SC Teachers’ Tour:  
Teaching Sustainable Forestry in Environmental Education

June 16th to 18th, 2010  
Environmental Education Advanced Workshop  
Harbison State Forest, Columbia, SC

“A look at Forestry”

One of the most enjoyable and rewarding parts of the S.C. Teachers’ Tour is the introductory 3-day Advanced Environmental Education Workshop that teachers have the option of taking to enhance their knowledge and teaching skills. Those teachers taking the Tour for graduate credit or 45 certificate renewal credits (CRC’s) gathered at Harbison State Forest in Columbia to learn how they can enhance their curriculum using environmental education materials such as Project Learning Tree (PLT). Although only 9 miles from downtown Columbia, this 2176 acre forest is the largest “greenspace” east of the Mississippi river that is within an incorporated city limits. Over the past several years, Harbison has become a recreation and education “Mecca” for those seeking to escape the busy city life and learn more about forestry and the environment.

On day one, after a brief welcome and introduction to the Teachers’ Tour by Jerry Shrum, Environmental Education Coordinator for the Forestry Commission, the educators quickly began learning the background information needed to teach about sustainable forestry and how to use the materials they were given to incorporate their knowledge into their classrooms. Gene Kodama, State Forester for the S.C. Forestry Commission briefly outlined forestry role in the state and the role the state agency plays in protecting and nurturing the forest resource. Beginning with a history lesson on forestry, the class watched and discussed the “Southern Forests, Southern Heritage” video and the books “American Forests” and “Forest Sustainability – The History, the Challenge, the Promise” (The Forest History Society, 2002). Project Learning Tree (PLT) activities such as “We All Need Trees” and “Every Tree for Itself” gave the teachers practice in lessons they could use to teach about our need for forest products, renewable versus non-renewable natural resources, and the values we put on natural resource management.
After lunch participants were treated to activities from Project Learning Tree’s newest secondary module “Forests of the World” and watched the video “Material & the Environment” describing research on the attitudes and misconceptions about forests in the U.S. To end what was a great day of learning and fun, Guy Sabin, Environmental Forester with the S.C. Forestry Commission discussed Best Management Practices (ways to protect water quality in a managed forest) in forestry. Each teacher got a copy of his presentation to use in their classrooms. Darryl Jones of the SC Forestry Commission gave an interesting discussion on endangered species of South Carolina and especially addressed the red-cockaded woodpecker, an endangered species of the long leaf pine ecosystem.

Before retreating to their hotel rooms, the teachers enjoyed a wonderful meal on the back deck of the Environmental Center sponsored by Project Learning Tree. After all, food is an important part of our renewable resources!

**Day 2 – “More Fun, Food, and Education”**

Day 2 began with more fun activities teachers could use in their classrooms with additional materials and guest speakers. Secondary teachers were introduced to the PLT secondary modules “Focus on Forest Issues”, “Focus on Forest Ecology” and “Forests of the World” in a separate workshop, while elementary teachers practiced lessons in how students can “Adopt a Tree”, write poetry from trees in the PLT activity “Poet-trees”, a look at “Trees As Habitats” for wildlife and other species, and examining decomposition of a fallen log to complete the tree’s lifecycle.

After lunch, teachers were treated to an entertaining yet educational presentation of “What is a Forester” by Jimmy Walters, Piedmont Urban Forester for the S.C. Forestry Commission. Jimmy later presented several PLT activities on “Trees In Trouble”.

At the end of the second day of the workshop, the teachers were loaded into vans for a great trip and excursion to one of the South’s only virgin forests, the Congaree National Park. Park scientist David Shelly treated us to a great walk around the boardwalk and discussion of how the park was formed geologically, the history of the park, and other interesting
and knowledgeable information. Congaree National Park is a great resource for educators in the midlands region.

One of the major objectives of the workshop is to expose teachers to outdoor lessons and give the teachers ideas and resources that they can incorporate into their own curriculum and schools. Once trained in Project Learning Tree the teachers can apply for PLT’s “Greenworks” service learning grants. The walk ended with a trip to Millmoree Hunt Club for a supper sponsored by the Central Carolina Chapter of the Society of American Foresters.

Day 3 – FOREST PROTECTION -“The Natural Role of Fire” in Forest Ecology & Insect and Disease of forests

Day three was dedicated to a single topic – FOREST PROTECTION! The teachers viewed the video “The Two Sides of Fire” that they received and discussed the natural role that fire has played throughout the history of the Southern pine forest. Ken Cabe with the S.C. Forestry Commission then addressed the history of wildfire in South Carolina and the science behind wildfires. Forestry technicians were waiting nearby with their dozers and equipment to demonstrate how there are approximately 3000 to 6000 wildfires in South Carolina and the science behind wildfires. Forestry technicians were waiting nearby with their dozers and equipment to demonstrate how are approximately 3000 to 6000 wildfires in South Carolina. Forest ecosystems have been shaped by fire for thousands of years, and fire is a vital component of forest health. The dependence of many forest species on fire is paramount to understanding the role of fire in forest management. Prescribed fire as a management tool in reducing fuel loads and protecting sensitive species was emphasized.
June 22nd to 25th, 2010
The “UPCOUNTRY” Forestry Tour
Florence, SC

Day 4 – “All Onboard the Magic School Bus”

After a long weekend, the teachers were joined by others on the Forestry Tour of the Pee Dee region in Florence, SC. For the next four days the teachers boarded a bus to tour forests, forest products manufacturing facilities, and landowners of South Carolina’s Pee Dee area. On Tuesday afternoon Joe Young of Lowcountry Forest Products in Georgetown discussed his life in the logging business, five generations worth, and the changes that have occurred over time in this now modern business. Crad Jaynes, President of the Timber Producers Association gave an introduction into Sustainable Forestry practices and the business aspects of processing wood products, logging and other topics of turning timber into finished products. The teachers also learned about the Log A Load for Kids program. In this program loggers from all over the state and nation give the proceeds of one load of logs to a local children’s hospital. The program was begun in South Carolina, but has since spread nationwide. The teachers then boarded a bus for our first excursion of the week, off to the woods for an evening looking at urban forestry at Kalmia Gardens in Hartsville, SC.

Day 5 – “Growing Trees, From the Seed Up”

What a fantastic day this would turn out to be! Our group boarded the bus to begin the first of a long day’s journey. Our first visit would be a woods stop on forestland owned and managed by Sonoco. Sonoco is one of the nation’s largest recyclers, but as we were reminded, even recycled materials need virgin pulp to maintain their strength and properties. This beautiful woods stop was part of Sonoco’s hardwood management along...
The next adventure would take us to Bennettsville to visit the Flake Board Manufacturing plant. Here, sawdust and fine wood material is turned into pressed wood to be used in furniture and other household materials, many found in the classroom. School desks, shelving, and other applications can be found in the classrooms of the visiting teachers. This modern facility was a prime example of the technology used in modern through the wood product lasers and other applications most modern in America.

After a wonderful lunch provided by Flake Board, it was off for another woods stop to visit a working Tree Farm. Cattail Tree Farm in Wallace is owned by Eddie Drayton and is a great example of hardwood management. Mr. Drayton uses his certified Tree Farm as a place to continue the research he began at his long service for Sonoco. Now retired, Mr. Drayton’s farm grows many species of hardwoods, especially cherry bark oak, his favorite.

The final journey takes us to the Sandhills State Forest in Patrick, SC to study public land management. At Sandhills State Forest we toured longleaf pine forestlands where pine straw has become the primary income producer. The Sandhills State Forest is one of five state forests found in South Carolina and is managed by the SC Forestry Commission. Alongside the pine straw harvesting was endangered red-cockaded woodpecker habitat. Biologist from the Sandhills National Wildlife Refuge explained how the habitat was maintained, the birds were banded, and the management program was implemented nationwide. After what seemed like several hours of the blazing South Carolina June sunlight, we boarded our bus for an evening of food and thoughts at the Cooper Black Recreation area, managed by SC Parks and Recreation.

**Day 6 – “From the field to the household”**

The next adventure would take us to a harvesting operation where the forest was being thinned and the wood chipped in the field. Joe Young and Crad Jaynes did a great job of explaining what their objective was in this operation, and the machinery and techniques used to make this thinning harvest. Joe was gracious enough to allow us into the site and demonstrate the machinery. Trees were being harvested and removed from the site in a manner that was both environmentally friendly and promoted a healthier forest. Teachers
were allowed to get up-close and personal with the machinery.

The logging operation is one of the highlights of the field tour. It’s a chance to get up-close and personal with the people on the ground and learn how they can harvest timber for the many products we use daily and do it in an environmentally responsible way.

Now it was time to load the bus to head out for a tour of the Smurfit-Stone Container paper mill. After a safety briefing and lunch provided by the company, the teachers were able to tour the paper mill to discover how trees go from chips to huge rolls of paper. On our next stop we visited Charles Ingram Lumber Mill, where we saw trees turned into poles and structural lumber. Furman Brodie did an excellent job of describing the steps of manufacturing structural lumber and acted as a guide on the tour of the mill.

Next, we visited another woods stop, Ellerbe Bay, managed by Resource Management Services. Joey Ferguson joined us on the bus to drive on a bus tour of this forestland. Joey did an excellent job of tying the management objectives of Resource Management Services to its investors, some of whom are retirement portfolios’ such as teacher and state retirement investments. Growing timber, while managing for soil and water conservation and wildlife habitat, is an excellent environmental and monetary investment proposition.
After a brief bus tour of the area, it was on to end the day and enjoy a supper sponsored by the SC Teachers Tour Coalition and a chance to meet many of the sponsors of the Tour and discuss what the teachers have learned over the last six days. Other than the food, one of the great advantages of a learning experience like the Teachers’ Tour is the time spent relaxing and informally discussing the events of the days with foresters and landowners who are actively involved in managing this wonderful resource. Much can be learned and explained in an informal setting that can’t be relayed during a formal lecture. The Society of American Foresters has chapters all over the state with foresters who are eager to help explain their profession to students during classroom visits.

Day 7 – Learning More About Sustainable Forestry

One of the major accomplishments of the Sustainable Forestry Initiative is its reliance on and development of new technologies that help stretch the resource and make the wood products industry more efficient in using wood. On Friday morning, Dean Carson led a great discussion of new engineered wood products and discussed the process of creating jobs through value added products. Teachers passed around many of the new engineered wood products and even some future products that come from trees. Using every part of the tree and utilizing existing and new technology to grow, harvest, and manufacture products that we depend on to support our quality of life is a major goal of keeping our forests in South Carolina healthy, productive, and sustainable. This way future generations may also enjoy the social, economic and ecological benefits of this great natural resource.

Afterwards, the teachers had a chance to evaluate the Tour, ask questions about anything they experienced, and describe any new perceptions about forestry that they had gained from their experience. Then it was time to depart for summer vacation and say good-bye to all our new found friends and memories. And what did they learn? It can be summed up from the video we saw at the end of the tour:

“TREES ARE THE ANSWER!”
TEACHER COMMENTS

Teachers were asked what new perceptions they have about forests, forestry, foresters, public lands, and the forest products industry. Here is what they said:

“I enjoyed the casual atmosphere that was established. The sites we visited were well planned. It was a pleasure to attend with other teachers and see the passion you all have for forestry. It was an excellent refresher for me as an Ag teacher. The forest industry is doing their part to assure a safer environment for future generations. The timber industry is maximizing much more than tree growth when managing the forest. Careful consideration has been given to wildlife, environmental concerns, and water and air quality. New harvest methods are striving to process greater quantities of the tree and have less waste.”

-John Herron, Berea High School, Greenville

“I enjoyed the diversity of opportunities that we were exposed to; we saw the seed to the final products and all that went into the development of that product. The thing I was most impressed by was that the entire tree is used to make a product; there is no waste. Also the concept of sustainable forestry was not clear to me before taking this course; now I understand the true meaning of sustainability.”
I enjoyed getting out and walking out in the trees, hearing how people became involved in forestry, paper and pulp, and the technology behind every aspect of forestry and logging. I learned that there are more forests because of the sustainable business of wood through management practices of businesses and private owners.”

- Anne “Randy” Hart, The Children’s School, Rock Hill, SC

“I enjoyed learning about the economic impact forestry has. This is a major industry in my area yet it is unknown. I now have new perceptions about what sustainability is all about. I had no idea!”

- N.J. Rockwell, Carver-Edisto Middle School

“I enjoyed the wide variety of field trips. There were very well designed to give us an idea of all aspects of forestry. I didn’t realize the forest products industry was so diverse in the state. I had also assumed that most of the state’s forests were pine. I didn’t know wetland logging still went on and I didn’t realize pine straw was such a money maker.”

- John Plumket, Conway High School, Conway, SC

“I really enjoyed the quality and quantity of the educational materials we received. This is great information that I can use in my classroom. I now have new perceptions about the inter-relatedness of trees, wood products, etc. and the importance of these factors in our society.”

- Rick Gilstrap, Alternative Learning Center, Lexington, SC

“I enjoyed the fieldtrips the most. These field trips gave me real world knowledge or first hand knowledge of what forestry actually is. I really did not know much about what products or how wood products are manufactured, but low and behold I have now gained a wealth of knowledge.”

- Karen Reed-Perrineau, Burke High School, Charleston, SC

“This course was a good mixture of lecture and hands on lessons and tours. I now know that we can use it today and my kids can use it later.”

- Jay Copelan, Hana Westside Extension, Anderson, SC

“I really enjoyed the tours and meeting the ones who make it all work. I learned forests are sustainable and support lots of wildlife that I don’t commonly think of.”

- Brantley Caldwell, John de la Howe School, McCormick, SC

“This was excellent, fair information given to us. I will never look at a forests and forestry again the same way. I had a negative perception of cutting, but now I see how wrong I was in my thinking. It is sustainable.”

- Paul A. Gaddis, Lake Marion High School, Santee, SC

“I enjoyed the many people who spoke, the great information, the many places we went, and the great learning experience. The people who spoke made you feel so comfortable
with your questions. The information will be invaluable for use in the classroom. It renewed my excitement for teaching.

- Nancy P. West, Jefferson Davis Academy

“I enjoyed the information and materials that was given and shown to me that I will be able to use in my classroom. One new perception that I came away with is that clear cutting is not bad for the forest. It is planted back. This class has really opened my eyes.”

- Jackie Johnson, St. John Christina Academy, Moncks Corner, SC

“Learning about the sustainability of the forest was inspirational. I enjoyed actually seeing the harvesting and replanting sites. I had no idea how much economic impact the forests had in the state. I also enjoyed meeting other teachers with my passion. I feel that we, especially ‘I’ as a parent and an educator, have the responsibility to teach other about the benefits of sustainable forestry.”

- Linda Barksdale, Gray Court Elementary, Laurens, SC

“This was a quality program that was well worth the seven days of classroom education and tours. No corners were cut to show us first-hand the impacts of sustainable forestry and to provide resources for us to share this knowledge with our students. I feel that I truly understand forest management and I am able to make connections between the limited prior knowledge I had and all there is to know about sustainable forestry.”

- Carrie Caldwell, Calhoun Falls Charter School

The tours of the various mills and forest sites were wonderful! Seeing things first hand makes it easier to teach and share information.

I learned there is a need for trained workers for colleges and technical schools. Women and minorities need to be steered into this field. We need to encourage young people in developing a love and appreciation for forestry.”

- Marie Burrows, Laurens Academy, Laurens, SC

“I enjoyed being able to see and participate in the many parts of the forest industry. The factories and mills were fascinating and I would never have been able to experience this without this course. I never realized how many people prosper from the forest industry in our state. The industry is so essential for our state’s economy.”

- Melissa Remus, The Children’s School, Rock Hill, SC

“I enjoyed being able to tour wood product industries and seeing all of the products made from every part of the tree. This is a growing industry with many careers available to my students.”

- Kim Baldwin, Jackson Elementary, Camden, SC

“This course increased my knowledge greatly and helps me instruct my children. I enjoyed all the wonderful materials that were provided.”

- Judith Deason, McCormick Elementary School, McCormick, SC
“I enjoyed learning about the misconceptions in forestry, the integration of technology in careers in forestry, the tree harvesting cycle and uses for tree products. I learned our forests are not disappearing in our state. Instead, forestry has increased.”
- Robin Phillips

“I really enjoyed meeting people who love what they do to make our perception of forestry change. Forest are sustainable! Foresters are good people who work hard. I now have a clear understanding of how a wood product goes from a forest to a finished product.”
- Bryan Atkinson, Central High, Pageland, SC

“I enjoyed the visits to the different sites, all the diversity of forests in the state. Forestry is not only a sustainable industry, but vital to our economy. Foresters, like hunters and hikers, are environmentalists!”
- Barbara Soblo, E.L. Wright Middle School

“I enjoyed looking at South Carolina from a forestry perspective. We became aware of the totality of the ‘tree’. The hands-on activities we did were top notch. I enjoyed seeing the dedication and love of our forests by the men and women in forestry. It is important for all to know that 5 trees are planted for each tree that is harvested and we, as recipients of forestry programs, are assuring the sustainability of our forests. I was impressed with the care and consideration for wildlife in forestry.”
- Susanne B. Fleetwood, North District Middle School, Hampton, SC

“I really enjoyed going to the different sites to see the hands-on operation in forestry. My knowledge of the process that I learned about was enriched by seeing it in person. I have a better understanding of how the forest and the people that manage them go through to help people. Also, how people can help inform others about the misconception of how the forests are being destroyed.”
- Charles Perrineau, Morningside Middle School

“I most enjoyed the visit to the sawmill, it was an eye opener to learn how technology has enhanced the process of producing wool. I have always thought when a log truck passes me on the road – ‘well there goes another bunch of trees’. I never really went the next step and realized where these logs were going and what they were going to become, how it would happen, etc. I loved seeing the entire process.”
- Terri Geddings, Manning Elementary

“I liked learning about forestry and having a better understanding about trees and different parts of forestry. Trees can be and are replanted, the forest will come back and is sustainable. We must replace renewable resources for future generation. There’s nothing wrong with cutting trees, we need them, and in many cases we don’t realize it.”
- Isabella McKnight, Andrews High School, Andrews, SC
# The 2010 S.C. Teachers’ Tour Educators

<table>
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<tr>
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Sponsors

This Tour was created to show how our society and economy depend on the state’s forest resources, and demonstrate sustainable forest management in action. Our goal is to give educators the tools and resources to better assist their students in making informed decisions about natural resource issues and options.

We would like to thank the following sponsors and supporters for making this annual event possible.

*Abbeville Soil & Water Conservation District  
*AbitibiBowater, Inc.  
*American Forest Management  
*Association of Consulting Foresters  
*Cattail Tree Farm  
*Campbell Timber Management  
*Charles Ingram Lumber Company, Inc.  
*Congaree National Park  
*Collum’s Lumber Products  
*Domtar Paper Company  
*Central Carolina Chapter of SAF  
*Flake Board Manufacturing  
*Forest Investment Associates  
*Georgia-Pacific Corp.  
*Hancock Forest Management  
*International Paper  
*Kalmia Gardens  
*Keowee Chapter of SAF  
*Low Country Forest Products  
*MeadWestvaco  
*Milliken Forestry Co.  
*New South Lumber Co.  
*Norbord SC  
*Pee Dee Chapter of SAF  
*Plum Creek Timber Co.  
*Pollard Lumber  
*Resource Management Services  
*Sandhills National Wildlife Refuge  
*Santee Cooper  
*South Carolina Forestry Association  
*South Carolina Forestry Commission  
*SC Sustainable Forestry Initiative Committee  
*SC Timber Producers Association  
*South Carolina Tree Farm Committee  
*SC Department of Parks and Recreation  
*Smurfit-Stone Container  
*Society of American Foresters-SC Division  
*Sonoco Products Company  
*US Forest Service  
*Weyerhaeuser

*Sponsors that contributed by supplying direct monetary contributions and/or meals.

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