



Preliminary Estimation of Drought Economic Loss in East Texas Forests

In 2011, Texas experienced an exceptional drought, prolonged high winds and record-setting temperatures. Together, those conditions took a severe toll on trees across the state. The forests of East Texas were among the hardest hit. This historic drought has had major adverse economic impacts on the forests in the region.

According to our preliminary study, an estimated \$558 million of merchantable trees (diameter of 5 inches or larger) on forestland in East Texas have succumbed to the drought. The loss is roughly twice the stumpage value of annual timber harvest in Texas over the past three years. The damaged timber could be worth \$1.1 billion when sold to mills (delivered value). The drought also has had devastating impacts on seedlings and saplings, which normally are more susceptible to a severe drought of this scale. Economic loss to these pre-merchantable timber stands is estimated to be \$111 million.

Taking the impacts to merchantable and pre-merchantable trees into account, the direct economic loss of East Texas forests from the recent drought is estimated to be around \$669 million if stumpage values (sale value of standing trees) are used. The estimated loss could ramp up to \$1.2 billion if delivered values are used.

Note the timber loss estimated here only includes the values of trees that died as a result of the drought. Wildfire losses are not included (see below for separate estimate of wildfire losses). Economic losses due to reduced growth rate of surviving trees are not considered here. The estimated economic loss of merchantable timber is based on liquidation value, which is the sales value of timber resulting from immediate harvesting. Timber grows in volume over time and values of final timber products could be substantially higher due to better timber grade and quality. Meanwhile, the economic loss estimates do not include the impacts of lower market prices as result of higher timber supplies in the short term.

The drought has contributed to wildfire across East Texas. During the 2011 fire season, an estimated 155,000 acres of forestland were destroyed by wildfire. The stumpage value of timber damaged by fire was estimated to be around \$97 million. Had the timber been delivered to the mill, it would have fetched \$208 million.