which topics are appropriate for management; (3) It is vital to get all stakeholders involved in setting management objectives; (4) A decision framework is essential to make this process work; and (5) Models are needed to predict outcomes of management to facilitate learning from management.

Afterwards, the SAC divided into assigned community groups: Perennial Headwater Aquatics (Henry, Hughes, Candlish, Mattingly, and Medlock); Perennial Mainstem Aquatics (Ayers, Bakaletz, Rakes, Scott, Harvey, J. Davis, Fiss, Hart, and Kingsbury); Forest Interior (Boves, Saunders, Pelren, Welton, Gumbert, Turrentine, and Wyss); Early Successional (Buehler, Hawkins, Percy, Warr, Thurman, and Johnson); Isolated Wetlands (Wyatt, Bishop, Call, Miles, and Tisinger); and Intermittent Headwater Aquatics (Kirk, Baker, Smith, M. Davis, and Wisby). Each group was asked to develop a list of possible metrics that could be used to monitor the effects of the covered activities on the covered species and their habitat within the assigned community including monitoring technique, frequency, spatial extent, and cost associated with the monitoring. Results from the groups are in the Group Activity Results document.

In sum, the group exercise conducted at this meeting aided in the continued scientific support necessary for the development of the HCPs and brought in fresh insight into possible monitoring approaches for the species covered under the NCFR HCP. After the community groups completed their exercise, all meeting attendees were asked to gather for a photograph. The SAC members were thanked again for their ongoing in-kind support to the development of the HCPs. The meeting was adjourned at approximately 3:30 p.m.