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California AB 1504 Forest Ecosystem and Harvested Wood Product Carbon Inventory

Board of Forestry and Fire Protection
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AB 1504 requires that the CA Board of Forestry and Fire Protection ensures:

- Maximum sustained production of high-quality timber in serving the public's needs while also providing other forest benefits such as carbon sequestration, recreation, water resources, habitat, economic vitality, etc.
- Rules and regulations governing harvest of commercial tree species consider the capacity of forests to sequester 5 Million Metric Tons (MMT) of Carbon Dioxide Equivalent (CO_2e) annually by 2020.

For the Board to evaluate and monitor progress on the state's forest carbon sequestration goals, through agreements with the U.S. Forest Service Pacific Northwest Research Station (PNW), CAL FIRE is completing a forest ecosystem and harvested wood product carbon inventory in accordance with IPCC guidelines.

- First inventory expected mid-2017, will focus primarily on forest ecosystem carbon stocks, with an overview of carbon in harvested wood products (HWP).
- Second inventory expected early 2018, will include annual updates to forest ecosystem carbon stocks and will address HWP carbon stocks in more detail.
- Although AB1504 references meeting a forest sector carbon sequestration target by 2020, due to more recent legislation establishing 2030 and 2050 greenhouse gas (GHG) emissions reduction goals (i.e. SB 32) and the periodic update of the Climate Change Scoping Plan by the Air Resources Board, the 1504 inventory will continue beyond 2020.

AB 1504 Forest Ecosystem Carbon Inventory

- Relies on USFS Forest Inventory and Analysis (FIA) Program data using a ground-based, permanent plot re-measurement system of the same trees over time. FIA includes data from both federal and non-federal forestlands.
- Captures and quantifies growth well, which can be a limitation in remote sensing-based forest carbon inventory methods, as identified in a 2015 forest carbon inventory technical improvements report to the Air Resources Board. Also, directly accounts for mortality and changed conditions, is repeatable, allows for low errors, and is consistent with forest carbon inventory data and reporting nationally.
- Initial measurement of all plots completed between 2001 and 2010; this will be the baseline period.
- First re-measurement of all panels will be completed by 2020.
- Carbon stock reported in each year will be the ten-year rolling average (i.e. 2015 carbon stock is average carbon stock between 2006 to 2015).
- Includes public and private ownerships.
- Forest carbon stocks, gross growth, mortality by cause, removals, and net change will be provided for various pools, forest types, ecoregions, and land owners and will be aggregated to provide statewide estimates.

- In addition to forestland carbon stocks, land converted to forestland, and forestland conversions to other land-uses will be addressed as an approximation, with refinements in future reports.
- Other select GHGs included, such as from fire, decay, or landfills, in consultation with ARB and the USDA National Greenhouse Gas Inventory (NGHGI).
- Urban forests not included, as they are in the IPCC settlements category, rather than forestland.
- Per IPCC guidance, shrublands (i.e. chaparral) considered part of the grassland category and are not included.
- Neither urban forests nor shrublands are currently represented in FIA data.

AB 1504 Harvested Wood Product Carbon (HWPC) Inventory

- Based on a production approach, i.e. all timber produced from all ownerships in California will be evaluated regardless of whether it is consumed within the state or exported to other states or countries.
- Products still in use or at the landfill from historic harvests will be included for as far back as data allows.
- When by-products of commercial harvest/fuels reduction (i.e. logging slash or sub-merchantable biomass) are utilized to create energy, emissions from fossil fuel-based energy, in-forest decay, and open-pile burning are reduced. The amount of HWP C associated with energy capture will be included. A goal for future reports will be to describe the permanent, actual avoided emissions associated with biomass utilization.
- Describing opportunities for potential avoided emissions from increased biomass utilization or wood product substitution for other, more energy intensive building materials such as cement and steel is another goal for future reports.

Board utilization of AB 1504 reporting

- AB 1504 reports will be relied upon by the Board as an ongoing monitoring of carbon stocks associated with the forestry sector in California. Reporting will provide an active feedback loop to the Board to inform the maintenance of a comprehensive set of regulations for commercial forest management on state and privately owned timberlands, inform general forest policy for the state, and inform policy level decisions as they pertain to the state's interest in federal forestry matters.