

SC Teachers' Tour: Teaching Sustainable Forestry in Environmental Education

June 17th to 19th, 2009

Environmental Education Advanced Workshop
Harbison State Forest, Columbia, SC

Day 1 – “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 “Meca” for those seeking to escape the busy city life and learn more about forestry and the environment.

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. Joel Felder, Deputy 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.

That morning we were treated to a special first day field trip to Southland Log Homes. Southland is one of the largest manufacturers of log homes in the country. It was great to see the actual production line and also the



Pic. 1 - Log homes stacked and ready for delivery at Southland Log Homes.

“high-tech” design department they have. It was also great to have lunch provided by Southland in one of their beautiful model homes.

After lunch and back at Harbison, the video “Material & the Environment” helped the teachers understand 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. Gary Peters of the USDA-Forest Service 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!



Pic. 2 & 3 – Teachers learn and practice educational activities for their classrooms and examine life in a fallen log at Harbison State Forest’s Environmental Education Center in Columbia.

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”.



Pic. 4 & 5 Elementary teachers use one of the outdoor classrooms at Harbison to write poetry about trees while Secondary teachers study maps and learn about forests around the world from the “Forests of the World” secondary module.

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.



Pic. 6. Not Tree Huggers but Teachers measuring the diameter of a large loblolly at Congaree National Park

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 Milloree 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. Paul Watts 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 the Commission attacks wildfires. There are approximately 3000 to 6000 wildfires in South Carolina each year and our land and forests have been shaped by fire for thousands of years. The Southern pine forest is a fire dependent forest ecosystem, with many species of plants and animals (some endangered) dependent on frequent fires in the forestlands of the state. The importance of using prescribed fire as a management tool in reducing wildfires and ecosystem restoration were emphasized.



Pic.7 & 8 – Teachers inspect a fire suppression unit and the “Firewise” exhibit to learn how to protect their homes from harmful wildfires.

June 23rd to 26th, 2009

The “UPCOUNTRY” Forestry Tour

Clinton, 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 Upcountry in Clinton, SC. For the next four days the teachers boarded a bus to tour forests, forest products manufacturing facilities, and landowners of South Carolina’s upcountry 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 a 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 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 sense spread nation wide. The teachers then boarded a bus for our first excursion of the week, off to the woods for an evening at the Big Pine Hunting Lodge, where Mike Keim gave a tour of their managed property while Lee Murph and other partners cooked up some fabulous steaks and entertainment. Big Pine is managed for hunting, especially turkey, and timber management. Both Mike and Lee are forestry consultants.



Pic. 9 & 10 – Teachers enjoy a relaxing conversation at Big Pine Hunting Lodge while the steaks are cooking.

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 in Whitmire, SC to visit the United Wood Treatment Plant and Pole facility. The treatment of wood for decking and poles was of great interest to our participants. Participants are encouraged to ask questions and this stop was no exception where many questions were asked about the process of treating poles and the safety of treated wood products.



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. Ideal Logging 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.



Pic. 12 & 13 – The feller-buncher moves through the forest selectively choosing the correct trees to thin. Next, teachers get a close look at the head of this machinery. Wearing protective gear is always a necessary, perhaps usable in the classroom also.

Next was a visit to AbitibiBowater Paper Mill in Catawba, SC where we enjoyed a tour of the mill and a good meal also. Always a gracious host, Mike Windhorn lead a discussion and showed a video on the papermaking process before dividing us into groups to tour this modern facility.

Now it was time to load the bus to head out for a tour of the Sumter National Forest's Indian Creek area. We visited an area that was being restored to a near prairie structure in order to foster better habitat for quail and other ground feeding animals. This stop demonstrated the cooperative effort between federal, state, and private landowners to restore wildlife habitat through forestry practices. USDA-Forest Service personnel and DNR small game wildlife biologists explained the management process.



After a brief bus tour of the area, it was on to end the day and enjoy a supper sponsored by the Enoree Chapter of the Society of American Foresters at Johnny Wilson's Hunt Camp outside of Newberry. (Picture 15

– Johnny passes out cooked game to participants to try). 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 6 – “The Wonders of Technology”

Thursday turned out to be a fascinating day for most all of the teachers. It was a day filled with technology as we visited sawmills, OSB mills, more forests and a Tree Farmer. Our first excursion was to Georgia Pacific Plywood mill in Prosperity, SC. Georgia Pacific has a large plywood and sawmill in the area and hosted us for a tour of the sawmill. After a questions and answer session about hiring practices, safety concerns and employment in the community, it was off to visit with a Tree Farmer, Dr. Walt McPhail. At Dr. McPhail’s



site we were able to see the forests grow, literally, as he took us from a newly planted field of pines, through an area of young pines through to an area of mature pines. Afterwards, Dr. McPhail, along with Piedmont Pulp Inc., treated us to a great lunch.

Pic. 17 – Dr. Walt McPhail takes the teachers on a tour of land he’s planted and nurtured over the years and explains the Tree Farm System and sustainable forestry practices.

Our next excursion was to land owed and managed by Plum Creek. It was interesting to note that as we stood among these majestic tall pines, that this land was a cotton field only 50 years ago. Plum Creek, one of the largest land holders in the nation, also leases out this property to hunt clubs. This relationship between forestry and wildlife exist in all the forests we visited and serves as a reminder that forest provides many functions as they grow. Among them are wildlife habitat, clean air and water, storage of carbon, soil protection, recreation, jobs and the many products we use daily that enhance our quality of life. And they are renewable too!

Industrial forests are sometimes managed more intensely than private or public forest because of the need to feed mills or maximize profit. However, Plum Creek has no mills and simply is a forest based company growing timber. This allows more flexibility in their management objectives.

Next, it was off to visit Norboard's OSB (oriented strand board) plant in Joanna, SC. This engineered wood product is produced by literally cutting the tree into tiny strips and reassembled to make a stronger building material than the tree itself was.



Pic. 18 – Teachers watch as logs are being processed into the OSB mill to be stripped and glued back together.

Finally it was time for our sponsors reception and final dinner, a low-country shrimp boil. The Sponsors Reception is always a pleasant way to end the week of tours. Here, the teachers, dressed in their new Teachers' Tour T-shirts (see group photo), got to relax and mingle with many of the people who sponsored and worked so hard to make this Tour happen.

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!”

Group Photo of the 2009 S.C. Teachers' Tour



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:

“Loggers were totally different from the preconceived notions I had. The use of technology was surprising to me, much more than just a chainsaw and a big truck!”

- Holly Kennerly, Cherokee Trail Elementary, Abbeville county

“I have changed my opinion about the ugliness of clear cuts. I now know they are good things. I also am now aware of the numerous products that come from trees and that they are renewable so that those products will not deplete the trees and forests. I was amazed that foresters and everyone was so passionate about their jobs.”

- Merry Cox, Cherokee Trail Elementary, Abbeville county

“Foresters are truly working their hardest to sustain our forest. All of these people work together like a family and they help each other out, from the loggers to the mill and all those in-between.”

- Michele Gleaton, Calhoun Academy 3rd grade teacher, St. Matthews

I did not know that forestry in our state was so huge and how South Carolina benefits from its use.”

- Velma English, Cherokee Trails Elementary, Abbeville county.

“I learned that foresters using sustainable forest practices are the true stewards of the land. I learned about the tremendous respect and accountability standards that the industry has for our shared environment.”

- Glen Robinson, Andrew Jackson Middle School, 6th grade teacher, Kershaw, SC

“I like the idea of sustainable forestry. I have never thought of trees as a crop. It was nice to see the close bonds between the forestry community and the ties they had to the land.”

- Michelle Ashley, South Aiken High, Aiken, SC

“I did not realize what true environmentalist foresters, loggers, and industry leaders are. Their dedication to and passion about the wise usage and maintenance of our natural resources is inspiring.”

- Jane Fisher, 2nd grade teacher at Mossy Oaks Elementary, Beaufort, SC

“My perceptions have changed greatly in respect to renewable forests. I did not know that forestry was so huge and how SC benefits from its use.”

- Velma English, K-7 teacher, Cherokee Trails Elementary School, Abbeville County.

“This was extremely teacher friendly and practical for classroom use. It has opened many possibilities for my classroom and outdoor teaching.”

- Nancy Peoples, 5-8th grade teacher, Addlestone Hebrew Academy, Charleston, SC

“This is the best summer course I have ever taken.”

- Ruth Dunn, 8th grade teacher, Sims Middle School, Union, SC

“I have a greater respect for the forest, forestry, and foresters. All aspects of forestry are much more complex than I expected, and I did not realize the extent of technology used in the area of forestry.”

- Marcia Burckhalter, Barnwell, SC

“A tree is not just a tree any more. I’m able to look beyond that tree and see the industry that goes with it. I never knew that the forestry industry could produce as many jobs as it does.”

- Donna Corcoran, 2nd grade teacher, Calhoun Academy, St. Matthews, SC

The 2009 S.C. Teachers' Tour Educators

First Name	Last Name	City	School	Grades Levels
Michelle	Ashley	Aiken	Schofield Middle School	7th
Marcia	Burckhalter	Barnwell	Barnwell High School	10th
Donna	Corcoran	Lone Star	Calhoun Academy	2-3
Merry	Cox	Due West	Cherokee Trail Elementary	4th
Ruth	Dunn	Union	Sims Jr. High	8th
Velma	English	Greenwood	Cherokee Trail Elementary	K-4-7
Jane	Fisher	Beaufort	Mossy Oaks Elementary	K-5
Michele	Gleaton	Blackville	Calhoun Academy	3rd
Martha	Greer	Honea Path	Cherokee Trail Elementary	4th
Holly	Kennerly	Due West	Cherokee Trail Elementary	1st to 5th
Willow	Matyas	Myrtle Beach	Lowcountry Day School	3rd
Nancy	Peebles	Charleston	Addlestone Hebrew Academy	5-8th
Glenn	Robinson	Lancaster	Andrew Jackson Middle School	6th
Matt	Schnabel	West Columbia	Saluda Shoals Park	K-12
Suzanne	Sherard	Abbeville	Diamond Hill Elementary	4th
Calvert	Sherard	Abbeville	Abbeville Career Center	11-12
Robert	Silva	Columbia	Guniyard Elementary	K-8
Linda	Thompson	Spartanburg	Sims Jr. High	7th & 8th

Sponsors

This Tour was created to show how our society and economy depend on forest resources, and demonstrate sustainable forest management in action. Our goal is to give you tools and resources to better assist your 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.

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*AgSouth Farm Credit
American Forest Management
*Association of Consulting
Foresters
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Campbell Timber Management
Congaree National Park
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Domtar Paper Company
*Dr. Walt McPhail- Tree Farmer
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