



## Climate Change and Forest Health in Mississippi

A great deal is being talked and written about climate change. There are those that follow the paradigm of global warming and there are those that do not. Debate rages over weather versus climate. Unfortunately much of the argument is driven by politics and personal agendas. However truth generally wins in the end. What we all should be concerned about is how to adapt to inevitable environmental changes and produce the healthy forests of the future. Societal and individual perspectives will also change. Some individuals will consider certain forest conditions threatening or unhealthy whereas other individuals, although recognizing the same conditions, deem the situation to be healthy. Different convictions evolve out of ever-changing individual perceptions and/or organizational agendas and here in lies one of our great challenges: how to deal with these human derived changes.

Today's forest conditions are the result of past forest management practices or lack there of. Unhealthy forests are a product of not utilizing the lessons learned from past management practices. Silviculturally we know that there are basic guidelines we must follow if we are to expect

our forests to be healthy and remain healthy even under changing climatic conditions. They are: 1) matching the tree species to the appropriate site – trees planted on the wrong sites seldom have the vigor necessary to meet expectations and deter or withstand attack by pests, 2) controlling stand density – if a stand's basal area exceeds the site index, then the stand should be thinned to the appropriate level to reduce competition for light, nutrients and water, 3) promptly salvaging all lightning-struck, logging-damaged, diseased, and high-risk trees, which have historical served as epicenters of outbreaks, 4) plant trees only in their natural range – planting pines outside their range and offsite causes additional stress that increases their susceptibility, 5) minimizing site and stand disturbances – exercising care in use of heavy equipment, road layout, culvert location, and other construction projects that results in changes in drainage ultimately result in tree stress, and 6) harvesting all mature trees at or shortly after, rotation age. The use of good forestry and silvicultural practices naturally leads to healthy forest conditions if properly implemented.

However, before any steps can be taken to produce healthy forests, individual landowners and managers need to have stated management objectives in their stewardship or management plans. Society is concerned with the issues of forest health and conservation of natural resources. Environmentally friendly approaches to the management of our forests are desired. Multiple management objectives can be established within the framework of good forestry practices to maintain the health and productivity of our forests.

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