



Biomass Carbon Neutrality

Reid Miner
National Council for Air and Stream Improvement
April 2010

Summary Points of Study

- In the context of biomass energy, “carbon-neutrality” reflects the fact that biomass carbon was only recently removed from the atmosphere and is part of a natural cycle. When this cycle is in balance, it has a net zero impact on atmospheric carbon; i.e. it is “neutral.” This is an important distinction between biomass carbon and the carbon in fossil fuels.
- The balance of the biomass carbon cycle is most appropriately addressed at the national scale. Assessing the biomass carbon cycle at the individual plot level yields a misleading picture because it ignores trees growing on other plots that will be harvested in future years. If wood-producing land is being regrown to pre-harvest carbon stocks before it is harvested again, the atmosphere sees a net zero carbon “emission.”
- The biomass carbon cycle is never exactly in balance. Loss of forests in the tropics is a significant source of emissions, while forests in the U.S. absorb more carbon than they lose through decay, harvesting, and fires.
- By inserting energy production into the biomass carbon cycle, we can produce energy without adding combustion-related fossil fuels carbon to the atmosphere.
- The U.S. has a well-established system to account for forest carbon stock changes annually. It shows that U.S. forests supplying wood to the industry have stable or increasing stocks – meaning that the net carbon stored by these forests is accumulating over time.