FORY 4190 2010 Service Learning Project

As a class you will develop a management and outreach plan to rehabilitate a declining loblolly pine (*Pinus taeda*) stand that is located on the Auburn, Alabama wildland urban interface (WUI). The site will be cruised and marked for harvest to remove dead and declining trees while promoting gaps that will be replanted in longleaf pine (*Pinus palustris*). This method will allow for a gradual conversion of this stand to longleaf while leaving trees on site throughout the process limiting the impact on forest aesthetics that would be created with a clear-cut.

You will not only have a hands-on role in the development of a forest rehabilitation and demonstration site, but also participate in hosting a workshop, which you will develop, for school children. This project will highlight forest measurements techniques, demonstrate longleaf management, and help the public learn more about forestry in Alabama.

**Detailed project description:**

Auburn University School of Forestry and Wildlife Sciences manages a 100-acre forest, the North Donahue Tract that was first established as a tree density study area in 1933. Since that time many other studies were established on the site by University faculty with research on the site continuing through the 1990’s. These studies were designed to compare methods of various silvicultural activities such as herbaceous weed control, burning, and regeneration, and in addition, provide a demonstration area on campus. By the early 1990’s, however, most studies were discontinued or abandoned and the stand had begun to decline with mortality that has increased markedly in the last two years.

We have the opportunity to reinvigorate a twenty-acre portion of this area as an outdoor classroom and outreach area that has the potential to be seen by thousands of people each year. At only one-half mile from campus, this area is part of a popular recreational running route for locals, and is adjacent to several large tailgate areas for Auburn University sports fans. This “high-profile” location makes it an excellent candidate for a forestry and wildlife outreach and demonstration site as well as future learning laboratory for students.

The first goal of this project is to improve the health of a declining stand and develop it as a showplace for forestry in Alabama and Auburn University School of Forestry and Wildlife Sciences that
will be seen and utilized by school children, college students, the community, and those visiting campus. Stand health on this tract is indeed declining, but due to its location, clear-cutting of the area is not recommended.

The second goal of this project is the development and promotion of this site through a service learning project. Service learning is a form of teaching using a project based approach to accomplish academic goals through community service (NCSL 2002). As part of the requirements for FORY 4190, you will cruise this tract and determine stand inventory. Estimates of the stands 5-year tree growth and mortality will also be included. As part of the inventory process you will also create a GIS database and maps will be created identifying areas that need to be harvested as gaps for regeneration. Understory vegetation measurements will also be taken and used to determine site preparation and planting needs.

A print-ready outreach publication that highlights the history of the site, forest measurements, or forest management will be developed by you as well as information for signs at the planting areas and an educational kiosk to be displayed at the site.

As a final aspect of this project, you will be active participants in a forestry demonstration and field day on the site. By acting as field guides you will be part of an organized outreach program to learn about the project and forestry in Alabama. Potential activities would include discussion and demonstration of topics such as forest management and forest measurements.

Timeline for activities on the site.

1) Forest Measurements II students will cruise this tract and determine stand inventory, and management options.

2) GIS database and maps will be created identifying areas that need to be harvested as gaps for regeneration. Harvest areas will be marked.

3) Estimates of the stands 5 and 10 year tree growth and mortality, site index, and develop stand and stock tables for the site.

4) Understory control is necessary after the stand is harvested. Develop prescriptions for mechanical grinding/bailing, and/or chemical treatments will be considered for initial understory control.
5) Determine replanting the gaps to the specified densities. Longleaf pine seedlings will be planted in the gaps. Different densities (300, 500, 700, 900+) and configurations of plantings (straight rows, random, spiral) will be planted in the gaps to demonstrate how seedlings respond to different density configurations.

6) Print-ready outreach publications that highlight forest measurement and management topics.

7) Information for signs at the planting areas and educational kiosks on forest measurement and management topics.

8) Develop management objectives and final report for the site.

9) Assist in the organization of, and serve as field guides for, a 2 hour field tour for school children. Potential activities would include discussion and demonstration of topics such as forest growth and mortality, basic forest measurements.

Works Cited:


Appendix B

Basic outline for FORY 4190, 2011 WAC project

1) Forest Measurements II students will cruise a forest tract to determine stand inventory. This site and the information collected will be used throughout the semester.

2) The site will be mapped using Global Positioning Systems (GPS) and a resulting GIS database and maps will be created.

3) Using knowledge gained in the areas of statistics, forest stand dynamics, and growth and mortality estimation, students will estimate of the stands 5 and 10 year tree growth and mortality, site index, and develop stand and stock tables for the site.

4) Student teams will develop a 2-page outreach publication that highlights a particular forest measurement or management topics.

5) Student teams will develop an interpretive sign based on their forest measurement or management topic.

6) Students will assist in the organization of, and serve as field guides for, a 3-4 hour field tour for elementary school children. Using their outreach publications and interpretive signs as a basis for their talks, students will lead small groups of school children in activities and discussion topics such as forest growth and mortality, map reading, and basic forest measurements as it applies to the site.