



Oregon Forest Industries Council

## Climate change

# Economic incentives should be used to reward private forest landowners for the carbon they store in managed forests.

## Overview

The role of Oregon's forests is an important consideration in addressing the rise in atmospheric carbon dioxide levels and potential climate change impacts. Globally, forests – including above ground and in the soil – store 50% more carbon than exists in the atmosphere<sup>1</sup>, far more than alternative land uses. Oregon's forests alone sequester 34 million metric tons of carbon dioxide equivalent (CO<sub>2</sub> e) per year<sup>2</sup>, approximately 50% of Oregon's total greenhouse gas (GHG) emissions. This is equal to direct GHG emissions from the transportation, industrial, commercial and residential sectors statewide.

Modeling studies indicate that, over time, managed forests result in more carbon sequestered than unmanaged forests because young forests are more efficient at sequestration. The 2007 4<sup>th</sup> Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) states: *"In the long term, a sustainable forest management strategy aimed at maintaining or increasing forest carbon stocks, while producing an annual sustained yield of timber, fibre or energy from the forest, will generate the largest sustained mitigation benefit."* Oregon's private forestlands, while comprising only 37% of the forestland base, sustainably produce over 80% of the state's annual harvest, and are therefore a critical component of any GHG mitigation strategy.

Conversely, federal forestlands comprise 59% of the forestland base but produce less than 10% of the harvest. Natural tree mortality on federal forests is estimated to be six times the current harvest levels. Furthermore, more than a third of Oregon's forests – about 10 million acres, mostly federal – are at an unnaturally high risk of catastrophic wildfire. To the extent that climate change results in a hotter, drier climate, it will further stress these already fire-prone forests. In addition to destroying valuable natural resources, it is estimated that a wildfire can emit up to 100 tons of greenhouse gases, aerosols and particulates per acre. Oregon's Biscuit Fire in 2002, which burned nearly a half-million acres, is estimated to have released between 12 and 16 million metric tons of CO<sub>2</sub> e, equal to between half to three-quarters of the transportation-related emissions in Oregon that year.

## Position

Oregon's forests can and do play a significant role in mitigating GHG emissions in the state. Private forest landowners should be provided with economic incentives that recognize and reward the forest carbon sequestration benefits of managed forests, and encourage them to continue to actively manage their forestlands and limit forest conversion. On federal forestlands, landscape scale management efforts are needed to restore forest health and to reduce the risk of future fires that are likely to be more severe, cost more to suppress, and have greater impacts on wildlife habitat, infrastructure, and water and air quality (including carbon emissions).

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<sup>1</sup> Testimony of John Helms, 2005 President of the Society of American Foresters, before the House of Representatives Select Committee on Energy Independence and Global Warming, April 26, 2007.

<sup>2</sup> 2007 *Baseline Greenhouse Gas Emissions and Removals for Forest and Agricultural Lands in Oregon*. California Energy Commission, Energy-Related Environmental Research Program. CEC-500-2007-025.