## Down deadwood biomass in different forest management compartments within the Coastal Plain and Piedmont of North Carolina

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Wildfire risk has become an important issue in the southern US as the population continues to move into the wildland-urban interface. Land managers must find ways to reduce risk and comply with the President's Healthy Forests Initiative. Identifying areas at high risk and determining the fuel load present are two important considerations that land mangers face. However, fuel data is often incomplete or based on regionalized models that may not accurately represent forest types within the region.

As part of an effort to model and map fuel loads across the southern US we established 20 to 30 field plots in six distinct forest management compartments within the Coastal Plain and Piedmont of North Carolina. The four Coastal Plain sites include an unburned pond pine stand, a pond pine stand scheduled for prescribe burn every four years, and two longleaf pine stands burned either annually or every four years. The Piedmont sites, each burned on a four year cycle, include a hardwood and a loblolly pine stand. Data collection protocols followed those developed by FHM to measure FIA Phase 3 plots and included measurements of fine (1 to 100 hour fuels) and coarse (1000 hour fuels) woody material, litter and duff. Hurricane Isabel passed through one of our sites following initial biofuels measurements allowing us to assess the changes in fuel loading following a natural disturbance.

Total down deadwood ranged from 2 ton/acre on an annually burned site to 7.2 tons/acre on the post-hurricane site. Total fine woody material ranged from 0.27 to 1.48 tons/acre. Biomass was greater with increasing size class on all sites. Coarse woody material was the largest contributor to total DDW and ranged from 1.3 to 5.7 tons/acre. While these larger fuels may not contribute to wildfire except under extreme drought conditions they play an important role toward assigning wildfire risk. This data only represents a fraction of the overall forest types and management regimes present in the southern US, but offers insight into the distribution and amount of DDW and furthers our ability to identify areas that are at a high risk of wildfire.