

Oregon Forest Ecosystem Carbon Inventory: 2001-2016

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Acronyms

AB – Assembly Bill

BLM – Bureau of Land Management

C – carbon

CF – cubic feet

CH₄ - methane

CI – confidence interval

CO - carbon monoxide

CO_{2e} – carbon dioxide equivalent

DBH – diameter at breast height

EPA – Environmental Protection Agency

FF – Forest Land Remaining Forest (IPCC terminology)

FIA – Forest Inventory and Analysis

FIADB – FIA database

FMRL – Forest Management Reference Level

GHG – greenhouse gas

GRM – Growth, Removals and Mortality

HA – hectares

HWP – harvested wood product

ICE – Image-based Change Estimation

IPCC – Intergovernmental Panel on Climate Change

LF – Forest Land Conversions (IPCC terminology)

mm – millimeter

MMT – million metric tons

MT – metric tons

NFS – National Forest System

NGHGI – National Greenhouse Gas Inventory

NMVOC – non-methane volatile organic compounds

N₂O – nitrous oxide

NO_x - nitrogen oxides

NRCS – Natural Resources Conservation Service

NRI – Natural Resources Inventory

ODF – Oregon Department of Forestry

PNW – Pacific Northwest Research Station

RPA – Resources Planning Act

SOC – soil organic carbon

μm – micrometer i.e., one millionth of a meter

UNFCCC – United Nations Framework Convention on Climate Change

USDA – United States Department of Agriculture

USFS – United States Forest Service

USGS – United States Geological Survey

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Appendix 1: Forest carbon stocks by forest by forest type and region

Forest carbon stock for forest land remaining forest (FF): by forest type and forest land status
Aboveground live tree pool including foliage:
All of Oregon (Table D1) and ecoregion (Tables D2-D8), 2007-2016
Aboveground dead tree pool:
All of Oregon (Table D9) and ecoregions (Tables D10-D16), 2007-2016
Aboveground live understory vegetation pool:
All of Oregon (Table D17) and ecoregion (Tables D18-D24), 2007-2016
Belowground live understory vegetation pool:
All of Oregon (Table D25) and ecoregion (Tables D26-D32), 2007-2016
Belowground live tree pool:
All of Oregon (Table D33) and regions (Tables D34-D40), 2007-2016
Belowground dead tree pool:
All of Oregon (Table D41) and regions (Tables D42-D48), 2007-2016
Soil organic carbon pool:
All of Oregon (Table D49) and regions (Tables D50-D56), 2007-2016
Aboveground down dead wood pool:
All Oregon (Table D57) and regions (Tables D58-D64), 2007-2016
Aboveground forest floor pool:
All Oregon (Table D65) and regions (Tables D66-D72), 2007-2016

Appendix 2: 2007-2017 Oregon FIA forest carbon inventory tables

Area
Sampled area:
Sampled area by land status and Owner group for all of Oregon (Table A1) and by ecoregion (Tables A2-A8), 2007-2016
Forest Area for Forest Land Remaining Forest (FF): by owner:
Forest land area by land status and ownership group for all of Oregon (Table A9) and by ecoregion (Tables A10-A16), 2007-2016
Forest Area for Forest Land Remaining Forest (FF): by forest type:
Forest land area by forest type, forest land status and ownership group for all of Oregon (Table A17) and by ecoregion (Tables A18-A24), 2007-2016
Net forest carbon flux for forest land remaining forest (FF)
Net carbon flux for all pools by owner:
Annual net change in all forest pools by ownership group for all Oregon (Table B1) and for ecoregions (Tables B2-B8), 2007-2016
Disturbance effects on net forest carbon flux, all forest land:
Annual net change in aboveground carbon pools by disturbance, forest land status, and ownership group, 2001-2006 to 2011-2016 for all Oregon (Table B9.1) and per acre (Table B10); for live trees only on county (Table B9.2) and national forest lands (Table B9.3).
Disturbance effects on net forest carbon flux, timberland:
Annual net change on timberland for aboveground pools by disturbance and owner, 2001-2006 and 2011-2016 – total (Table B11) and per acre (Table B12)
Forest carbon stock for forest land remaining forest (FF): by owner group and forest land status
Aboveground live tree pool including foliage:
All of Oregon (Table C1) and by ecoregion (Tables C2-C8)
All of Oregon by 10-year averages (Tables C9.1)
Aboveground dead tree pool
All of Oregon (Table C10) and by ecoregion (Tables C11-C17)
All of Oregon by 10-year averages (Tables C18.1)
Aboveground live understory vegetation pool:
All of Oregon (Table C19) and by ecoregion (Tables C20-C26), 2007-2016
Aboveground and belowground live understory vegetation pools, 10-year averages:
All of Oregon by 10-year averages (Tables C27.1)
Belowground live understory vegetation pool:
All of Oregon (Table C28) and by ecoregion (Tables C29-C35), 2007-2016
Belowground live tree pool:
All of Oregon (Table C36) and by ecoregion (Tables C37-C43), 2007-2016
Belowground live and dead tree pools, 10-year averages:
All of Oregon by 10-year averages (Tables C44.1)
Belowground dead tree pool:
All of Oregon (Table C45) and by ecoregion (Tables C46-C52), 2007-2016
Soil-organic carbon pool:
All of Oregon (Table C53) and by ecoregion (Tables C54-C60), 2007-2016
All of Oregon by 10-year averages (Tables C61.1)
Aboveground down dead wood pool:

All of Oregon (Table C62) and by ecoregion (Tables C63-C69), 2007-2016
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Net forest carbon flux from forest land-use conversions:
Annual change in carbon pools due to change in land use between forest and nonforest in Oregon, 2001-6 to 2011-16 (Table E2)
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Chapter 1. Executive summary and key findings

The pursuit of carbon mitigation with forest management policy in Oregon has consistently resulted in the recognition that a reliable forest carbon accounting framework is fundamental to the policy development and monitoring process. This report, based on an extensive field plot monitoring system, supplies the quantitative dimension of that forest carbon accounting framework by providing estimates for the status and trends of carbon in Oregon's forest ecosystems and ownerships since 2001. The information in this report is based on measurements conducted on 9,483 forested plots in Oregon by the Forest Inventory and Analysis Program (FIA) within the USDA Forest Service. This report includes a brief introduction to the pursuit of forest carbon accounting in Oregon and an overview of the forest carbon cycle (Chapter 2) followed by a description of the methods used to inventory Oregon's forests and estimate forest carbon (Chapter 3). The results of the analysis are presented in Chapter 4 and are based on a subset of the abundant tabular data this analysis provides. Estimates of forest carbon across five forest ownerships and seven ecoregions are first reported in terms of flux, which is the difference between the amount of carbon that enters, and the amount that leaves, one of seven different pools of carbon. Estimates are then reported in terms of the amount of carbon stored in each pool. The results are compared with estimates from other reports and research in Chapter 5 and strategies for improving the inventory and analytical methods are discussed in Chapter 6. In this analysis results of carbon physically present in the forest are given in metric tons (MT) of carbon (C). Results of carbon flux, the amount and rate of gaseous carbon being emitted or sequestered by the forest, are given in metric tons (MT) of carbon dioxide equivalent (CO₂e).

Forest Carbon Flux

One of the most important features of this report is that as of the 2016 reporting period, Oregon's forests have been functioning as a net sink of carbon. According to the estimates made from remeasured FIA plots, Oregon's recent statewide rate of carbon flux from all forest pools across all ownerships and ecoregions is approximately 30.9 ± 7.4 MMT CO₂e per year (Table 4.1). This estimate excludes net CO₂e contributions from other sources such as harvested wood products which will appear in a separate analysis for this reporting period. After accounting for forest land use conversions and non-CO₂ greenhouse gas emissions from wildfire, the 2016 statewide rate of carbon flux on all forest land is approximately 31.8 ± 7.2 MMT CO₂e per year (Table 4.2). The pools of live vegetation (trees, foliage, live roots, and understory vegetation) are accumulating carbon at a net rate of about 37.9 ± 5.8 MMT CO₂e per year (Table 4.3). However, the pools of dead vegetation (standing dead trees, dead roots, and down wood) have been losing CO₂e to the atmosphere and other forest ecosystem pools at a rate of about 7.3 ± 2.1 MMT CO₂e per year.

National forests alone account for approximately 19.1 ± 2.0 MMT CO₂e per year of the total carbon flux (Table 4.3) mostly from growth of live trees. The contribution of those pools on other federal forests is about 9.5 ± 1.4 MMT CO₂e per year. Tree mortality, especially from fire,

is highest on productive forests owned by the USDA Forest Service that are withdrawn from harvest at a rate of 0.8 ± 0.4 metric tons of CO₂e annually per acre. Net tree growth on forests owned by private individuals contributes about 3.6 ± 2.3 MMT CO₂e per year. The variation in live tree growth and carbon flux in other pools on forests owned by local and state governments and corporations is too large in this reporting period to determine if the average annual rate of carbon sequestration is statistically different than zero. Nonetheless, on a per acre basis gross tree growth is highest for these two ownerships that contribute the most to the wood products pool (Table 4.4 and Table 4.5).

This report also provides estimates of forest flux from growth, harvest, and mortality of live trees for each ecoregion in Table 4.6. Two ecoregions account for about 58% of the annual net CO₂e sequestration in live trees, the forests of the Western Cascades (9.4 ± 3.0 MMT CO₂e/year) and the Oregon Coast Range (8.1 ± 4.3 MMT CO₂e/year) (Table 4.6). Although there is a large amount of uncertainty the importance of Coast Range forests to annual carbon flux is reflected in the estimate for gross growth of trees at 30.3 ± 2.4 MMT CO₂/year while the amount harvested from that growth each year is about 17.5 ± 3.8 MMT CO₂. Growth of trees in the Western Cascades ecoregion is also high at about 26.9 ± 1.7 MMT CO₂/year with much less transfer to harvest (8.0 ± 2.5 MMT CO₂e/year) than the Coast Range but experiencing a higher rate of mortality (9.5 ± 1.1 MMT CO₂e/year). The annual net change in live trees is less than 5 MMT CO₂e for the other ecoregions and less than 0.5 MMT CO₂e/year in forests of East Oregon outside of the Blue Mtns.

The carbon accumulation from growth of live trees has been approximately 90.2 ± 2.4 MMT CO₂e/year from all forests in Oregon (Table 4.7a). After accounting for the amount of carbon removed by harvest (-34.8 ± 4.7 MMT CO₂e/year) and mortality from all causes (-25.3 ± 1.7 MMT CO₂e/year) the net accumulation of carbon in live trees is approximately 30.1 ± 5.7 MMT CO₂e per year reflecting the state's high annual tree growth rate across all forest ownerships.

Estimates of carbon flux in live trees for each county from growth, harvest, and mortality can be found in Table 4.7b. Washington county is estimated to have a net loss of carbon (-2.3 ± 2.1 MMT CO₂e/year) and Douglas County shows a high rate of live tree mortality (-3.5 ± 0.8 MMT CO₂e/year) mostly due to fire and natural causes, but is partially compensated for with a high rate of annual tree growth (12.1 ± 1.4 MMT CO₂e/year). The forests of Lane County lead the state in net carbon flux by sequestering approximately 7.6 ± 2.3 MMT of CO₂e/year.

For carbon flux on National Forests (Table 4.7c) the Deschutes National Forest is currently estimated to have a net loss of carbon based on all pools (-0.2 ± 0.6 MMT CO₂e/year) but this estimate is not statistically different than zero. Other National Forests where net carbon flux is not statistically different from zero include the Fremont, Ochoco, Columbia River Gorge National Scenic Area, and the Crooked River National Grassland. All other National Forests are accumulating carbon with the highest rate of net flux for all pools on the Willamette with approximately 4.1 ± 0.9 MMT CO₂e/year. The Rogue River-Siskiyou National Forest is experiencing the highest rate of live tree mortality among national forests (-2.8 ± 0.6 MMT CO₂e/year). The causes of tree mortality on National Forests in terms of percent of carbon

were fire (23%), disease (20%), insect (18%), and wind (13%). The rate of mortality in terms of percentages of live tree carbon was 0.7% per year for the state and ranged from 1.0 percent in the East Cascades to 0.4% in the Willamette Valley ecoregions.

Fire was estimated to affect 103 ± 16 thousand acres/year (95% CI), with an additional 16 ± 7 thousand acres/year affected by both fire and tree cutting. The total estimate of emissions from fire is approximately -3.6 ± 1.2 MMT CO₂e/year as CO₂ and -0.2 ± 0.05 MMT CO₂e/year for methane (CH₄) and nitrous oxide (N₂O) (Table 4.8).

Approximately 20 ± 7 thousand acres of forest land were converted to non-forest every year in Oregon while about 24 ± 7 thousand acres of non-forest land were converted to forest every year (Table 4.9). About 53% of the forest loss was conversion to grassland, 88% of which consisted of mechanical removal of juniper and 12% from lack of forest regeneration more than 30 years after a disturbance, primarily fire. Another 34% of the conversion was for powerlines and logging roads. Conversion of non-forest lands to forest is accounted for by regrowth on abandoned logging roads and tree encroachment on grasslands. However, the net change of 4.5 ± 9.3 thousand acres/year is not statistically significant. Consequently, the net gain of 0.9 ± 1.1 MMT CO₂e/year from forest land conversions was also not significant with most of the gains and losses occurring in the live tree pool (Table 4.10).

Forest Carbon Storage

In Section 4.2 of this report you will find estimates for the amount of forest area in each ecoregion, such as Table 4.11, and each forest type across productivity levels of each ownership, such as table 4.12. The heart of the forest carbon numbers for each pool across ownerships is in Table 4.13a where according to estimates made from the FIA plot measurements over the most recent 10-year reporting cycle (2007-2016) there are 3.2 ± 0.03 billion metric tons of carbon stocks (C) on forest land including forest floor and forest soils across all ownerships in Oregon. Approximately 70% of this C is found on public forest land with the National Forests containing over half of all C (52%). Just under half of all stored C is found belowground in forest soils (49%), and about a third is found aboveground in the live tree pool (32%). The remaining stored C is distributed among dead trees (2%), roots (7%), down wood (5%), forest floor (4%) and the understory vegetation pool (1%). Table 4.13a also reports the amount of forest area estimated for each ownership.

For each county Table 4.13b provides estimates of forest C storage for each forest pool and estimates for the amount of forest area. Douglas and Lane County have the largest amount of forest C storage with 380.1 ± 25.9 MMT C and 377.6 ± 25.3 MMT C, respectively. Counties east of the Cascade Mountains tend to have the largest amount of C stored in standing dead and down wood pools relative to other forest pools such as Jefferson County with 32% and Wheeler County with 26%. Similar estimates for each National Forest are found in Table 4.13c.

Forest land carbon stocks by specific pool on both public and private ownerships are reported in Tables 4.14 through Table 4.21 for all of Oregon and each ecoregion of the state. These

tables show that two Westside regions account for over half of Oregon's forest C stocks (52%), the Western Cascades with 969.1 MMT C and the Oregon Coast Range with 717.7 MMT C. In the Oregon Coast Range public forests have on average 168.4 MT C/acre while privately managed forests have 111.8 MT of C/acre. The Willamette Valley has the lowest total forest carbon storage with about 106.3 MMT C.

Carbon stock estimates in each pool for the major forest types (Table 4.22 and Table 4.23) show that the Douglas-fir forest type contains about 47% of Oregon's C stocks ($1,511.1 \pm 42.0$ MMT C) (Table 4.22). The fir/spruce/mountain hemlock type stores over three times less at approximately 435.3 ± 24.8 MMT and the ponderosa pine forest type stores about 419.5 ± 17.9 MMT C. Of the hardwood forest types, the alder/maple forests are currently storing the most total forest carbon at 122.7 ± 15.5 MMT C.

Estimates of forest carbon stocks and flux for each ownership are reported in four pairs of tables for live trees and understory vegetation (Table 4.24 and 4.25), Roots (Table 4.26 and 4.27), standing dead trees and down woody material (Table 4.28 and 4.29), and forest floor and soil carbon (Table 4.30 and 4.31). Carbon storage for each forest pool based on 10 year averages are provided in Table 4.32 and for ownership and land status in Table 4.33 and 4.34.

Chapter 5 provides a comparison of the results in this report are with estimates of forest carbon reported in the National Greenhouse Gas Inventory (USDA OCE Climate Change Program Office 2016), the 2018 forest carbon report from the Oregon Global Warming Commission, and other research that contains comparable forest carbon information (Gray and Whittier 2014, Gray et al. 2014, Law et al. 2018, Campbell et al. 2007). Strategies to improve the inventory are described in Chapter 6 and include increasing the number of plots that are measured each year, improved estimation of non-sampled plots, increased use of remote sensing, better equations for calculating tree biomass, and ideas for improving forest carbon reporting.

Chapter 2. Introduction

2.1 Oregon's Forest Carbon Accounting Background

The need for a reliable forest carbon accounting system in Oregon expanded in 2001 when the Oregon State Legislature passed a bill that allowed *the State Forester to enter into agreements with nonfederal forest landowners as a means to market, register, transfer, or sell forestry carbon offsets on behalf of the landowners to provide a stewardship incentive for nonfederal forestlands* (ORS 526.780). This legislation required the State Forester to develop a forestry carbon offset accounting system for measuring and monitoring carbon benefits of mitigation projects and accounting for emission debits and credits for carbon storage and sequestration.

In its 2003 strategic planning document, *The Forestry Program for Oregon*, the Oregon Board of Forestry recognized the threat of climate change from rising levels of carbon dioxide and other greenhouse gases in the atmosphere and the contribution of forest ecosystems to Earth's carbon cycle. The Board agreed on enhancing carbon storage in Oregon's forests and forest products as one of seven key strategies toward sustainable forest management. The Board identified several priorities for implementing the strategy including increasing the forest land base, developing analytical tools for calculating the effects of forest management and wildfires on forest pools of carbon, increasing public understanding of the potential for storing carbon in forests, promote forestry carbon-offset markets, and improving consumer awareness of the carbon benefits associated with forest management and wood products.

In the 2011 update to the *Forestry Program for Oregon* the Board of Forestry established the goals of improving forest carbon sequestration and storage and reducing carbon emissions in Oregon's forests and forest products. The Board acknowledged that sustainable forest management included stable or increasing rates of carbon sequestration and storage in Oregon forests and forest products as well as promoting the use of biomass to offset emissions from fossil fuels. The Board also recognized that a primary challenge lies in monitoring forests on a statewide scale with respect to pools of above- and below-ground carbon, live and dead forest carbon, and carbon in harvested wood products, to learn where and under what conditions forests are acting as net carbon sinks

In 2007 Oregon established goals to reduce future greenhouse gas emissions. The legislation passed that year requires the State to arrest the growth of greenhouse gas emissions and reduce them to 10% below 1990 levels by 2020 and 75% below 1990 levels by 2050 (ORS 468A.205). That legislation also established the Oregon Global Warming Commission (OGWC) and required the Commission to *"track and evaluate...The carbon sequestration potential of Oregon's forests, alternative methods of forest management that can increase carbon sequestration and reduce the loss of carbon sequestration to wildfire, changes in the mortality and distribution of tree and other plant species and the extent to which carbon is stored in tree-based building materials."*

In 2010 the OGWC created the Roadmap to 2020 that was designed to offer recommendations for how Oregon can meet its GHG reduction goals and support a clean energy-based economy. The final report included recommendations from six technical committees from economic sectors that included energy and utilities, transportation and land use, industry, forestry, agriculture, and materials and waste management. The purpose of the forestry committee was to develop and prioritize a set of strategies and actions for primarily increasing carbon storage in forest ecosystems and long-lived forest products to meet Oregon's 2020 goal. Establishing a carbon inventory for Oregon's forests was the first of four key actions the committee recommended. The other three key actions included investing in research to understand the impacts of climate change on carbon storage in forests, pursue reforestation/afforestation, advance energy and forest policies supporting biomass facilities.

Following on the recommendations from the Roadmap to 2020 the OGWC started a forest carbon accounting project in 2016 to advance our understanding of the carbon potential of Oregon's forests. A Forest Carbon Task Force subcommittee to the OGWC was formed to review potential sources of forest carbon accounting data and provide recommendations to the Commission and Board of Forestry. The Task Force recognized the value of the USFS Forest Inventory and Analysis Program for providing Oregon with a standardized and statistically sufficient system of monitoring and accounting for forest carbon.

The Board of Forestry supervises all matters of forest policy within Oregon and adopts rules regulating forest practices. The Board of Forestry and Oregon Department of Forestry have been integral partners with the OGWC since inception and provided contributing support in developing the Roadmap to 2020 and the 2016 Forest Carbon Taskforce. The Board of Forestry agrees with the first Key Action of the Roadmap to 2020 and is committed to establishing a long-term, statistically reliable, forest carbon accounting system that can be used to monitor the status and trends of carbon in Oregon's forests, provide a baseline for evaluating alternative forest carbon management policies, and for measuring the effect of carbon enrichment and climate change on forest productivity. The Governor's Office of Carbon Policy, established in the 2018 Legislative session, is also fully committed and has provided support for this report. The analysis that follows in this report does not provide a complex policy analysis but it does provide a quantitative forest monitoring framework that is fundamental to the development of forest carbon policy.

2.2 U.S. National Greenhouse Gas Inventory

The U.S. Environmental Protection Agency (US EPA) coordinates and compiles summaries and analyses by multiple agencies to produce the National Greenhouse Gas Inventory (NGHGI). The most recent published report provides national estimates of stocks and flux of greenhouse gases for 1990-2017 (US EPA 2019). The last NGHGI that included state-level estimates was released in 2016. The core dataset for forest carbon used in the NGHGI is the USDA Forest Service's Forest Inventory and Analysis (FIA) inventory. The inventory is based on empirical field measurements of carbon pools and on models that complement the field measurements for pools and/or time periods with few data. The NGHGI follows IPCC guidance as closely as possible with available datasets.

This report differs from the NGHGI analysis in that some of the fluxes can be estimated from measurements available in Oregon, rather than models designed for national estimation, and in not attempting to model results back to 1990 for all lands. Instead, we summarize available empirical data for that time-period and identify alternatives for improving estimates. We refer to the methods of the NGHGI extensively, however, for estimating flux in pools and processes for which empirical data are limited (e.g., soils). This report also includes the use of regional biomass equations instead of national models, and adjustments for decay and fragmentation of snags that differ from the NGHGI.

2.3 Forest carbon cycle overview

The global carbon cycle includes movement of carbon (C) among vegetation, soil, ocean, rock, and atmosphere (Ryan et al. 2010). Although the amount of C in vegetation and soils (i.e., **stores**) is much smaller than that in the ocean, the movement of C to and from the atmosphere (i.e., **flux**) is comparable. Vegetation absorbs C from the atmosphere through photosynthesis and fixation of C in living material, and vegetation and soils emit C to the atmosphere through respiration and microbial decay of dead plant matter (Figure 2.1). Forests are particularly important to the carbon cycle because they can store large amounts of C and can be dynamic over relatively short time periods (e.g., decades). It is thought that forests in the Northern Hemisphere in particular are absorbing more C from the atmosphere than they are emitting (Pacala et al. 2001). C removed from the atmosphere by forest growth or stored in harvested wood products for the U.S. in 2017 were estimated to offset 11.3% of U.S. emissions from industry and agriculture (US EPAa 2019).

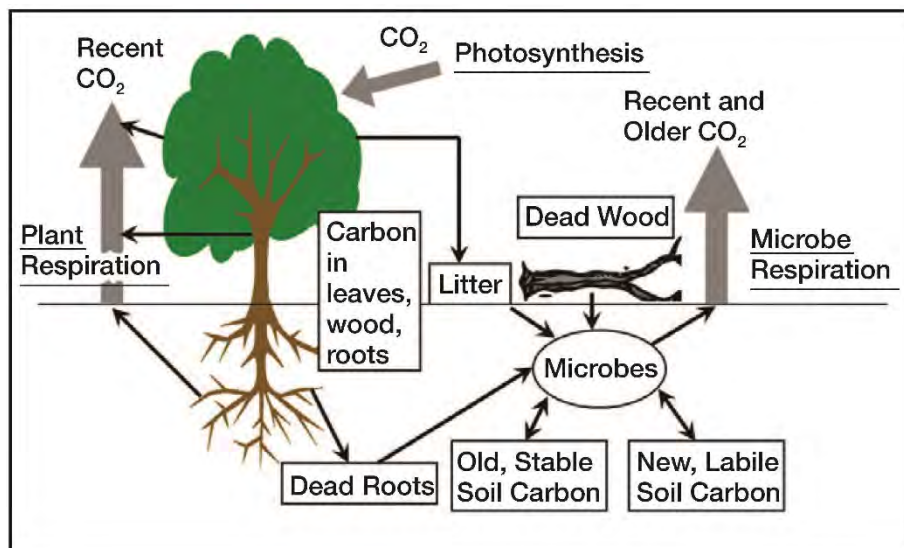


Figure 2.1: Flows of carbon in a forest from the atmosphere to the forest and back. Carbon is stored mostly in live and dead wood as forests grow (extracted from Ryan et al. 2010 Figure 2). This figure does not include C removed from harvest, or soil C removed in groundwater or erosion.

Live forest vegetation builds plant tissues with carbon dioxide (CO₂) from the atmosphere through the process of photosynthesis. A large proportion of the photosynthetic carbon is respired by living plant cells, but a portion of it goes into the production of tissues like leaves; twigs; fine roots; flowers and fruits; and wood and bark in boles, branches, and coarse roots. Depending on their longevity (a matter of weeks for fine roots, or centuries for tree boles), these tissues die and begin to decompose due to microbial action, whereby C is emitted to the atmosphere, primarily as CO₂. The increase in volume or biomass of live trees over a specific time period is called **gross growth**, and is similar to estimates of net primary production (NPP) of wood. The volume or biomass of live trees that die during a specific time period is called **mortality**. The difference between gross growth and mortality is the net change in live tree volume or biomass, referred to as **net growth**, which can be positive or negative. Some of the partially-decomposed tissue stays in the soil mineral and organic layers, where C may accumulate over time. When the net effect of the many C fluxes in a forest results in increased storage of C it is referred to as **sequestration**.

In addition to carbon dioxide (CO₂), other greenhouse gases emitted by forests and/or forest products include methane (CH₄), and nitrous oxide (N₂O). In this report carbon stocks are reported in metric tons of carbon. Changes in carbon stocks that involve transfers between different components of the forest ecosystem or to/from the atmosphere are reported in units of metric tons of carbon dioxide equivalent (CO₂e), which puts the various greenhouse gases on the same footing in terms of their absorption of infrared radiation. One metric ton of carbon mass in live and dead biomass or soil is equal to 3.667 metric tons CO₂e (also the fraction 44/12¹).

While tree mortality occurs naturally in all forests, natural disturbance events such as wildfire, pest outbreaks, wind throw, and drought can result in high mortality rates, potentially killing all aboveground live vegetation over large areas. In the case of wildfire, some C (as well as other greenhouse gases such as N₂O) can be emitted directly to the atmosphere through combustion, or lost from the area as soot. Fine particulate matter in soot ($\leq 2.5 \mu\text{m}$ in diameter) is referred to as “black carbon” and although it only remains in the atmosphere for a few weeks, it contributes to the greenhouse effect by absorbing solar radiation and heating the atmosphere. In some cases, black carbon can take on the form of charcoal, which can be a stable, long-lived form of C in the forest. Dead tissue left after the disturbance then decays, emitting C to the atmosphere over weeks in the case of scorched needles or over decades to centuries in the case of large dead trees. In severely disturbed forests, C emissions to the atmosphere will initially exceed absorption, and total C will decrease (Figure 2.2). As vegetation becomes established and the amount of growing tissue increases, at some point absorption will exceed emissions, and total C stocks will increase. This net flux from the atmosphere (accumulation) tends to decrease as forests age and appears to come close to zero, or equilibrium, in older forests (Gray et al. 2016). At this point when annual emissions equal annual uptake, forests have reached the **carbon sink saturation point**.

¹ Throughout the forest ecosystem portion of the inventory, results are converted from C to CO₂e by multiplying by 3.667

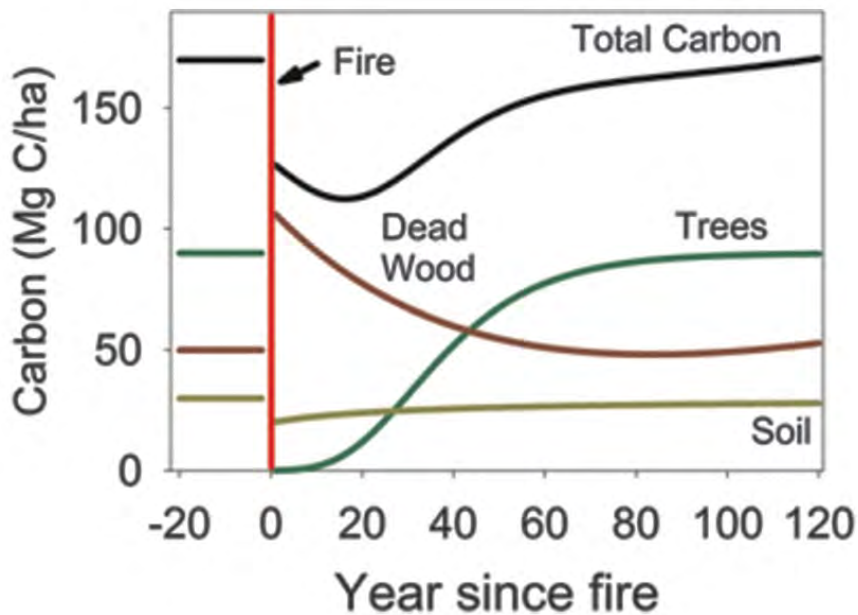


Figure 2.2: Idealized cartoon of carbon trajectories in live trees, dead wood, and soil in a forest where all trees are killed by severe wildfire and vegetation subsequently regenerates (extracted from Ryan et al. 2010 Figure 3). With sufficient time, the forest will recover the carbon lost in the fire and the decomposition of trees killed by the fire as long as there were no conversion to lower carbon vegetation types such as shrub lands or grasslands.

In addition to growth and mortality, the C stored in forests can change through increases in forest area (**afforestation**) or decreases in forest land (**deforestation**). While vegetation on afforested sites may accumulate at rates comparable to regenerating forest, levels of soil C tend to take longer (e.g., several decades) to accumulate to levels typically found in forests. Consequently, recently deforested areas may not reflect a significant loss in soil C for many years. Similarly, deforested lands lose soil C over decades until they reach levels typical of non-forest land-uses. While trees are often found in non-forest land-uses (e.g., urban areas, windbreaks or stream buffers in agricultural lands), their C stores are typically included in the carbon assessments of those other land-uses identified as sectors of national assessments.

Tree harvest removes C from forests in the form of logs. However, the C in those logs is emitted to the atmosphere at different rates depending on how the wood and bark are used, so the tracking of the fate of forest C in various harvested wood products (HWP) becomes an important part of forest C accounting. Some portions of harvested trees remain in the forest, moving between forest ecosystem carbon pools and decay slowly along with other dead tissue (e.g., branches and foliage) or are disposed of through in-forest burning with immediate carbon and other greenhouse gas emissions. Other parts become stored in short-lived or long-lived products (e.g., paper and house frames, respectively), converted into other bioproducts, or burned to supply industrial or residential energy and/or heat. At the mill, sawlogs, pulpwood, fuelwood (termed **timber product classes**) are converted to primary timber products (i.e.,

lumber, plywood, veneer, residues, etc.). Each of these products are then allocated to various end-uses such as residential construction, manufacturing, packaging and shipping, or biomass energy, to name a few. Wood products within these various end-uses have different lifetimes. A product's **half-life** is the number of years it takes for half of the initial amount of wood to be discarded and can be used to determine how much of the original product remains in use versus disposed (Skog 2008). Once disposed, discarded wood products decay over time releasing carbon back to the atmosphere. The process by which this happens is dependent on the manner of disposal. In anaerobic environments such as in landfills, wood decay releases carbon (mostly in the form of methane (CH₄), a more potent greenhouse gas than CO₂) and ceases after several decades, leaving a carbon fraction that persists in solid form indefinitely. Newer landfill technologies are being implemented in parts of the country to allow for methane capture and combustion (oxidation), thus reducing overall methane emissions to the atmosphere with formation of CO₂, a less powerful greenhouse gas. In some cases, at the end of product use-life, products can remain in use through recycling, burned for energy, or burned as waste (Stockmann et al. 2012). When the product is kept out of the landfill methane emissions from landfill decay are substantially decreased.

Fossil fuel and other emissions not derived directly from forest ecosystems that are generated in the forest management and manufacturing process are typically not included in forest sector C analyses but are included in the industrial sector (e.g., US EPA 2019).

Accumulating C in standing forests is one way to increase absorption from the atmosphere. Accumulating C in forests could be accomplished by reducing the amount of C removed during harvest. However, to the extent that the demand for wood products remains, one result could be **leakage** where storing more carbon in forests in one region (or country) is offset by reduced storage of carbon in other regions, with no net gain in global carbon storage (McKinley et al. 2011). Conversely, intensive commercial timber production may decrease demand for wood from other lands, thereby increasing the in-forest carbon stocks on those other lands (Heath et al. 2010).

Another concern with increasing carbon stores in forests is the notion of **permanence**; areas that are fire-prone are at higher risk that live trees will be killed and C lost to fire and decay, especially in forest types where denser (higher C) forests are likely to burn at higher severity. The use of harvested wood and wood products may reduce overall C emissions through their use as **biomass energy** in situations where the use of wood as biomass for fuel results in fewer C emissions from the use of fossil fuels. Another effect of using wood products could be through **substitution** of wood instead of steel or concrete, which result in more C and other greenhouse gas emissions to produce.

While tracking the changes in C stocks (and therefore C flux) can be relatively straight-forward, quantifying leakage, permanence, and substitution can be more difficult. One example of an analysis that incorporated biomass energy as a reduction in fossil fuel emissions compared overall emissions from open pile burning of logging residues to processing and burning in a

biomass energy plant, and found a net reduction in emissions of 0.54 tons CO₂e per dry ton of biomass (Figure 2.3; Springsteen et al. 2015).

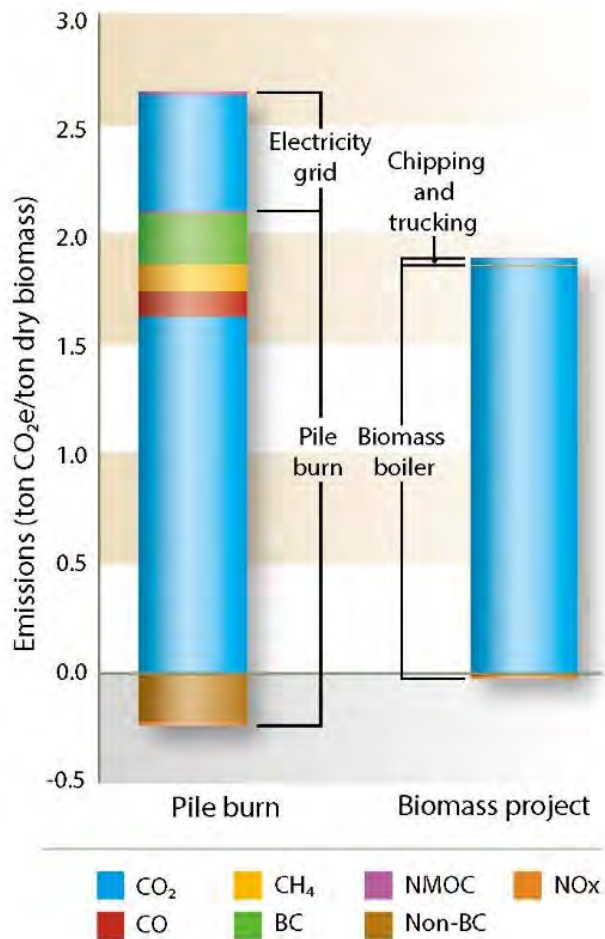


Figure 2.3: Comparison of greenhouse gas emissions between a pile burn of logging residue versus chipping, hauling, and burning it in a biomass energy plant. Analysis estimates CO₂-equivalent effects of different gases and particulates, as well as the additional emissions needed in the case of the pile burn to generate the same amount of electricity from natural gas. (Extracted from Springsteen et al. 2015).

2.4 Overview of Oregon forests

Oregon hosts a wide variety of tree species, including many species of conifers as well as oaks and other hardwoods. Assemblages of tree species are often grouped into forest types to support inventory and reporting. The Forest Inventory and Analysis (FIA) program defines a variety of coniferous forest types in Oregon including Douglas-fir, Ponderosa pine, fir/spruce/mountain hemlock, western juniper, western hemlock/Sitka spruce, lodgepole pine, and others. Hardwood forest types include alder/maple, tanoak/laurel, western oak, and elm/ash/cottonwood among others.

FIA **land status** distinguishes **forest land** from non-forest (i.e., crops, improved pasture, residential areas, city parks, etc.) and other area (i.e., water), and also distinguishes differences in **forest land status**. For example, forest land in Oregon is also categorized into timberland and other forest land based on its ability to grow commercial tree species (**productive capacity**) and its availability for timber extraction. Lands that can produce 20 cubic feet of wood volume per acre per year of commercial tree species are termed **Productive Forest land**. Productive forest land that is available for management for timber production (i.e., not in a **reserve status**) is called **Timberland**. Forest land that is not capable of producing 20 cubic feet of wood volume per acre per year of commercial tree species is called **Other forest land**. Forests in reserve status (i.e., wilderness designation, National Monuments, National Parks, etc.) can include both productive and other forest land. Although management for production of wood products in reserved forests is precluded, in some cases timber harvest can still occur for various objectives (i.e., restoration, salvage, etc.). Approximately 80% (23.7 million acres) of the 29.7 million acres of forest land in Oregon are classified as timberland, with an estimated 2.5 million acres of productive forest land in reserves (Palmer et al. 2018). There are approximately 3.2 million acres of non-reserved other forest land and 270 thousand acres of reserved other forest land. Management and use of forest land is often a function of ownership and land status in Oregon. Oregon's forest land is divided between private and public ownership (see Figures 2.4 and 2.5). The federal government manages 60% of these lands, with the remaining areas under state and local government (3.8%) or private management (36%). Approximately 13.3 million of the 23.7 million acres of timberland are managed by the federal government, 9.4 million are in private ownership, with the remainder in other public ownership. Approximately 1.3 million of the 3.2 million acres of other forest land in non-reserved status is privately owned, 1.8 million acres in federal management, with the remainder in other public ownership. Of the 2.8 million acres of forest land in Oregon in reserved status (National Wilderness designations, etc.), 98% are managed by the federal government, with the remainder in other public ownership.

To better understand the carbon dynamics in Oregon's forests, information in this report and appendices is provided for different forest types, ownerships, forest reserve classes, and on a regional basis (see figure 4.6a,b).

The way in which forests are used and managed impact both forest health and resilience as well as carbon storage and sequestration. Oregon's forested landscape consists of a mosaic of land-uses including working forests, conservation reserves, and those associated with human-dominated uses. Forests in which trees are harvested regularly are often referred to as **working forests**. Whether a forest is considered a working forest or not, forested landscapes provide many important ecosystem services, including carbon sequestration as well as wildlife habitat, clean water, recreational opportunities and other cultural values. A variety of recent studies exhibit concern that current forest conditions resulting from management activities focused on commodity production or on fire suppression have negatively impacted the resiliency of forest ecosystems and carbon stocks. For example, 20 years after sweeping changes in management of federal lands under the Northwest Forest Plan have protected and promoted older forests (Spies et al. 2018), models suggest that abundance of birds dependent on older as well as younger forest has declined (Phalan et al. 2019). Other studies suggest that forests in drier

conditions, such as Ponderosa pine forests in eastern Oregon, have changed when compared to historic conditions, with more of the biomass in higher densities of small, fire-prone trees (Merschel et al. 2014, Stine et al. 2014). These forests are thought to be vulnerable to fire, pest outbreaks, and other disturbance, especially as changes in climate continue to affect the timing, frequency, intensity and extent of disturbances such as wildfire and pest outbreaks. In the short-term, management strategies to improve forest health and resiliency and reduce hazardous fuels may decrease in-forest carbon stocks and result in other greenhouse gas emissions through tree removal or prescribed fire. In the long-term forest carbon stocks might benefit from these treatments through continued growth and decreased mortality from wildfire, pests and drought (North and Hurteau 2011), although there is disagreement on whether total carbon stocks reach the same levels as untreated stands (Mitchell et al. 2009) or whether treated areas will burn in the period when treatments are effective (Restaino and Peterson 2013).

The focus of this report is not to present or debate policy options and the desirability of different approaches to forest management. However, we expect that a comprehensive assessment of carbon stocks and fluxes, broken down by pool, ownership, and disturbance impacts, will help ground and guide those policy discussions going forward.

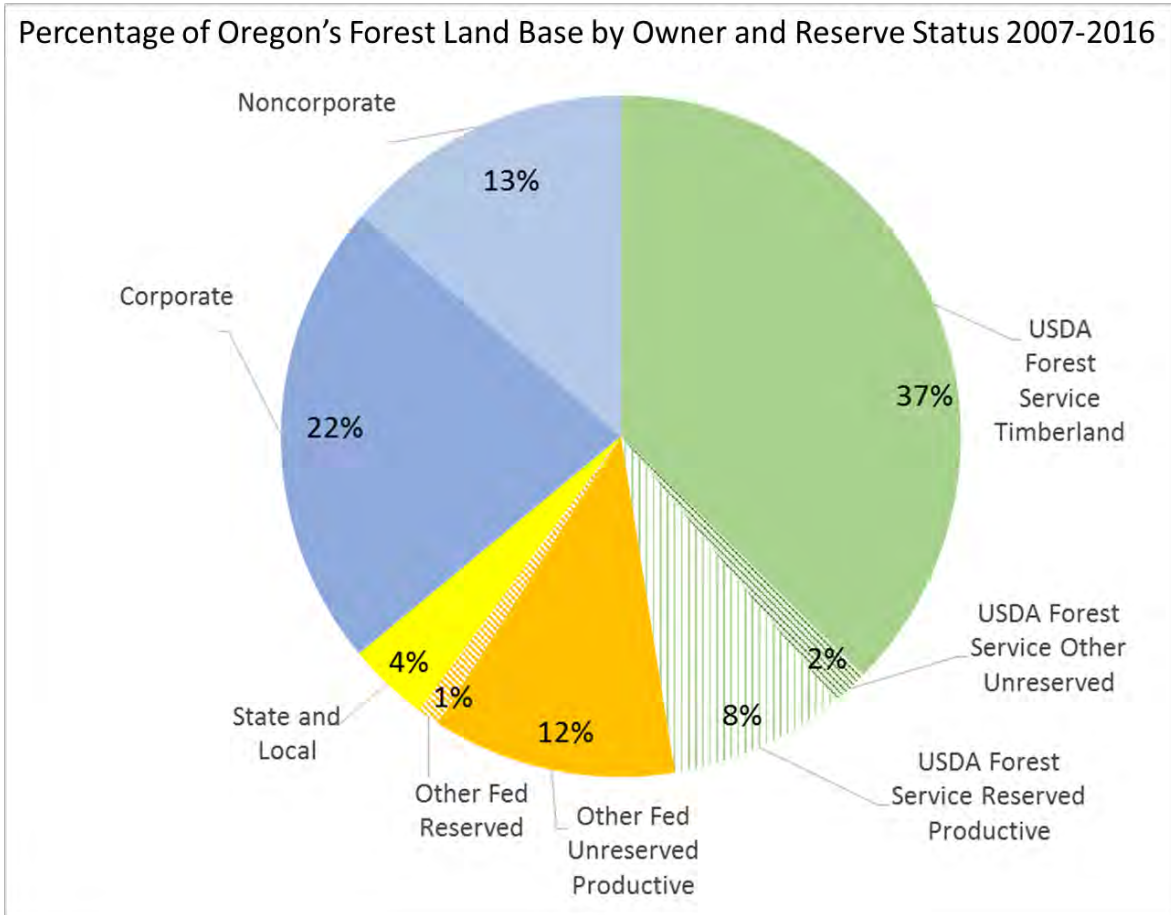


Figure 2.4: Percent of forest land base by owner, reserve status for forest land remaining forest land (2007-2016).

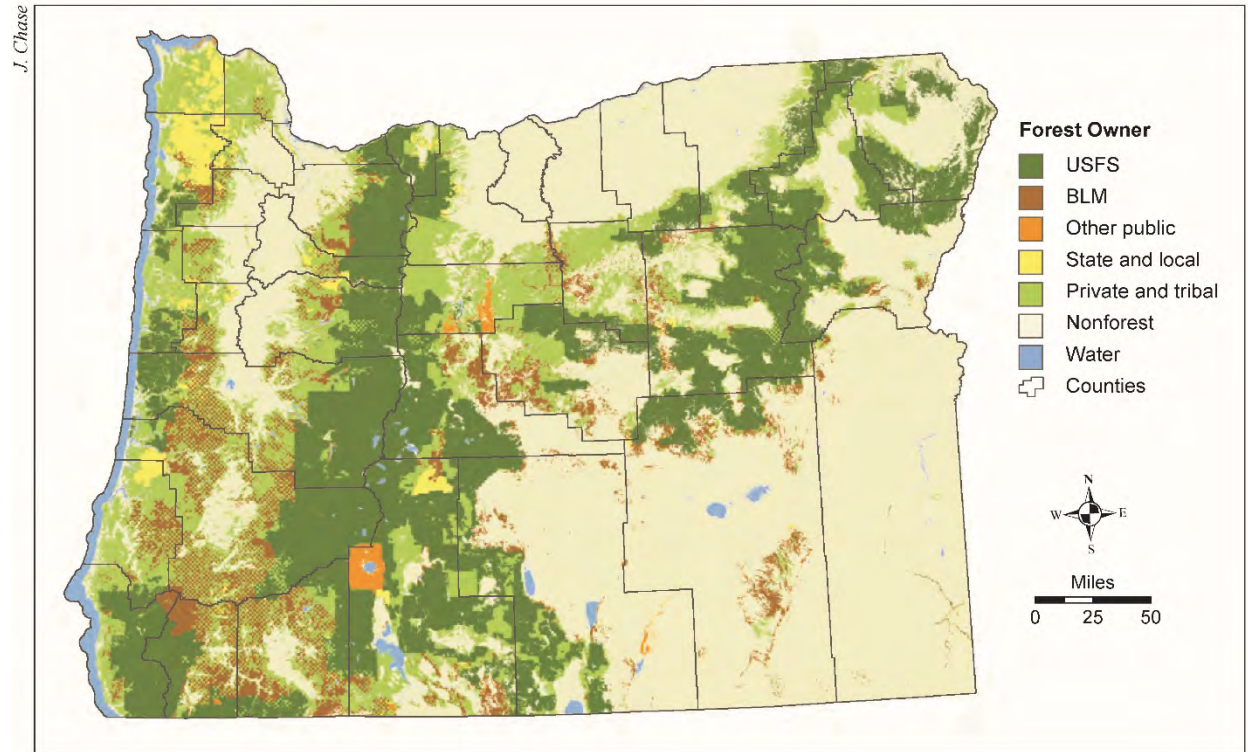


Figure 2.5: Land ownership in Oregon

Source: Palmer et al. 2018

Chapter 3. Forest ecosystem carbon inventory methods

3.1 Use of IPCC inventory approach/methods

The Intergovernmental Panel on Climate Change (**IPCC**) was created in 1988 to prepare assessments on all aspects of climate change and its impacts based on available scientific information and is the key international body studying global warming. The IPCC issues guidance on reporting carbon stock inventories and emissions designed to implement the international United Nations Framework Convention on Climate Change (UNFCCC) 1992 Kyoto Protocol agreement. Although the U.S. is not a signatory to the Kyoto Protocol, the U.S. NGHGI follows IPCC guidance for international reporting for subsequent agreements and negotiations. Similarly, although Oregon is not a reporting party to the Kyoto Protocol, this inventory will comply with IPCC-defined “good practices” as much as possible. The 2006 IPCC “Guidelines for National Greenhouse Gas Inventories” (IPCC 2006) provides a conceptual framework, sectoral scope definition, description of tiered inventory methods, calculation steps and uncertainty assessment steps. An important element specified in the 2006 Guidelines is a **key category analysis** in which key emissions categories are identified and prioritized. The focus of this report is on determining whether the forest sector in Oregon is sequestering or emitting carbon from the atmosphere, and by how much.

The key categories described in IPCC (2006) for forest-related fluxes include:

- CO₂ emissions and removals resulting from C stock changes in biomass, dead organic matter and mineral soils; and
- CO₂ and non-CO₂ emissions from fire on all managed land, including methane (CH₄), nitrous oxide (N₂O), non-methane volatile organic compounds (NMVOC), nitrogen oxides (NO_x), and carbon monoxide (CO).

Minor elements that may be relevant to forested wetlands and fertilized forest plantations include:

- N₂O emissions from managed soils, and
- CO₂ emissions associated with liming and urea application to managed soils.

The U.S. NGHGI calculates N₂O emissions from southeastern pine forests and commercial Douglas-fir stands in western Oregon and Washington that are fertilized (US EPA 2019). The U.S. NGHGI only calculates CO₂ emissions associated with liming and urea for agricultural soils, so these emissions are assumed to be negligible for Oregon forests and are not included in this report.

The IPCC guidelines only require reporting for **managed lands** under the assumption that nations cannot affect, or be held responsible, for changes happening on lands that are not directly influenced by humans. According to IPCC 2006, “managed land is land where human interventions and practices have been applied to perform production, ecological or social

functions” (Paustian et al. 2006). Because even most Wilderness areas and National Parks in the U.S. are impacted by human management in some form, e.g., from fire suppression, in practice all lands in the lower 48 states are considered “managed” (e.g., US EPA 2019, Ogle et al. 2018).

In 2014, the IPCC published the “Revised Supplementary Methods and Good Practice Guidance Arising from the Kyoto Protocol” (IPCC 2014) which provides additional guidance on estimating flux from land-use, land-use change and forestry (LULUCF) activities. For forest land, the primary change from IPCC 2006 are guidelines for reporting on forest management and on harvested wood products (HWP). Procedures for estimating HWP stocks and flux will be addressed in a separate report.

3.1.1 Rationale for use of Tier 3 approach

The IPCC guidance on greenhouse gas accounting describes three “tiers” or approaches to reporting that accommodate the range of data and institutional support in different countries. Gain-loss methods estimate the net balance of additions to and removals from each carbon stock. Stock-difference methods are a more rigorous approach that track the amounts in each carbon stock and their change over time.

Tier 1 methods are the simplest, and apply IPCC equations and default parameter values for emission and stock change factors (e.g., deforestation/afforestation, disturbance, harvest, grazing) to available information on land-use and activity (e.g., from land cover maps derived from satellite mapping). Tier 2 can use the same approach as Tier 1 but applies region- or country-specific emission and stock change factors. Tier 3 methods apply models and inventory measurements tailored to national conditions, are repeated over time, are driven by high-resolution activity data and disaggregated at sub-national level. Models are expected to undergo quality checks, audits, and validations and be thoroughly documented. Tier 3 methods are often referred to as “stock-difference,” because C flux is derived from the difference in estimates of individual C pools at different points in time.

Most nations with more detailed economic and natural resource information are expected to follow the Tier 3 approach. This is the approach used by the U.S. NGHGI, built on a wide range of economic, environmental, and natural resource data already being collected for a variety of objectives. This is the approach used in this report as well, with a focus on forested lands as sampled by the FIA program.

Six land-use classes are recognized in IPCC assessments. While the IPCC does not prescribe specific definitions for each class, it does require that countries explicitly and consistently define and track them. These land-uses are further defined for the U.S. in the NGHGI (US EPA 2019) and are described in section 3.2.2. The IPCC land-use classes are:

1. Forest land: includes all land with woody vegetation, using consistent and well-defined criteria for minimum area, minimum cover, and minimum height at maturity to define “forest land” (specifying minimum width too is “good practice”). Assessment of this land-use class is

split between land remaining forest land, and land converted to forest land from other uses. In the U.S., the FIA definition for forest land is used for reporting this category.

2. Cropland: cropped land and agro-forestry where structure falls below forest land.
3. Grassland: includes rangelands and pasture not considered cropland. Also includes systems with woody vegetation or herbs that fall below thresholds for forest land. For example, chaparral falls in this category in the U.S. NGHGI.
4. Wetlands: areas of peat extraction and covered by water for all or part of the year that doesn't fall in the vegetated or settlement categories.
5. Settlements: developed land, including transportation infrastructure and settlements of any size, unless placed in other categories by national definitions.
6. Other land: bare soil, rock, ice, and all other land areas, including unmanaged lands. In addition to identifying these six land-use categories and subcategories, IPCC requires distinguishing natural from planted forest, identifying areas subject to different natural disturbances and their effects on flux, identifying areas subject to management, and identifying areas of mineral and organic soils, with the latter split into drained, wet, or rewetting.

3.1.2 Determining the Forest Management Reference Level

The concept of a Forest Management Reference Level (FMRL) was established in the 1992 Kyoto Protocols and guidelines for implementing it are described in IPCC (2014, section 2.7.5). The FMRL is a baseline value of average annual net emissions and removals from “forest management” (i.e., all lands that remain forested or that change land-use to/from forest). All pools and gases and the area under forest management that are included in the calculation of the FMRL are to be identified. The FMRL facilitates consistent comparison of forest carbon stocks and losses through time by comparing one or more time periods to a reference baseline that is calculated in the same way, including all the same pools and assumptions. The UNFCCC refers to emissions in 1990 as the baseline that targets are tied to for future emissions levels.

For Oregon, the availability of forest inventory data is more limited for the period including 1990 than for more recent years (2001 and on). Specifically, field measurements that span 1990 and that can be used to estimate change only consist of live trees on timberland outside of National Forests (Azuma et al. 2004a, 2004b). Estimation of flux in 1990 for other lands and carbon pools requires substantial modeling and/or extrapolation from more recent datasets. An extrapolation approach was adopted for U.S. forests in the most recent U.S. NGHGI but the resolution of the estimates currently does not support analysis at less than the state level (US EPA 2019, Woodall et al. 2015). Some national and international assessments and negotiations have used other dates as baselines (e.g., 2005) to align better with available data.

In this report, we establish an FMRL for in-forest carbon based on data from the complete 10-year inventory in Oregon conducted during the time-period 2001-2010 (the first comprehensive, standardized FIA inventory of Oregon's forest lands since 1955).

In this report, the FMRL provides a complete estimate of all pools of forest carbon in Oregon and the trends over time as 10-year moving averages. Although there are large overlaps between periods, re-measurement data makes it possible to review trends from complete samples (i.e., all plots) in Oregon for 2001-2010, 2002-2011, 2003-2012, 2004-2013, 2005-2014, 2006-2015, and 2007-2016. However, estimates of change between 10-year stock averages (i.e., Stock-Change approach) are a less accurate and less precise way to infer flux than the Growth, Removals and Mortality (GRM) method described below. The FMRL identifies six key pools including Aboveground Live (trees and shrubs), Aboveground Dead (standing snags and down wood), Belowground Live (roots), Belowground Dead, Forest Floor Litter and Soil Organic Carbon (organic soil layers). The Harvested Wood Product (HWP) carbon pools will be determined for the FMRL in a separate report.

Although we present data for the FMRL and 10-year moving stock averages to compare to it, in this report we determine annual flux through the Growth, Removals and Mortality (GRM) approach. Comprehensive forest inventories that are based on re-measured, permanent sample plots have the potential to provide the most accurate estimates of forest volume and carbon. This direct measurement of growth, removals and mortality would be considered an IPCC Tier 3 approach to carbon accounting as it is based on more advanced country-specific data and methods. It is also still considered a stock-difference approach, but by measuring changes in the same trees over time the components of change can be detailed (i.e., growth, removals, mortality).

The Forest Inventory and Analysis Program (FIA) began a new inventory of forest land in Oregon in 2001 by installing a complete sample of the state each year using 10% of the full set of plots (15,082 on land, excluding census water). This equates to a complete sample of all inventory plots in Oregon every 10 years. FIA completed their first full annualized inventory of Oregon forests in 2010 (previous inventories were conducted periodically on a nominal 10-year interval). In 2011, FIA began re-measuring the same plot locations as established in 2001 and as of 2016, they had re-measured 60% of the plots in the state. As FIA re-measures more forest inventory plots in Oregon (through 2020 and beyond) the ability to derive more precise estimates of change for smaller domains of interest will improve (e.g., regions and ownerships), and will be incorporated into future annual reports. The USDA Forest Service Pacific Northwest Research Station (PNW) manages the FIA program for the state of Oregon.

3.2 Forest inventory compilation methods

This section is designed to document the basic estimation and compilation methods used for this report, and identify options for improving estimates in future reports. As mentioned above, this assessment relies primarily on empirical data from FIA inventories of the forests of Oregon

and to a large extent applies methods and models used in the NGHGI in accordance with IPCC guidance.

3.2.1 Inventory design

The population, or scope, of the inventory of Oregon is the boundaries of the state, including offshore islands and approximately 3 nautical miles of ocean out from the coastline. Beginning in the 2001 nationally-standardized “annual inventory”, the sampling frame for this area was determined by a national layer of hexagons approximately 6,000 acres in size. Plot sample locations were identified within each hexagon in a manner sometimes referred to as “randomized systematic”. For hexagons that contained plot locations that were part of the previous FIA or National Forest System (NFS) inventories, the previous plot was selected for the annual inventory (or one was randomly selected if more than one was present). For hexagons without a previous plot, a new location was randomly generated within the hexagon. In addition, in 2001 NFS began installing the annualized FIA inventory using the same procedures on their earlier Current Vegetation Survey (CVS) inventory plot locations, based on a square grid of plots every 1,875 acres outside of Wilderness (Max et al. 1996). FIA has included this sample and the data collected in their databases, estimates, and reports since 2001. The total number of plots (forested, non-forested, and census water) in Oregon is 15,320. Starting in 2017, the Bureau of Land Management (BLM) in western Oregon began implementing the annualized FIA inventory on the CVS grid on their lands in cooperation with NFS; that data will be added to the existing FIA grid on BLM lands and incorporated in future FIA reports.

The hexagons in Oregon are assigned to ten evenly-dispersed panels. Each panel is measured in a specific year, providing a balanced annual sample of the state each year. All panels are measured after ten years, at which point the cycle starts over and plots are re-measured on a ten-year interval. The first cycle of annual inventory in Oregon occurred in 2001-2010, and six years of re-measurement data are available for this report, covering 2011-2016.

All inventory estimates are based upon the grid of plots and the classifications and measurements taken on them. The precision of the estimates is improved, however, by incorporating information from independent, ancillary datasets in a process referred to as “post-stratification” (MacLean 1972, Bechtold and Patterson 2005). Satellite imagery, historic maps, and ownership layers are combined and pixels with similar attributes related to forest/non-forest delineation and forest characteristics, and land areas sampled with the same plot density, are grouped into strata. The number of pixels in each strata and the number of plots that intersect them are used to define weights for each plot in the inventory. Potentially-forested plots that were unable to be sampled (e.g., access was denied or plots were too hazardous to measure safely) are assumed to be missing at random. The methods represent nonsampled plots by increasing the weights of sampled plots found in the same strata as the nonsampled plots.

The plot sample and stratification are used in the calculation of sampling errors, which are provided with the results of this report. These errors describe the uncertainty associated with sampling the forest (i.e., with plots) instead of measuring the entire population. Additional

details on inventory design and estimation methods are provided in Bechtold and Patterson (2005) and Palmer et al. (2018).

3.2.2 Forest land-use and land-use change

As provided for in IPCC guidelines, the NGHGI uses the FIA definition of forest land to define the specific lands covered, including the change in land-use between forest land and other land-uses. The current FIA definition of forest land (Woudenberg et al. 2010) is land with at least 10% cover by live forest trees of any size, or that formerly had such cover and that will be artificially or naturally regenerated (i.e., is not being managed for non-forest uses). The area must be at least 1 acre in size and at least 120 feet wide. Tree-covered areas where management precludes natural vegetation development (e.g., through mowing, disking, regular herbicide application, or intensive grazing) are not considered forest land. FIA maintains a national list of species that are considered forest trees; these generally are species that form dominant central stems and attain heights greater than 16 feet over the majority of their range. However, some international definitions refer to trees being able to attain 16 feet in height “in situ”, and recent NGHGI and Resources Planning Act (RPA) reports (Oswalt et al. 2014) have reclassified some forest land as “woodland”. The in-situ criterion implemented for NGHGI/RPA classifies plots based on a combination of current tree height, forest type, site class, and ecoregion. The criteria relevant to Oregon that would result in changes of FIA data from forest land to woodland (a component of forest land) are:

- mean height of trees \geq 5 inches diameter is $<$ 16.4 feet; and
- FIA forest type code =184 (juniper woodland)
- site class = 7 (unproductive forest of $<$ 20 ft³/ac/yr maximum growth; i.e., culmination of mean annual increment); and
- in ecoregions 342 (Northwestern Basin and Range).

The NGHGI also states that “land is not classified as Forest Land if completely surrounded by urban or developed lands, even if the criteria are consistent with the tree area and cover requirements for Forest Land. These areas are classified as Settlements” (US EPA 2019). Forested FIA plots in urban areas were not specifically excluded from the NGHGI calculations; instead, forest estimates were adjusted by the land-use categories derived from the USDA Natural Resources Conservation Service (NRCS) Natural Resources Inventory (NRI) to implement these criteria (e.g., USDA NRCS 2015).

In this analysis, we did not separate out FIA-classified forested lands that fell in the NGHGI-classes of woodland and urban from total forest land. We estimate that 3 thousand acres of forest land meet the woodland definition, or 0.01% of the total forested area. Using currently-measured heights in the criteria ends up misclassifying some recently disturbed (seral) stands where trees have not reached their height potential. However, a ***potential change*** to match NGHGI reporting as closely as possible would be to incorporate woodland and urban criteria in the next iteration of the report.

Inventory crews delineate the area covered by different land-uses that fall in the FIA plot footprint. These proportions, in combination with the plot weights from the stratification, enable FIA to estimate the area of all land-use classes in the state (i.e., forest, non-forest, water). In sparsely-covered stands, crews take additional measurements and estimates (e.g., of dead or harvested trees) to determine whether the 10% tree canopy cover threshold is met. Non-forest land-uses are identified either on the ground (for field-visited plots) or using recent imagery (for non-field-visited plots), which makes it possible to classify non-forest lands into most of the other IPCC classes (i.e., cropland, grassland, settlements, other). When plots were re-measured, changes in land-use within the plot footprint were delineated, enabling the estimation of change in forest land area and the land-uses that forest lands are coming from or changing into. Wetlands are apparently delineated in the USDA NRCS NRI used in the NGHGI, but their locations are not yet clear; we assumed there was no land-use change between wetlands and forest.

The NGHGI definitions for non-forest land-uses are:

- Cropland: Areas used to produce adapted crops for harvest, including both cultivated and non-cultivated (e.g., hay, orchards), and agroforestry and windbreaks.
- Grassland: Areas where plant cover is composed principally of grasses, grass-like plants (i.e., sedges and rushes), forbs, or shrubs, including pastures and native rangelands. Savannas, deserts, and tundra, and drained wetlands with the appropriate plant cover are included. Systems with woody vegetation or herbs that fall below the thresholds for forest land are also included in grasslands (i.e., chaparral).
- Wetlands: Areas covered or saturated by water for all or part of the year, in addition to the areas of lakes, reservoirs, and rivers. Does not include areas of drained wetland that meet other categories, or un-drained forested wetlands.
- Settlements: Areas of at least 0.25 acres that includes residential, industrial, commercial, and institutional land; construction sites; public administrative sites; railroad yards; cemeteries; airports; golf courses; sanitary landfills; sewage treatment plants; water control structures and spillways; parks within urban and built-up areas; and highways, railroads, and other transportation facilities. Also included are tracts of less than 10 acres that may meet the definitions for Forest Land, Cropland, Grassland, or Other Land but are completely surrounded by urban or built-up land.
- Other Land: Areas of bare soil, rock, ice, and all land areas that do not fall into any of the other five land-use categories. Following IPCC (2006), C stock changes and non-CO₂ emissions are not estimated for Other Lands. However, C stock changes and non-CO₂ emissions are estimated for Land Converted to Other Land during the first 20 years following conversion to account for legacy effects.

Prior to the implementation of the national FIA field guide 6.0 in 2012, the definition of forest land used on the west coast was slightly different and was based on a 10% stocking threshold rather than cover. This was changed to cover to improve national and international consistency and the ability to relate ground classifications to imagery. The change in definition has little impact on the majority of forest land in Oregon which easily exceeds both thresholds, but can lead to some differences in sparse forest conditions that may be found in oak and juniper woodlands (Azuma and Gray 2014). Nevertheless, the change raises the possibility that areas may change designation due to procedural change and not real change on the ground. PNW-FIA field crews have been distinguishing procedural from real changes and taking additional measurements of cover and stocking in sparse stands to be able to better quantify the relationship between cover and stocking in different forest conditions. This will make it easier to compare estimates between older and newer inventories.

This report incorporates regional assessments of land-use change, after accounting for definition changes, procedural changes, and previous errors. This analysis of land-use change is NOT reflected in the publicly-available online FIA databases. The PNW-FIA program is in the process of evaluating how to implement databases that reflect correct analyses of change using current definitions while maintaining previous data used to generate earlier assessments.

3.2.3 Carbon pool calculations

Aboveground live tree—Estimates of aboveground live-tree woody C were based on regional FIA equations of the sum of bole, bark, and branch biomass in metric tons for each tree measurement multiplied by 0.5, the C fraction of biomass. Bole biomass (ground to tip) was calculated from regional species-specific volume equations documented in Zhou and Hemstrom (2010) and species-specific wood density values documented in Woudenberg et al. (2010). Bark and branch biomass were calculated from regional species-specific equations selected from Means et al. (1994) and documented in Zhou and Hemstrom (2010), except red alder branch equation (Eqn. 16) used Snell and Little (1983) and Douglas-fir and red alder bark equations (Eqn. 8 and 20) used Means et al. (1994) equations 5 and 275, respectively. Most equations use both diameter at breast height (dbh) and height data, whereas a few bark and branch equations use diameter only. Foliage biomass was calculated using the Jenkins et al. (2003) ratios to total tree biomass as implemented in Woodall et al. (2011) and added to aboveground wood biomass before calculating aboveground live tree C. In contrast, the NGHGI estimates of live tree biomass are based on the “component ratio method” equations in Woodall et al. (2011). An expansion factor derived from the fixed-area plot size was used to convert individual tree C to an area basis (e.g., metric tons per acre).

Aboveground standing dead tree—Estimates of aboveground standing dead tree carbon followed the same procedures as for aboveground live trees, but with the following modifications. Gross volume from ground to tip was adjusted for broken tops by calculating the gross volume (to an intact “total” height estimated in the field or modeled using Barrett (2006)) and the net volume to the broken “actual” height with a Flewelling (1994) taper equation for Douglas-fir. The proportion of net to gross volume from the Flewelling equation was applied to reduce the gross volume calculated for each tree. In addition, the biomass of all components

(bole, bark, and branch) were reduced for decay using the hardwood/softwood parameters in Harmon et al. (2011), Table 6. Standing dead biomass was further reduced to account for the tendency of bark and branches to be dropped from snags sooner than bole biomass; component reductions described in Harmon et al. (2011) were applied to further reduce bark and branch biomass. Biomass calculations in metric tons were multiplied by 0.5 to calculate C. In contrast, the NGHGI estimates of standing dead tree biomass are based on the equations in Woodall et al. (2011) and the species-specific decay-reduction factors in the table REF_SPECIES in Woudenberg et al. (2010). The species-level decay factors appear to be based on small datasets and highly variable among similar species; the hardwood/softwood parameters seemed more reliable. Stumps are not included and it is unlikely that they will be included in future inventories without substantial additional effort.

Belowground live and standing dead tree (i.e., roots)—Estimates of belowground biomass (i.e., coarse roots > 2 mm diameter) were based on the ratios for species-groups developed in Jenkins et al. (2003) as implemented in Woodall et al. (2011); i.e., adjusting the estimate by the ratio of the FIA volume-based estimate of bole biomass to the Jenkins equation-based estimate. Decay class of standing dead trees was used to reduce belowground calculations using the species- and decay class-specific parameters in the REF_SPECIES table (Woudenberg et al. 2010); biomass calculations in metric tons were multiplied by 0.5 to calculate C.

Aboveground down woody debris—Estimates of carbon in down wood were based on the transect-intercept measurements of coarse wood (≥ 3 inches intersect diameter) and counts of fine wood (≥ 0.25 to < 3 inches diameter). Piles were not included, as the field estimates of pile density in the initial years of the inventory were unreliable. Biomass of coarse wood was calculated using the equations in Woodall and Monleon (2008) with wood density and decay-class reduction factors from the REF_SPECIES table (Woudenberg et al. 2010). A ***potential improvement*** for a future report would involve using the hardwood/softwood decay-reduction parameters from Harmon et al. (2011) instead (as described above for snags), as they seem less variable among similar species than the species-specific variables in REF_SPECIES, which were also derived from Harmon et al. (2011). Log inclinations were measured in PNW inventories starting in 2013 with the implementation of core FIA manual 6.0. Where available, inclinations were factored into the calculation of coarse wood biomass and carbon (inclined logs have a lower probability of being intercepted by a transect, so the calculated C per acre is greater than if the same log were lying flat). For the smaller size classes of down wood (“fine wood”) we followed the procedures in Woodall and Monleon (2008) where the fine wood piece counts in each size class are multiplied by a quadratic mean diameter (QMD) to calculate volume, and a wood density factor to calculate biomass, which is multiplied by 0.5 to calculate C. Parameters are specific to forest type group and available in REF_FOREST_TYPE_GROUP in the FIA database (FIADB) (Woudenberg et al. 2010). Although measurements of piles were taken, estimates of wood density in piles tended to be unrealistically high, particularly in the initial inventory years. As a result, we currently do not include pile data in the down wood calculations, but may be able to develop replacements for current values with reasonable assumptions with greater scrutiny.

Aboveground and belowground understory vegetation—Estimates of above- and belowground biomass and C of understory vegetation (which includes live trees < 1 inch in diameter) are based on the calculations from the U.S. Forest Carbon Budget Model (FORCARB2) (Smith et al. 2006), as populated in the FIADB. Calculations are based on FORCARB estimates of live-tree biomass, (calculated from forest type and stand age), and are highest at low levels of live tree biomass and decline slightly at higher levels. Dead understory vegetation is not included and there are no plans to include it at this time. It was previously identified that a potential improvement for a future report would use the cover and layer height data collected on FIA plots to calculate understory biomass directly, provided suitable equations can be found. However, after further research it was determined that potential equations were very general and from different vegetation types/areas that are likely not relevant for Oregon.

Forest floor—Estimates for carbon in the forest floor (i.e., duff and litter) use the same model used in the NGHGI which was based on FIA Phase 3 data and predictor variables of location, elevation, forest type group, live tree C, and some climate variables (Domke et al. 2016). Although PNW-FIA crews have measured forest floor depth on the down wood transects since the beginning of annual inventory, there were methodological problems in the initial years and the estimates are quite sensitive to seemingly small measurement errors of depth (e.g., a tenth of an inch). **A potential improvement** for a future report is to continue evaluating flux estimates using more recently-remeasured forest floor depths and adopt them if/when they appear to be reliable.

Soil—We estimate soil organic C stocks to a 1 meter depth using the modeled estimates from Domke et al. (2017) as implemented in the latest NGHGI report. This model incorporated data from soil cores on FIA plots with other national datasets and values compare favorably with those calculated from FIA cores in Oregon. The new values are 3.4 times greater than those estimated from the earlier NGHGI model by Smith et al. (2006) and appear to correspond much better with other expert estimates of forest soil C.

3.2.4 Flux calculations

The Growth, Removals, and Mortality (i.e., GRM) approach was used to calculate change in forest C pools and the magnitude of flux by comparing measurements taken on the same set of plots and trees 10 years apart.

All flux calculations were summarized based on the condition classification at the initial measurement (e.g., owner, forest type, etc.). It was fairly common for the condition classification on a plot to change over time: usually it was a result of disturbance or management changing the forest type and/or stand size class, but sometimes there was a change in land-use on the plot. The change in C was calculated for individual trees between measurements. For live trees that died or were cut between measurements, growth equations were used to estimate tree diameter and height at the midpoint of the measurement interval and calculate C at the time of death (Bechtold and Patterson 2005); using the dimensions at the first measurement would result in a biased under-estimate for mortality and harvest. New trees that grew into the sapling size class (≥ 1 inch diameter) between estimates were considered

ingrowth (a component of growth). Live tree C was allocated into the components of change based on initial and re-measurement tree status, namely: growth, removals, and mortality. Change in C for standing dead trees was based on the difference in calculated C at each time period and would include live tree C entering this pool through mortality, and dead tree C leaving this pool through decay, transition to other pools, or combustion; trees that fell over or were cut were assigned zero for the second measurement. Changes in down wood C were estimated at the plot level, based on calculations that did not incorporate log inclination from the most recent measurements. Changes in this pool include tree C entering this pool from live or standing dead pools and C leaving this pool through decay, transition to other pools, or combustion. Changes in understory vegetation were based on modeled estimates (from live tree biomass) from each measurement. Flux was also calculated for forest floor and mineral soil C based on the difference in modeled estimates for each plot at each measurement, using the models described in sections 3.2.3. While there is some confidence in the estimates of C stocks using these models, their accuracy at estimating C flux in Oregon is unknown.

For land-use change (i.e., forest to non-forest or non-forest to forest), all non-soil pools were assumed to be zero for non-forest conditions. Although in some cases this is unrealistic (e.g., not all trees are cut when houses are built on forest land), there are currently no data to estimate those pools on non-forest lands. For soil organic carbon (SOC), the IPCC Tier 2 approach is to use country-specific data to assign carbon concentrations by land-use, climate zone, and soil type, and assume a 20-year lag for SOC to reach a new equilibrium. However, most of the recent IPCC values and research on SOC appear to focus on agricultural soils and effects of different types of management (Ogle et al. 2003, IPCC 2006). The approach in Ogle et al. (2003), which is used in the NGHGI, assumes that forest, rangeland, and urban land-uses have the same SOC as uncultivated land (primarily due to lack of information for urban). Because the agricultural land-uses involved in land-use changes in Oregon were either pasture or orchard (i.e., did not involve any plowing or intensive row cropping), we assumed that SOC changes due to land-use were zero.

3.2.5 Disturbance classification and assessment

FIA crews identify the types of treatments and disturbances that have occurred on the plot since the previous measurement. Up to three management treatments, and up to three natural disturbances can be coded. Disturbances must meet a minimum threshold that cause mortality or damage to at least 25% of all trees in a stand or 50% of an individual species' count. We classified disturbance codes hierarchically for analysis, with both fire and harvest taking precedence over other disturbances. Harvest treatments of Trees removed (generic), Clearcut, Partial heavy, Partial light, Precommercial, and Improvement were classified as "Cut". Any record of fire (Fire [generic], Ground fire, and Crown fire) were classified as "Fire". If either of these types were recorded, they were identified with the condition; if both were recorded, the condition was classified as "Cut and Fire". (Note: Cut and Fire includes stands that were thinned and prescribe burned, as well as stands that were burned by wildfire and salvage-logged.) If neither of those were coded, then any insect or disease disturbances were used to classify the condition disturbance as "Insect and Disease". If nothing had been classified yet, then any weather disturbances (including landslide and avalanche) were coded as "Weather". Finally, if

none of the previous had been recorded but treatment codes for Firewood cutting, Incidental cutting, Stand conversion, Clean and release, or Chaining were present, then the disturbance was classified as “Other cut”. Although estimated trends in area burned are similar between FIA and other methods, other approaches don’t distinguish forest from non-forest burned area (Christensen et al. 2016).

Because change analyses are based on the conditions as designated at the first measurement, and disturbance is coded at the second measurement, when condition mapping may change, a mechanism to associate the disturbance code with the condition as classified at the first measurement is needed. For changes in tree carbon, the individual trees were assigned to both the current and previous condition IDs. For the other pools (e.g., down wood and understory veg) biomass estimates for each subplot were proportioned by the condition-change proportions on the subplot to link up the first and second measurements and calculate change. **Potential additions:** there is substantial interest in using remote sensing of disturbances to provide modeled up-to-date estimates of change; however, this would also require modeling growth, mortality, and decay on the undisturbed plots which could require substantial effort.

3.2.6 Estimation of additional greenhouse gases

The primary non-CO₂ greenhouse gas emissions for forest land are for methane (CH₄) and nitrous oxide (N₂O) from combustion in prescribed fire and wildfire. The default IPCC (2006) method is to estimate pre-fire fuel mass (live vegetation, litter, and dead wood), and apply combustion factors for the amount of woody material consumed (defaults in IPCC 2006 Table 2.6). Because we have measurements of change in C pools on plots that burned, we used the change in C on each burned plot instead. We then multiplied the amount combusted by emissions factors listed in IPCC 2006 Table 2.5 (CH₄=4.7, N₂O=0.26 g/kg of dry matter burnt for non-tropical forests). The CO₂ equivalents for the greenhouse gas effect of these gases (i.e., 100-year global warming potentials) are listed in IPCC (2007b) as CH₄=25 and N₂O=298. Greenhouse gas equivalents were not found for CO and NO_x, so analyses of emissions of these gases were not included, which is consistent with the NGHGI.

For N₂O emissions due to fertilization of commercial Douglas-fir stands in western Oregon, we followed the NGHGI approach (EPA 2019, page 6-38) where the area estimates (3.22 million acres in this case) are multiplied by the typical rate used in this region (200 pounds N per acre applied to 20 of every 1,000 acres of private industrial Douglas-fir timberland per year) to estimate total N applied (Briggs 2007). The total N applied to forests was multiplied by the IPCC (2006) default emission factor of one percent to estimate direct N₂O emissions. For indirect emissions, the volatilization and leaching/runoff N fractions for forest land were calculated using the IPCC default factors of 10% and 30%, respectively. The amount of N volatilized was multiplied by the IPCC default factor of one percent for the portion of volatilized N that was converted to N₂O off-site. The amount of N leached/runoff was multiplied by the IPCC default factor of 0.075% for the portion of leached/runoff N that was converted to N₂O off-site. The resulting estimates are summed to obtain total indirect emissions. We calculate the size of this emission at 0.20 ± 0.1 MMT CO₂e per year. While we report the state total, we did not incorporate this flux as a standard component of all the reported estimates.

4. Forest ecosystem results: Carbon flux, stocks, and trends

In this analysis results of carbon physically present in the forest are given in metric tons (MT) of carbon (C). Results of carbon flux, the amount and rate of gaseous carbon being emitted or sequestered by the forest, are given in metric tons (MT) of carbon dioxide equivalent (CO₂e). Net changes in individual carbon pools are also shown in units of CO₂e and referred to as flux to provide insight into the components of change, even if they aren't a direct flux with the atmosphere (e.g., tree mortality, which is a conversion from live to dead wood that initially stays in the ecosystem). Carbon can be converted to CO₂e by multiplying by 3.667². Negative values indicate a loss from the pool. Ranges in the text (i.e., ±) represent a 95% confidence interval (CI), while estimates in the tables report the sampling error (SE; CI = 1.96*SE). Estimates of carbon storage and net flux provided in this report based on modeled attributes (e.g., belowground roots, soils), or estimates based on measured values but summarized for a small area or filtered set of specific criteria (e.g., C in storage for a forest type, single ownership, and a small forested region) must be interpreted with caution. An estimate of error (SE and 95% CI) is provided as an aid in interpretation and as a measure of confidence in each summarized result. The sampling error for modeled attributes does not account for potentially much larger amount of error associated with the model itself. Additionally, modeled attributes are developed by estimating total carbon storage and not carbon change. Any small bias for carbon model totals can lead to very large biases for carbon change.

4.1 Average annual net carbon flux

4.1.1 Statewide net carbon flux 2001-2006 & 2011-2016—overview

Estimated average annual net carbon sequestration is based on a 10-year average from plots and trees initially measured between 2001 and 2006 then re-measured 10 years later between 2011 and 2016. Results from this remeasurement period are referred to as 2016 results, or results from the 2016 reporting period throughout the report. Remeasuring permanently located inventory plots gives the FIA forest inventory program the unique ability to fully evaluate and monitor changes on each plot in all carbon pools especially changes in tree growth, removals, and mortality across all ownerships and forested areas of the state. Most of the results focus on net change in forest ecosystem carbon for forestland remaining forested at both measurement intervals, and incorporates effects on CO₂ flux from growth, harvest, and mortality from any disturbances such as wildfire. In addition, we account for the carbon impacts of land changing to or from forestland, and for gasses in addition to CO₂ that are emitted from combustion in wildfire.

As of the 2016 reporting period, according to the FIA plot measurements, Oregon's statewide rate of carbon sequestration from all forest ecosystem pools across all ownerships is 30.9 ± 7.3 MMT CO₂e per year, excluding net CO₂e contributions from other sources such as harvested wood products, land moving to and from a forested condition, and non-CO₂ greenhouse gas

² Throughout the forest ecosystem portion of the inventory, results are converted from C to CO₂e by multiplying by 3.667.

emissions from wildfire (Table 4.1, 4.3). After accounting for forest land use conversions and non-CO₂ greenhouse gas emissions from wildfire, the 2016 statewide rate of carbon sequestration on all forest land is 31.8 ± 7.2 MMT CO₂e per year (Table 4.2). Changes in land-use between forest and non-forest land condition is estimated to have a net effect of sequestering 0.9 ± 1.2 MMT CO₂e per year (Table 4.2, 4.10). Combined annual net emissions of non-CO₂ greenhouse gases (methane and nitrous oxide) from wildfire is also accounted for and is estimated to be 0.2 ± 0.0 MMT CO₂e per year (Table 4.2, 4.8).

Table 4.1. Statewide average annual net CO₂e flux from forest pools in forest land remaining forest land based on plots initially measured between 2001-2006 and re-measured between 2011-2016.

	Net flux	
	Total	SE
	<i>million metric tons CO₂ equivalent</i>	
CARBON POOL		
Aboveground live ¹	31.6	3.0
Aboveground dead ²	-7.0	1.0
Belowground live ³	6.3	0.7
Belowground dead ⁴	-0.3	0.2
NET VEGETATION FLUX	30.5	3.7
Forest Floor	0.6	0.1
Soil Organic C	-0.2	0.3
TOTAL FOREST NET FLUX	30.9	3.8
¹ includes live trees, foliage, and understory veg		
² includes standing and down dead wood		
³ includes live tree and live understory veg roots		
⁴ includes dead tree and dead understory veg roots		

Table 4.2. Statewide average annual net CO₂e flux from forest pools, non-CO₂ emissions from forest fires in Forest land remaining forest land, and changes due to forest land conversions (i.e., by forest land-use and land-use change). Plots initially measured between 2001-2006 and re-measured between 2011-2016.

Land-use category	Net flux	
	Total	SE
	<i>million metric tons CO₂ equivalent</i>	

Forest land remaining forest land		
Changes in forest carbon	30.5	3.7
Changes in forest floor	0.6	0.1
N-fertilization	0.2	<0.1
Changes in soil organic carbon	-0.2	0.3
Non-CO ₂ emissions from forest fires	-0.2	0.0
net flux	30.9	3.7
Forest land conversions		
Changes in forest carbon, forest to non-forest	-2.4	0.4
Changes in forest carbon, non-forest to forest	3.4	0.4
net flux	0.9	0.6
Total net flux	31.8	3.7

Note: negative numbers are a net loss to the forest

4.1.2 Net carbon flux for forest land remaining forest (FF)

4.1.2.1 Net carbon flux by pool and ownership

Annual growth in all live vegetation carbon pools is exceeding annual losses from these pools by 124%. Live vegetation including trees, foliage, live roots, and understory growth contribute to Oregon's forest carbon stock at a net rate of about 37.9 ± 5.8 MMT CO₂e per year (Table 4.1, 4.3). Dead vegetation including standing dead trees, dead roots, and down wood as fallen logs and other decaying woody material is losing CO₂e to the atmosphere and other forest ecosystem pools at a rate of 7.3 ± 2.1 MMT CO₂e per year. Net loss of CO₂e from down wood pool is partially due to the overall rate of wood decay combined with losses from disturbance events such as wildfire exceeding the rate of recruitment of new material through fallen trees and branches. Potential down woody material is also being partially off-set from harvested trees that would have become part of the down wood carbon pool. Carbon in wood products manufactured from a portion of the wood volume in these harvested trees is not immediately emitted as CO₂, but is stored as sequestered C. An analysis of harvested wood products and the role they play in Oregon's forest carbon cycle are not included as part of this carbon reporting effort, however, the final results will be published in a separate report.

Table 4.3. Statewide estimate of average annual net carbon flux (CO₂e) by pools and owner, 2001-2006 to 2011-2016. Changes in CO₂e due to land-use and non-CO₂ greenhouse gas emissions are not included. See also Appendix 2, Table B1.

	Public						Private						Total		Total	
	National forest		Other federal		State and local govt.		Corporate		Non Corporate							
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE		
<i>thousand metric tons CO2 equivalent per year</i>																
Standing Live tree																
Mortality	-16,725	697	-2,753	321	-989	195	-3,221	316	-1,654	210	-4,875	365	-25,341	870		
Cut	-3,197	310	-954	259	-3,105	775	-22,908	2,140	-4,618	827	-27,526	2,228	-34,782	2,373		
Gross Growth	36,222	425	12,139	472	4,970	333	27,368	1,065	9,498	642	36,866	1,048	90,197	1,220		
Net	16,300	866	8,432	619	876	863	1,239	2,395	3,226	908	4,465	2,558	30,074	2,897		
Foliage	936	51	493	38	46	51	76	145	142	53	218	154	1,693	174		
Roots																
Live	3,325	193	1,889	148	196	202	232	556	676	210	908	594	6,318	672		
Dead	-193	142	-16	62	3	36	-92	56	-37	35	-129	66	-335	172		
Standing Dead	-393	578	265	235	108	127	-129	189	-31	141	-160	236	-181	679		
Dead Woody Debris	-1,357	493	-1,411	316	-179	231	-3,409	486	-460	220	-3,869	530	-6,817	820		
Understory Vegetation																
Above Ground	-74	17	-52	10	-5	7	-33	25	-41	13	-74	28	-205	35		
Below Ground	-8	2	-6	1	-1	1	-4	3	-5	1	-8	3	-23	4		
Total (excluding soils)	18,535	987	9,594	780	1,045	1,116	-2,119	3,098	3,470	1,160	1,351	3,307	30,525	3,706		
Forest Floor	442	59	89	36	-1	22	-144	95	174	58	30	111	561	133		
Soils	148	146	-211	112	19	54	-90	190	-37	93	-127	212	-172	286		
Total (including soils and forest floor)	19,125	1,020	9,473	797	1,063	1,128	-2,353	3,147	3,607	1,194	1,254	3,364	30,914	3,773		

As a single ownership, federally managed forests contribute to the majority of overall net annual CO₂e sequestration in Oregon. National forests alone account for 54% of the annual net change in live trees (Table 4.3). Adding forest land managed by other federal agencies brings the statewide contribution to 82% of the net change coming from federal forests. Tree growth on private ownerships, corporate and private individual owners, has a net contribution of 15% to the overall rate of sequestration in live trees after accounting for removals due to harvest and mortality. State and local government managed forests contribute about 3%.

Evaluating the contribution of each ownership by carbon pool reveals the significant amount the National Forests and private ownerships provide to overall annual carbon sequestration. It is the combined effect of annual growth on live trees from all ownerships that overcome annual carbon losses due to any single source of emission (Figure 4.1). Of the 30.9 ± 7.3 MMT CO₂e per year being sequestered in Oregon's forests, 19.1 ± 2.0 MMT CO₂e per year is taken up by forest land on the National Forests. Of the forest land managed by private owners, those managed by private individuals are sequestering carbon at rate of 3.6 ± 2.3 MMT CO₂e per year. Although the estimate for net annual change on private corporate forest lands is negative (-2.4 ± 6.2 MMT CO₂e per year), the variation in the estimate of current annual growth when accounting for trees removed through management activities is too large to determine if the average net annual rate of carbon sequestration is statistically different from zero. For the 80% of Oregon's forests classified as timberland the rate of carbon flux among owners differs only slightly from the amounts estimated for all forestland (Figure 4.2).

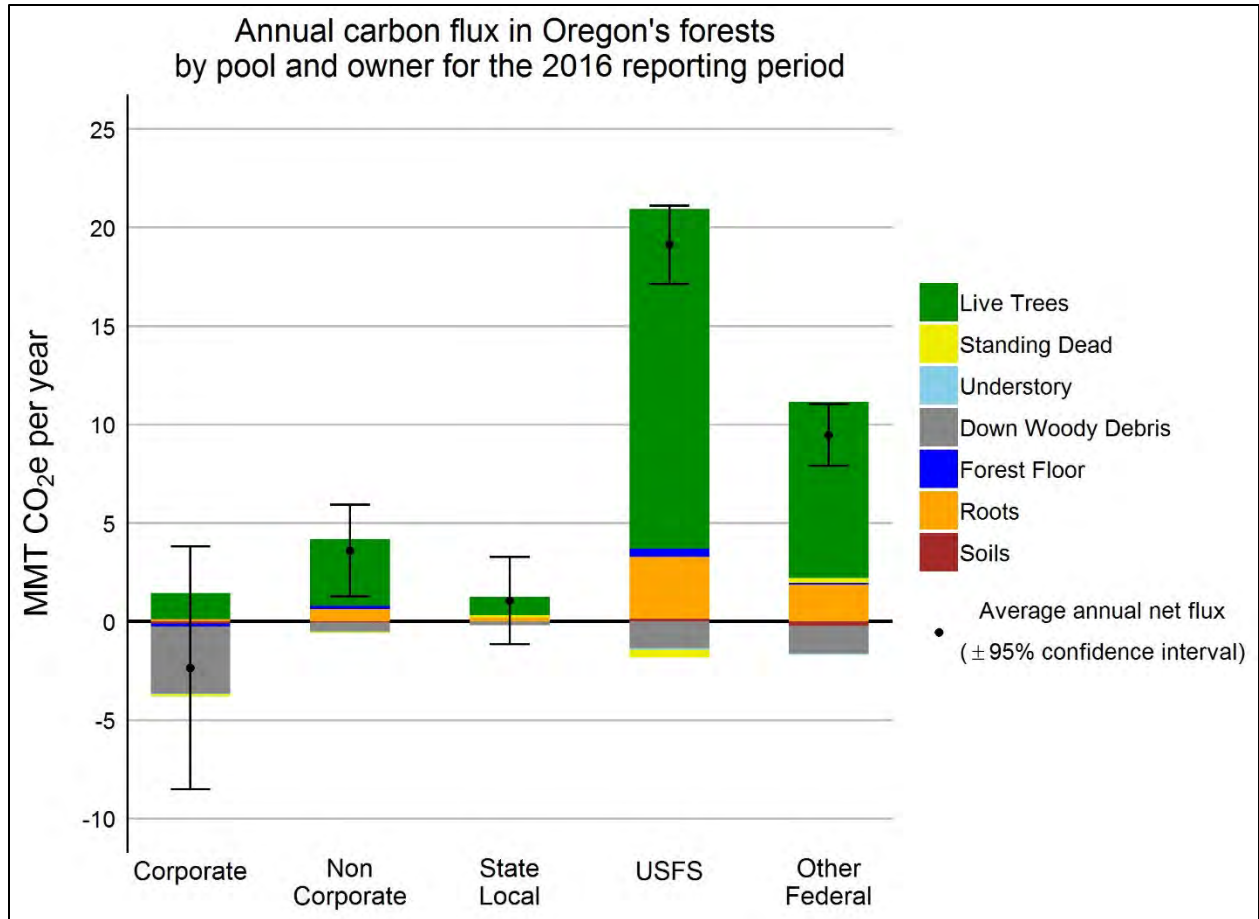


Figure 4.1. Oregon statewide estimate of average annual carbon flux (MMT CO₂e/yr) by pool and ownership, 2001-2006 to 2011-2016. Estimates exclude emissions from land-use changes and non-CO₂ greenhouse gases. Roots includes belowground live and dead tree roots. Understory includes aboveground and belowground pools. Error bars represent 95% confidence intervals around point estimates for net flux. Figure derived from Appendix 2, Table B1.

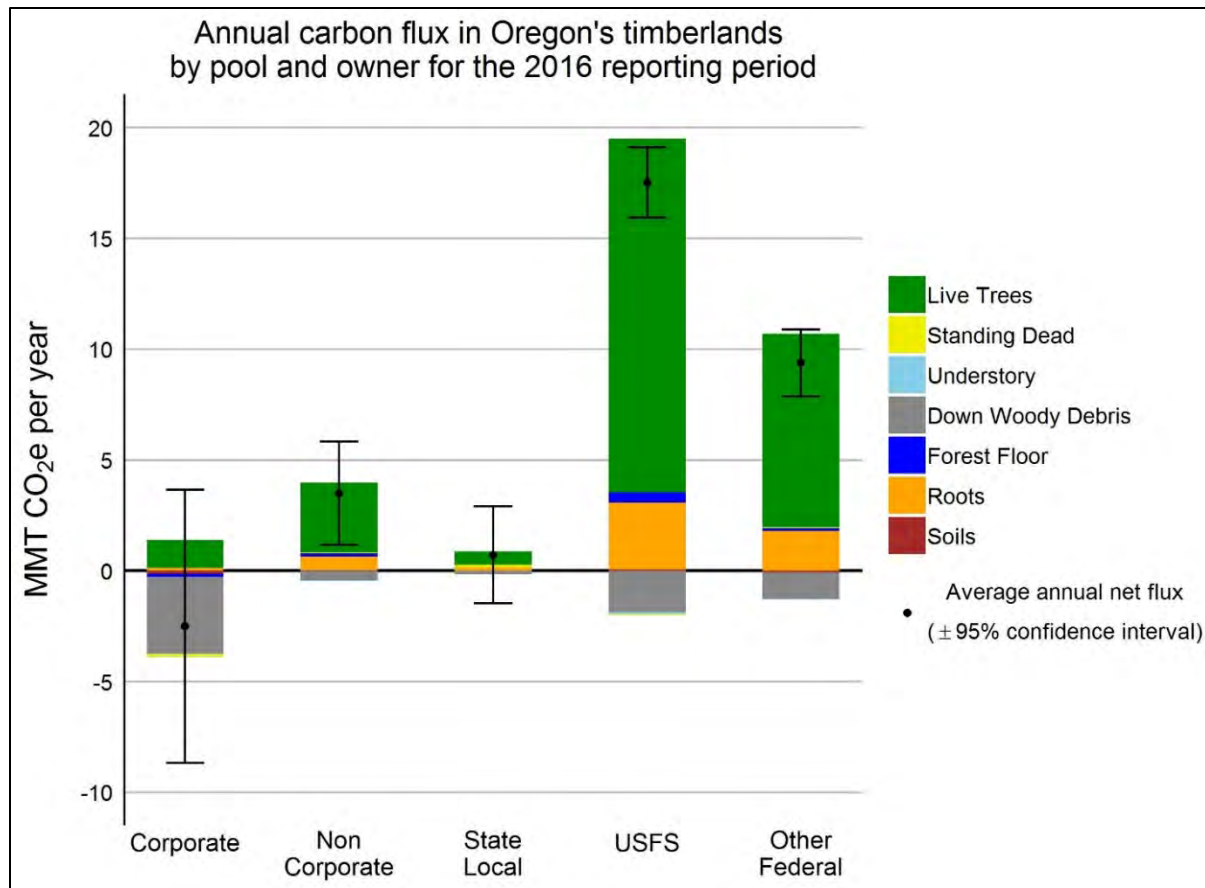


Figure 4.2. Oregon timberland statewide estimate of average annual carbon flux (MMT CO₂e/yr) by pool and ownership, 2001-2006 to 2011-2016. Estimates exclude emissions from land-use changes and non-CO₂ greenhouse gases. Roots includes belowground live and dead tree roots. Understory includes aboveground and belowground understory vegetation. Error bars represent the 95% confidence interval of net change. Figure derived in part from aboveground totals in Appendix 2, Table B11.

4.1.2.2 Investigation of patterns of flux in down wood in Oregon's forests, 2001-6 to 2011-16

Unlike most other pools down woody material declined significantly in Oregon (6.8 ± 1.6 MMT CO₂e per year, 95% confidence interval). Converting to units of C and comparing to down wood stocks, this indicates a decline of 1.2% per year (%/yr) over this period, or a loss of 12% over 10 years. The estimates range from a decline 0.4%/yr on National Forests to a decline of 2.7%/yr on private corporate lands. We do not have decades of measuring down wood to know how these changes over the last 16 years compare with other time periods, but we analyzed the data a few different ways to try to understand the changes better (Figure 4.3). The percent of down woody material by log diameter class indicates a greater proportion of material in the larger classes (> 20 inches) for State/Local, Other Federal, and to some extent USFS. Larger logs tend to decay more slowly than smaller logs. These ownerships also tended to have more of

their larger logs in the lower decay classes (1-3), indicating more recent input of large material from mortality than the private ownerships. The largest decreases (75%) occurred in undisturbed stands, which occupied 67% of the landscape, for a loss of 0.26 MT CO₂e /ac/yr. Across all owners, this rate was highest on private corporate lands, with a loss of 0.72 MT CO₂e /ac/yr on undisturbed forest. The decrease on undisturbed stands indicates that the input of mortality and standing dead trees to down wood is less than the output of decaying down wood. Indeed, the carbon in mortality trees was higher across all owners than on private corporate lands (0.86 vs. 0.47 MT CO₂e/ac/yr). The standing dead tree pool was essentially unchanged on all ownerships, which would indicate less input to the down wood pool from mortality. While the amount of cut trees was much higher on private lands than on public lands, logging slash that isn't yarded or burned tends to be small and decays relatively quickly. Estimates from down wood piles were not included in this report because field estimates are highly variable and problematic (pile density was often over-estimated in the field in the 2000s). Nevertheless, the data are compiled and available and even with an over-estimate, suggest that piles make up 0.49% of down wood mass in Oregon.

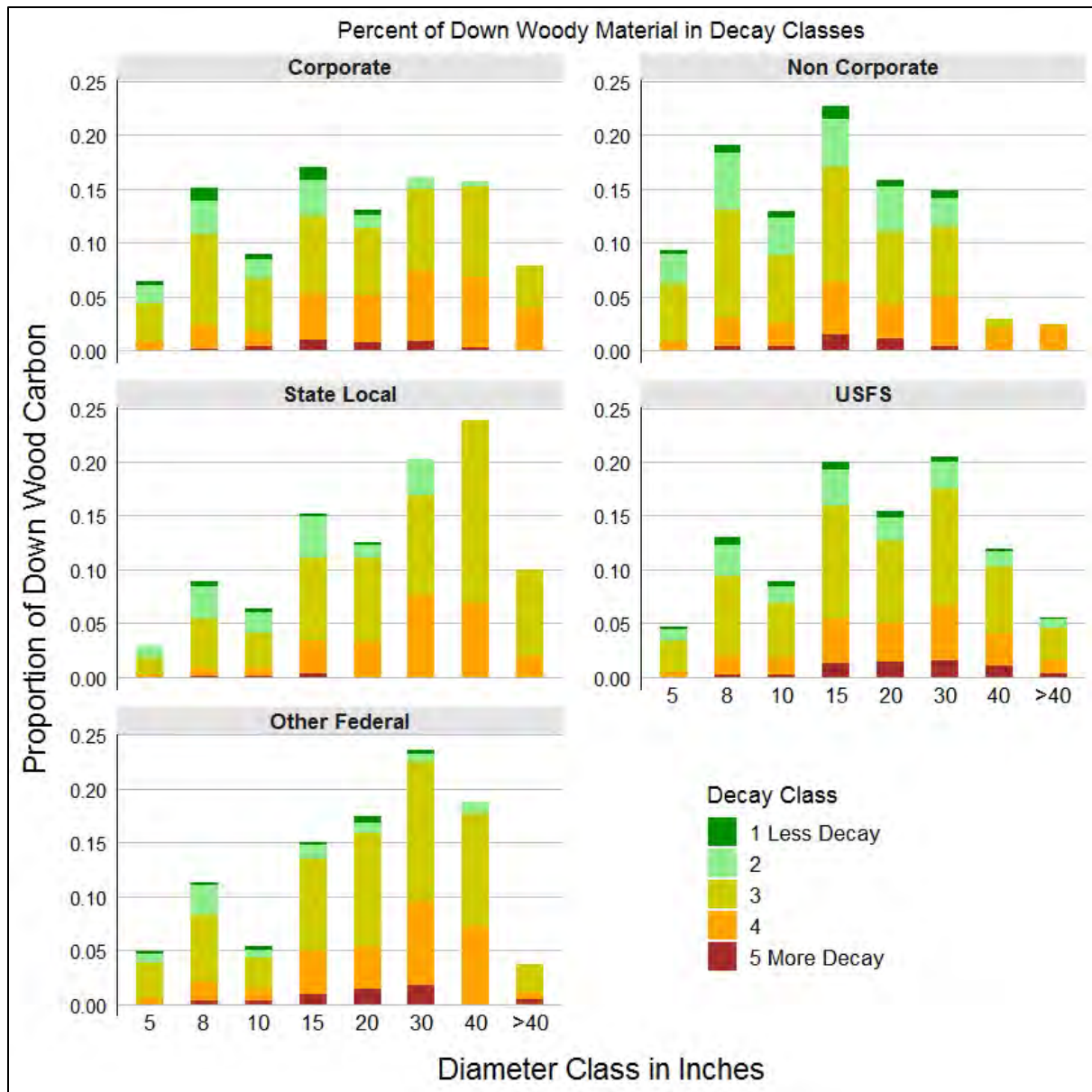


Figure 4.3. Proportion of carbon in down woody material by ownership and log diameter class and decay class in Oregon, 2011-2016.

4.1.2.3 Net carbon flux aboveground live tree pool, by owner and land status

Annually on a per acre basis, carbon sequestration as gross tree growth is highest on forest lands managed by state and local governments (4.5 ± 0.5 MT CO₂e/ac/yr), and private corporate owners (4.1 ± 0.2 MT CO₂e/ac/yr) (Figure 4.4, Table 4.4). These ownerships also have the highest rate of annual timber harvest and are expected to contribute more to the harvested wood products carbon pool as compared to contributions from the other ownerships including forests managed by private noncorporate individuals, national forests managed by the USDA Forest Service, or other federal forest lands. An analysis of carbon stored in harvested wood

products is being prepared and will be released in a subsequent report. Combined with a relatively high annual rate of gross tree growth and less harvest per acre, forest land managed by other federal owners such as the BLM currently have the highest average annual rate of net carbon flux where 2.3 ± 0.3 MT of CO₂e per acre has been added each year (from a gross growth rate of 3.3 ± 0.3).

Transfers of sequestered carbon from the live tree pool into dead wood pools from mortality are represented as a negative flux as shown by the portion of the bars below the horizontal zero line in figure 4.4. These carbon transfers are driven primarily by timber harvest, but also by wildfire and other mortality events. In Oregon’s forests, naturally occurring mortality is consistently occurring at a rate greater than any other cause of mortality (except harvest) across all ownerships.

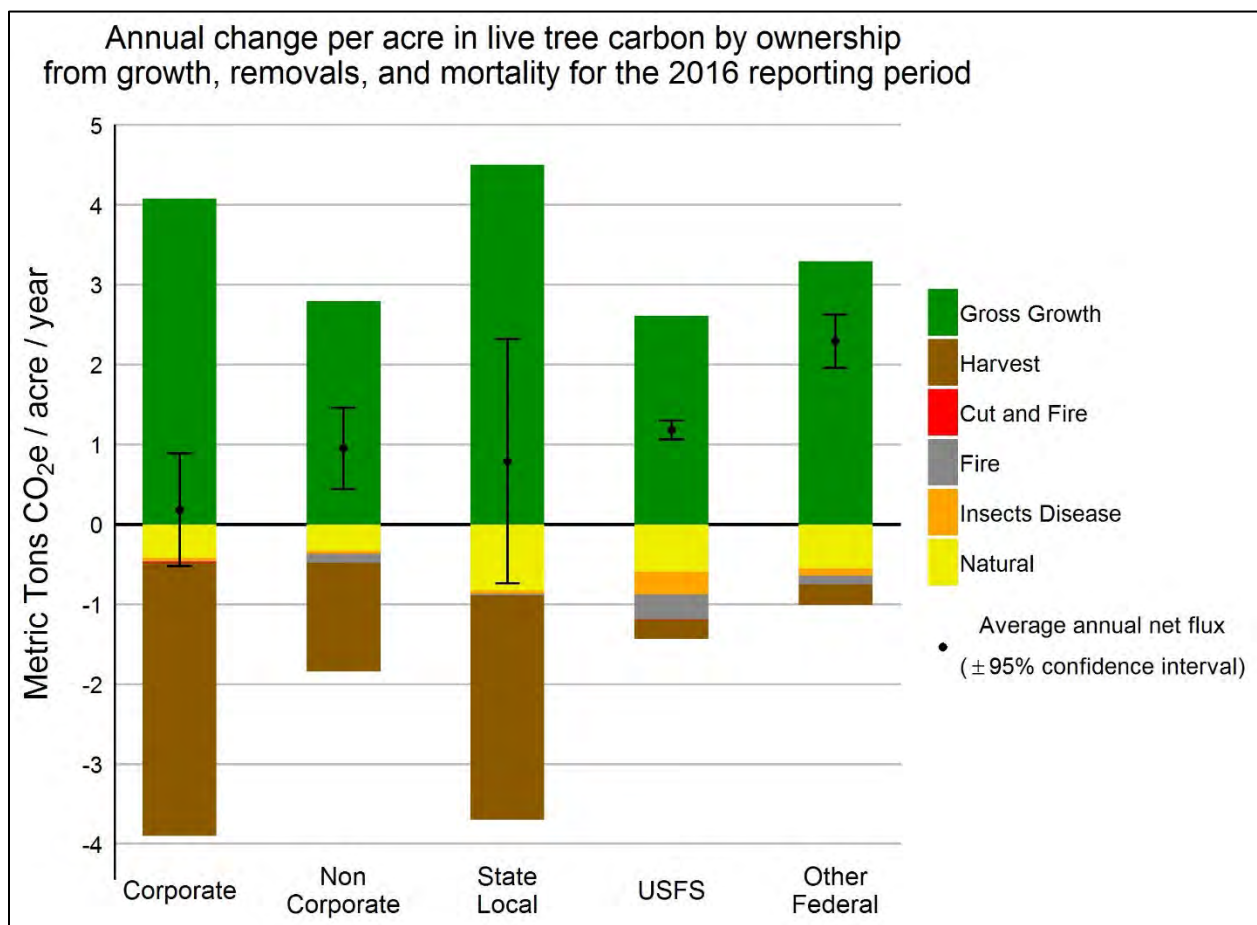


Figure 4.4. Average annual net change per acre in aboveground live tree carbon (MT/CO₂e/acre) by ownership in Oregon’s forests, 2001-2006 to 2011-2016. The error bars represent the 95% confidence interval of net change. Figure derived from Appendix 2, Table B10.

Table 4.4. Forest land average annual growth, mortality, harvest, and net change per acre in aboveground live tree carbon (CO₂e) pool by ownership of Oregon's forests, 2001-2006 to 2011-2016. See also Appendix 2, Table B10.

	Private - Corporate	Private - Noncorporate	Other Federal	State and Local Gov.	National Forests	All Ownerships
<i>Metric tons CO₂e/acre/year</i>						
Gross tree growth	4.08	2.79	3.29	4.50	2.61	3.14
Removals - harvest	-3.42	-1.36	-0.26	-2.81	-0.28	-1.21
Mortality - fire killed	-0.01	-0.11	-0.11	-0.02	-0.22	-0.18
Mortality - cut and fire ¹	-0.01	0.00	--	--	-0.01	-0.01
Mortality - insects and disease	-0.04	-0.04	-0.09	-0.04	-0.26	-0.17
Mortality - natural/other	-0.42	-0.33	-0.53	-0.76	-0.57	-0.52
Net change (± 95% Confidence Interval)	0.18 (0.70)	0.95 (0.52)	2.29 (0.33)	0.79 (1.52)	1.17 (0.12)	1.04 (0.20)

¹Mortality - Cut and fire: plots where tree mortality has occurred due to both harvest and fire.

Figure 4.5 illustrates carbon sequestered annually on a per acre basis from productive forest lands such as managed timberlands and other productive forest land not actively managed for timber production, such as congressionally withdrawn wilderness areas. When comparing the two largest ownership groups, carbon sequestration from gross tree growth is highest on ownerships managed by private corporations. On average, gross tree growth accounts for an increase of 4.2 ± 0.2 metric tons of CO₂e annually per acre on these timberlands compared to 2.8 ± 0.1 metric tons per acre per year for National Forests timberlands (Table 4.5). Note: State and local government and other federal owners have higher gross tree growth at 4.9 ± 0.5 and 4.9 ± 0.4 metric tons per acre per year, respectively (See Appendix 2, Table B12).

Regardless of the cause, tree mortality transfers carbon from tree growth into carbon pools that eventually emit carbon through decomposition. Productive forests being managed by the USDA Forest Service are currently experiencing the greatest impact of tree mortality, in part due to wildfire on productive forests withdrawn from management for the production of timber. Fire caused tree mortality on these reserved forests is currently reducing the live tree carbon pool by 0.8 ± 0.4 metric tons of CO₂e annually per acre (Table 4.5).

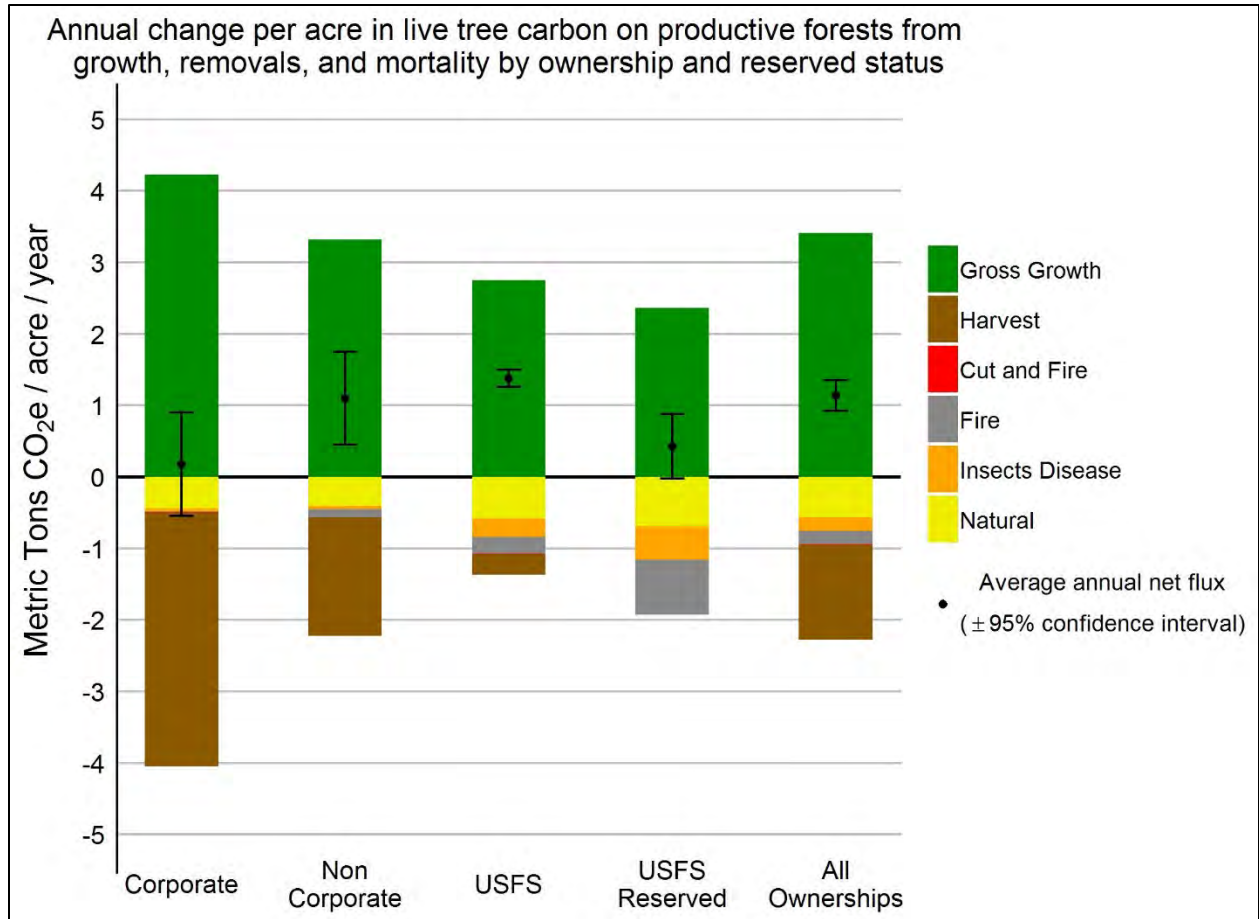


Figure 4.5. Average annual net change per acre in aboveground live tree carbon (CO₂e) for Oregon’s productive forests by largest ownerships and land status of Oregon’s forests, 2001-2006 to 2011-2016. Productive forests are capable of producing 20 ft³ of tree volume per acre every year. The “All Ownerships” category includes all other state and federal agencies managing forest land in Oregon. The error bars represent the 95% confidence interval of net change. Figure derived from Appendix 2, Table B10, B12.

Table 4.5. Timberland (productive forest land) average annual growth, mortality, harvest, and net change per acre in aboveground live tree carbon (CO₂e) pool by ownership and land status of Oregon's productive forests, 2001-2006 to 2011-2016. The all ownerships category includes all other state and federal agencies managing forest land in Oregon. See also Appendix 2, Table B10, B12.

	Timberland			Reserved Productive Forest Land	All Productive Forest Land
	Private - Corporate	Private - Noncorporate	National Forests	National Forests	All Ownerships
	<i>Metric tons CO₂e/acre/year</i>				
Gross tree growth	4.23	3.32	2.75	2.36	3.41
Removals - harvest	-3.55	-1.65	-0.29	0.00	-1.33
Mortality - fire killed	-0.01	-0.12	-0.23	-0.77	-0.19
Mortality - cut and fire ¹	-0.01	0.00	-0.01	--	-0.01
Mortality - insects and disease	-0.04	-0.05	-0.26	-0.47	-0.18
Mortality - natural/other	-0.44	-0.40	-0.58	-0.69	-0.57
Net change (± 95% Confidence Interval)	0.18 (0.73)	1.10 (0.65)	1.38 (0.12)	0.43 (0.45)	1.14 (0.22)

¹Mortality - Cut and fire: plots where tree mortality has occurred due to both harvest and fire.

4.1.2.4 Net carbon flux aboveground live tree pool, by region

In Oregon, over half of the annual CO₂e sequestration in live tree gross growth is occurring in two regions, the forests of the Western Cascades and the Oregon Coast Range (Figures 4.6a, 4.7, and 4.8). Due to the high rate of annual tree growth these regions account for 58% of the net CO₂e sequestered annually from tree growth in Oregon's forests. The Western Cascades region accounts for 31% of the state's total annual net CO₂e flux in live trees at 9.4 ± 3.0 MMT per year, slightly more than the live tree net flux of 8.1 ± 4.3 MMT CO₂e sequestered annually from the Oregon Coast Range (Table 4.6). However, this does not account for carbon removed through timber harvest where a portion is sequestered as harvested wood products. Combined with a high rate of annual tree growth, annual output of high value wood products, and relatively less area impacted by tree mortality make forests of the Oregon Coast Range the most important region to the state for annual carbon flux. The highest annual rate of conversion to mortality occurs in the Western Cascades region where on average there is 9.4 ± 1.1 MMT of CO₂e per year in tree mortality, or 37% of the statewide total mortality. After accounting for tree mortality from all causes and carbon removed through timber harvest, no single region is currently losing more CO₂e annually than is being sequestered through live tree growth (Table 4.6).

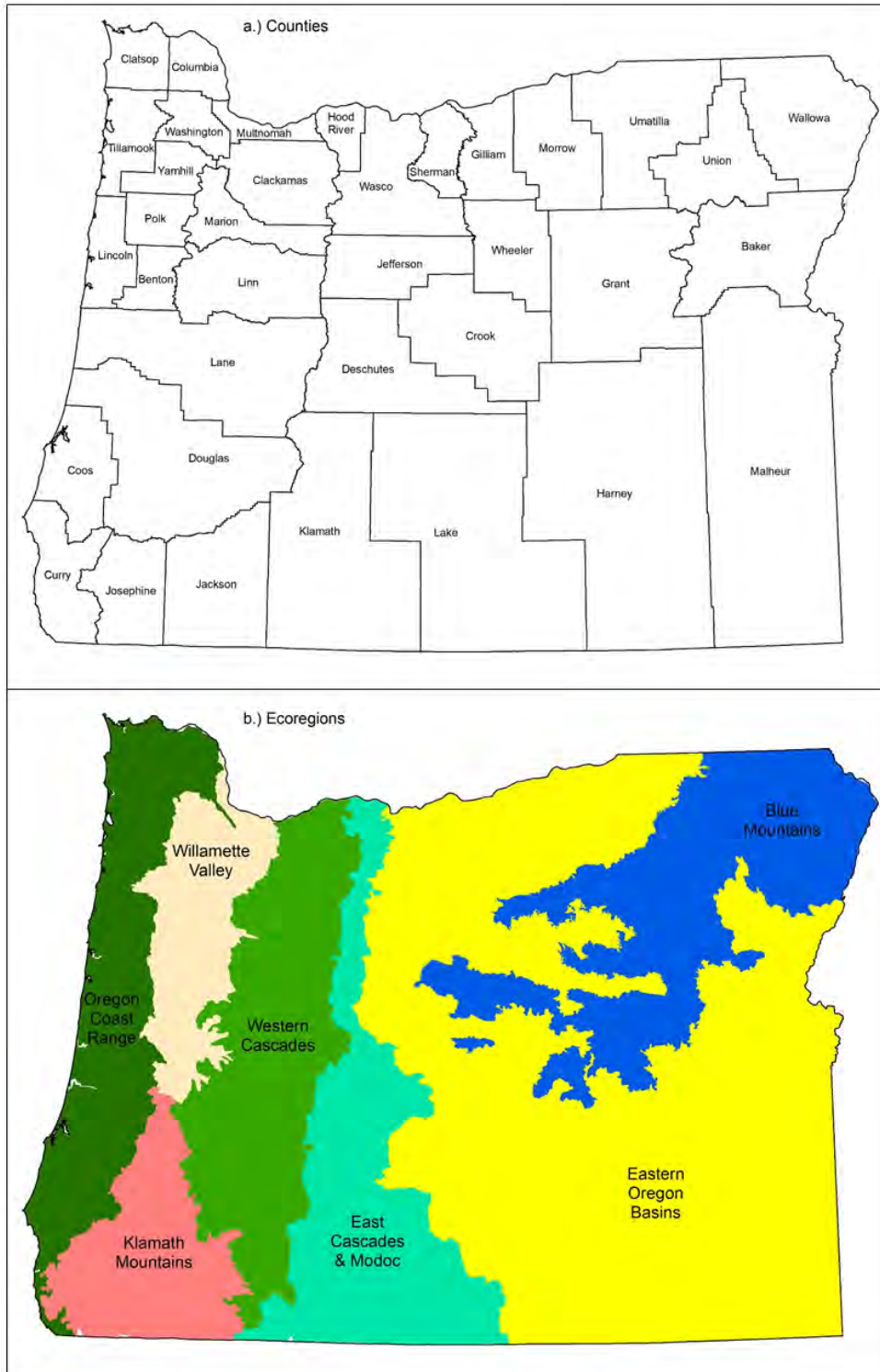


Figure 4.6a. Oregon a.) Counties; b.) Ecoregions used in this analysis, based on ecological sections as described by Cleland et al. (2007).

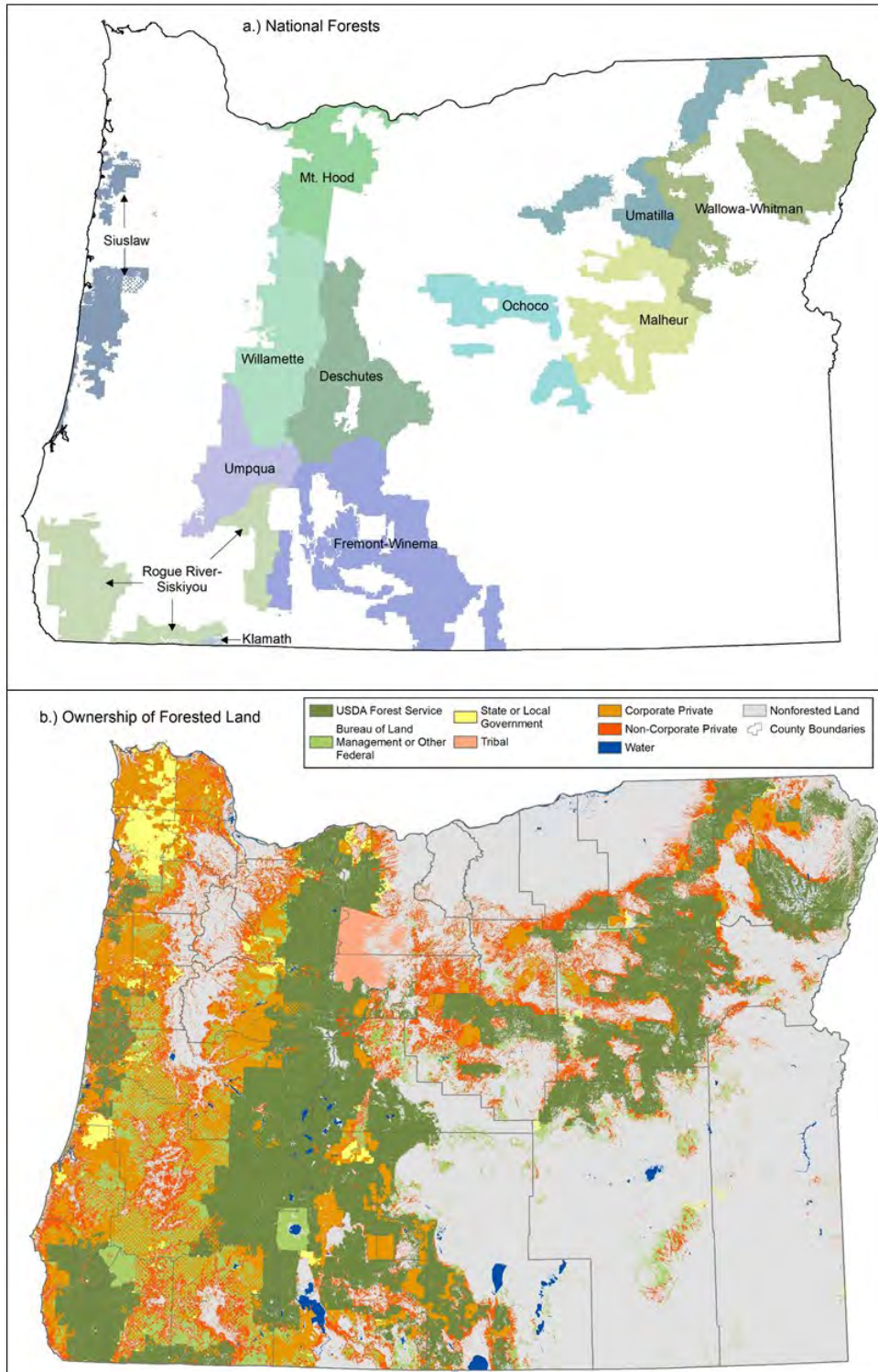


Figure 4.6b. Oregon a.) National Forest System boundaries; b) Ownership of forest land.

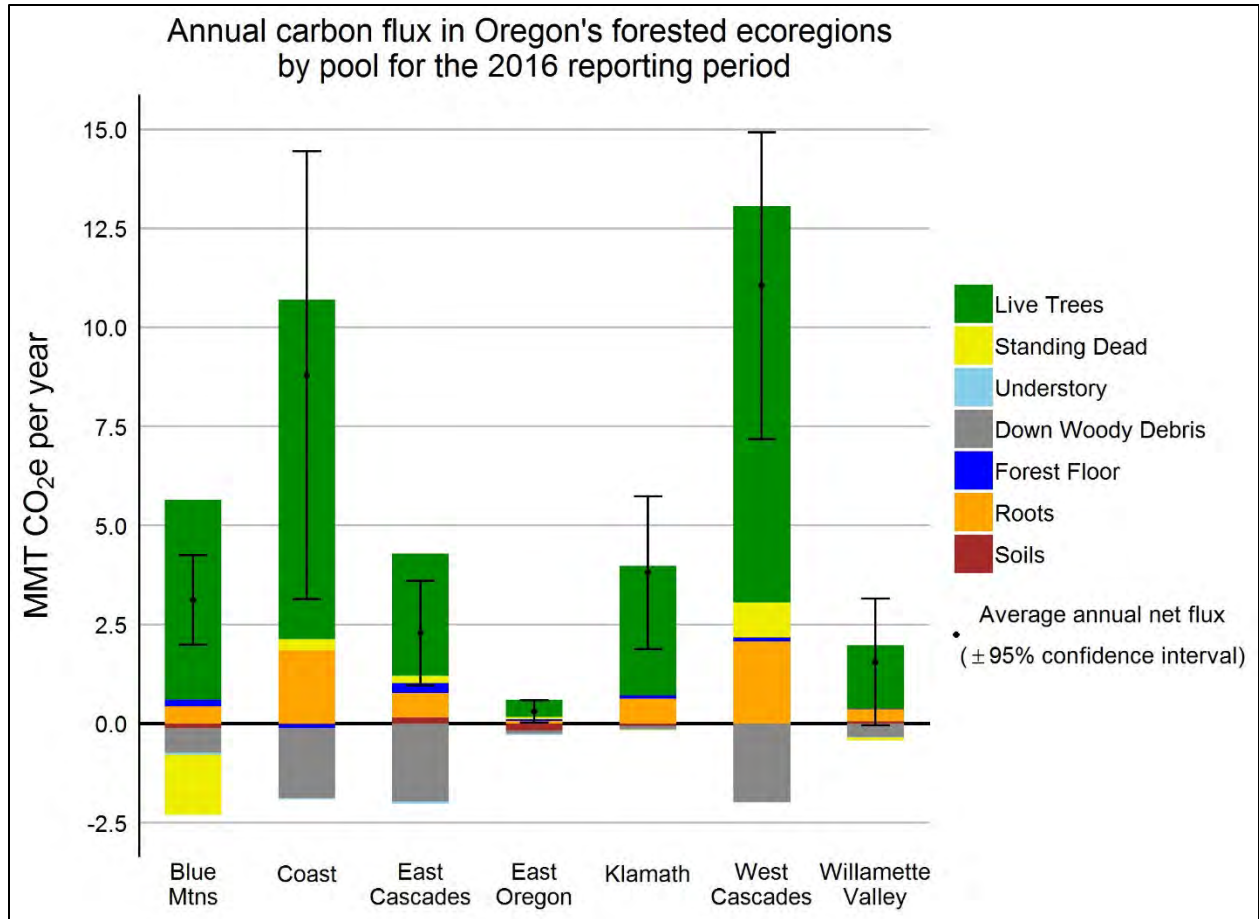


Figure 4.7. Average annual carbon flux in Oregon forested ecological regions by pool (MMT/CO₂e/acre), 2001-2006 to 2011-2016. The error bars represent the 95% confidence interval of net change.

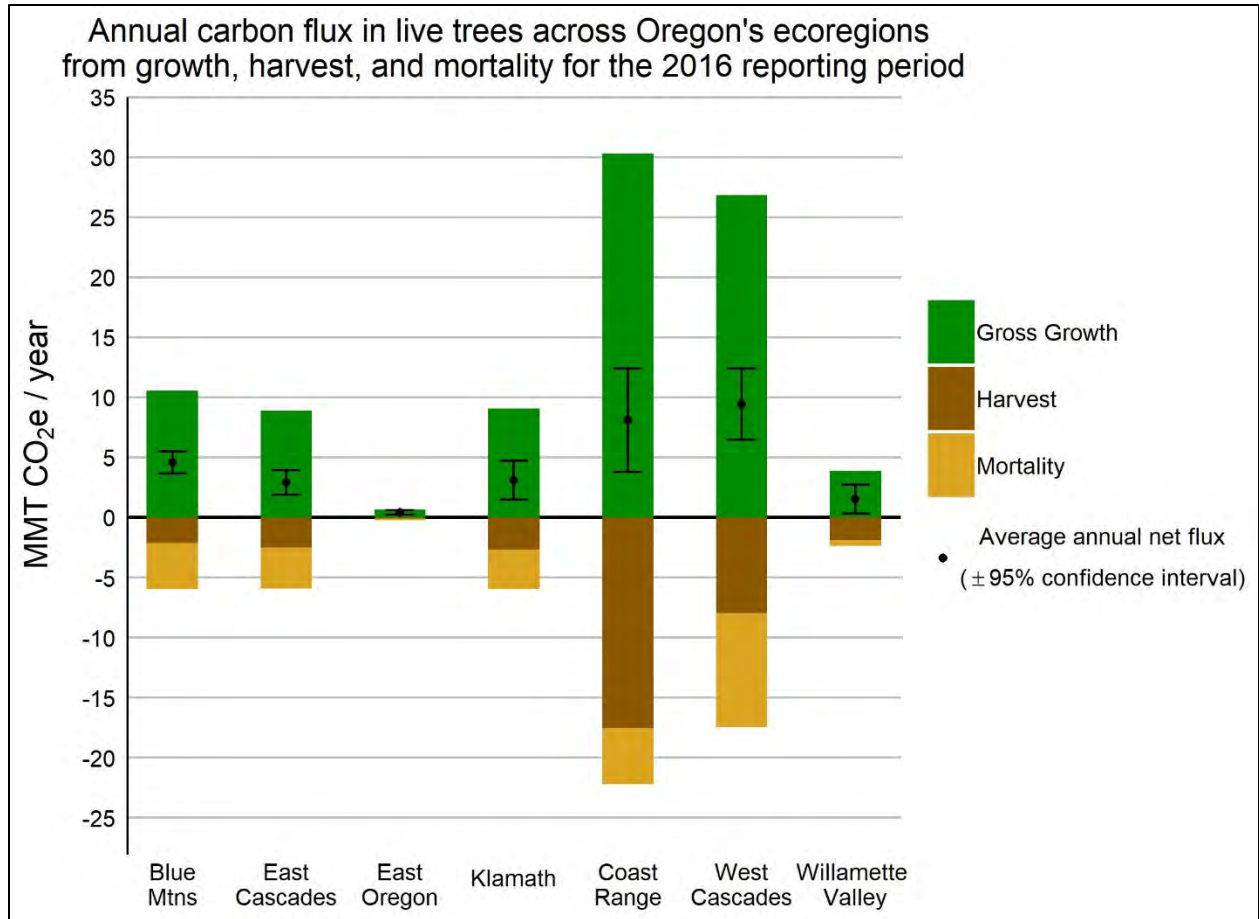


Figure 4.8. Average annual net CO₂e flux in live trees from growth, harvest and mortality by ecological region, 2001-2006 to 2011-2016 (MMT CO₂e /yr). Error bars represent the 95% confidence interval of estimated net flux. Figure derived from Table 4.5/Appendix 2, Tables B2-B8.

Table 4.6. Average annual net CO₂e flux in live trees from growth, harvest, mortality by ecological region, 2001-2006 to 2011-2016. Compare to Appendix 2, Tables B2-B8.

	Gross Growth		Harvest		Mortality		Net Flux	
	Total	SE	Total	SE	Total	SE	Total	SE
<i>Thousand Metric Tons CO₂ equivalent per year</i>								
Blue Mountains	10,548	301	-2,115	341	-3,853	329	4,580	474
East Cascades+Modoc	8,873	327	-2,501	387	-3,446	319	2,925	521
Eastern OR Lowlands	652	78	-88	38	-151	36	413	84
Klamath Mountains	9,086	537	-2,684	675	-3,297	383	3,106	820
Oregon Coast Range	30,307	1,229	-17,516	1,956	-4,698	391	8,093	2,194
Western Cascades	26,856	882	-7,977	1,258	-9,450	575	9,429	1,518
Willamette Valley	3,875	467	-1,900	567	-446	85	1,528	620
All Oregon	90,197	1,220	-34,782	2,373	-25,341	870	30,074	2,897

Annual CO₂e flux by pool and ownership from each region shows increased statistical uncertainty as wider confidence intervals for many of the estimates (Figure 4.9). The increased uncertainty illustrates the current useful limit of the FIA collected measurement data and compiled estimates. As the sample size of measured plots decreases through additional estimation classifications covering smaller geographic scales the statistical uncertainty with each estimate quickly increases. Despite the increased uncertainty there is useful information that can be obtained from this detailed look at annual CO₂e flux. Of the estimates not statistically different from zero, annual CO₂e flux in live tree growth is exceeding CO₂e loss into other carbon pools for most regions especially for USDA Forest Service managed forests. Despite the relatively high rate of live tree growth, the Blue Mountains region has a notable transfer of live trees into the standing dead tree pool on USDA Forest Service forests where 1.4 ± 0.5 MMT of CO₂e is added to this pool each year (Table B2).

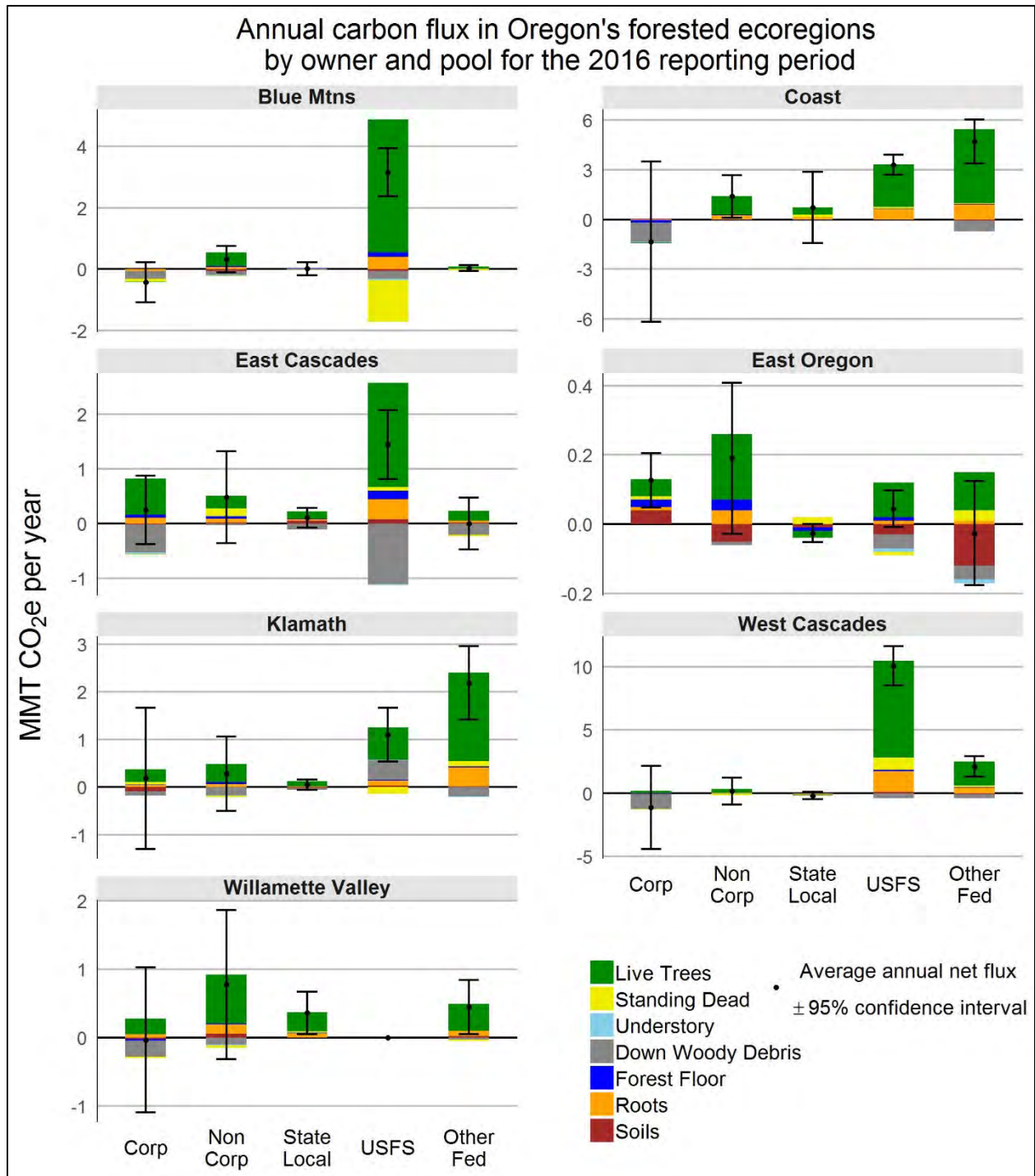


Figure 4.9. Oregon average annual net CO₂e flux by ecoregion, pool and ownership, 2001-2006 to 2011-2016. Roots includes belowground live and dead tree roots. Understory includes aboveground understory vegetation. Error bars represent the 95% confidence interval of net change. Figure derived from Appendix 2, Tables B2-B8. Note the different y-axis scales on individual graphs.

4.1.2.5 Disturbance effects on carbon flux

The net change in C by pool varied with management, disturbance, and ownership. In stands that experienced harvesting, the loss of live trees on National Forest lands was slightly more than growth when also accounting for natural mortality (-0.87 ± 0.5 MMT CO₂e per year), since on average growth was roughly proportional to harvest in those stands (Table 4.7a). In contrast, on private corporate lands, the net change in live trees on cut stands was -16.1 ± 3.7 MMT CO₂e per year, reflecting greater proportional removals of live trees in stands that were cut on that ownership compared to others. Accounting for additional losses of dead wood resulted in a net removal of -29.0 ± 5.3 MMT CO₂e per year in stands where harvesting occurred across all ownerships in Oregon. Of the estimated 34.8 ± 4.6 MMT CO₂e per year of live trees cut within the forest (Table 4.7a), live tree growth annually exceeded harvest and mortality.

The total net change in C in stands that experienced fire in Oregon was -2.3 ± 0.8 MMT CO₂e per year. Most of that loss occurred on National Forest lands. Although live tree mortality was nearly twice that amount on National Forests (-4.3 ± 1.2 MMT CO₂e per year), live tree growth and the increase in standing dead was significant.

In contrast to stands experiencing fire and/or cutting, stands affected by weather disturbances or insect and disease accumulated C in the live and dead tree pools. Overall, in spite of annual statewide losses due to fire and/or cutting across Oregon, accumulations on stands experiencing other disturbances, and undisturbed stands, resulted in a net overall accumulation of nearly 30.1 ± 5.7 MMT CO₂e per year reflecting the state's high annual tree growth rate across all forest ownerships.

Washington county is estimated to have a net loss of carbon based on all pools (-2.3 ± 2.1 MMT CO₂e per year), due to an estimated high rate of harvest (Table 4.7b). Douglas County is also notable with a high rate of live tree mortality (-3.5 ± 0.8 MMT CO₂e per year) mostly due to fire and natural causes, but is partially compensated for this loss by also having a high rate of annual tree growth (12.1 ± 1.4 MMT CO₂e per year) second only to Lane County. The forests of Lane County lead the state in net carbon flux by sequestering approximately 7.6 ± 2.3 MMT of CO₂e annually, making it responsible for nearly a quarter of all the CO₂e sequestered each year by Oregon's forests. Douglas and Lane are the two largest counties in terms of forest area in western Oregon. See figure 4.6a for a map of Oregon counties.

Of the National Forests or other forested areas managed by the USDA Forest Service in Oregon, only the Deschutes National Forest is currently estimated to have a net loss of carbon based on all pools (-0.2 ± 0.6 MMT CO₂e per year) but this estimate is not statistically different than zero (Table 4.7c). Other forests managed by the USDA Forest Service where net flux is not statistically different from zero include Fremont National Forest, Ochoco National Forest, Columbia River Gorge National Scenic Area, and the Crooked River National Grassland. As of 2016, due to recent fires the Rogue River-Siskiyou National Forest is experiencing the highest

rate of mortality on a National Forest at -2.8 ± 0.6 MMT CO₂e per year. See figure 4.6b for a map of National Forests within Oregon.

Table 4.7a. Average annual net carbon (CO₂e) flux by pool on forest land by disturbance type and ownership, 2001-2006 to 2011-2016. See also Appendix 2, Table B9.1.

	USDA Forest Service								Other Public				Private				Total			
	Timberland		Reserved		Low productive, unreserved		Total		Other federal		State and local gov.		Corporate		Non Corporate					
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE		
<i>thousand metric tons CO₂e equivalent per year</i>																				
Cut																				
Mortality	-334	44	-3	3	-3	2	-339	44	-58	26	-84	42	-232	69	-96	40	-328	79	-808	103
Cut	-2,635	280	-3	1	-2	1	-2,640	280	-755	244	-2,912	764	-21,160	2,070	-3,812	770	-24,971	2,154	-31,278	2,296
Gross Growth	2,085	157	15	8	6	3	2,105	158	971	250	852	200	5,253	497	1,295	250	6,548	545	10,477	648
Net Live	-884	234	9	6	1	1	-874	234	159	214	-2,144	672	-16,138	1,891	-2,613	657	-18,751	1,964	-21,610	2,084
Standing Dead Change	-298	98	-1	1	-2	2	-301	99	2	16	-39	36	-510	106	-40	16	-550	106	-888	150
Dead Woody Debris Change	-97	92	-5	9	4	3	-97	92	-219	111	34	164	-28	235	13	56	-16	241	-298	325
Total Net	-1,566	322	5	5	3	3	-1,557	322	-7	313	-2,772	886	-21,298	2,459	-3,387	847	-24,685	2,553	-29,021	2,720
Cut and Fire																				
Mortality	-160	61	--	--			-160	61	--	--	--	--	-75	63	-10	10	-85	63	-245	88
Cut	-318	132	--	--			-319	132	--	--	--	--	-350	277	-326	260	-675	379	-994	401
Gross Growth	130	34	--	--			130	34	--	--	--	--	59	38	55	32	114	50	244	60
Net Live	-348	147	--	--			-349	147	--	--	--	--	-366	247	-281	242	-647	344	-995	374
Standing Dead Change	33	26	--	--			33	26	--	--	--	--	2	7	3	6	5	9	38	28
Dead Woody Debris Change	-19	37	--	--			-19	37	--	--	--	--	-62	76	-47	41	-109	86	-128	94
Total Net	-412	175	--	--			-412	175	--	--	--	--	-511	315	-398	341	-908	463	-1,320	495
Fire																				
Mortality	-2,478	391	-1,833	486	-40	21	-4,351	624	-398	209	-22	17	-41	31	-375	159	-416	162	-5,187	678
Cut			-1	1	--	--	-2	1	--	--	--	--	--	--	--	--	--	--	-2	1
Gross Growth	764	81	422	106	12	6	1,198	134	128	54	1	1	4	3	100	38	104	38	1,431	149
Net Live	-1,714	358	-1,412	433	-28	17	-3,155	562	-270	179	-21	16	-37	28	-274	135	-312	138	-3,757	606
Standing Dead Change	1,133	232	784	250	14	9	1,930	341	111	121	19	15	36	28	142	119	177	123	2,238	383
Dead Woody Debris Change	-299	96	-70	80	-20	15	-390	126	-32	21	1	1	-26	24	24	44	-2	50	-423	138
Total Net	-1,024	210	-864	289	-34	21	-1,922	358	-211	118	-1	2	-27	22	-141	83	-168	86	-2,302	387

Table 4.7a. Average annual net carbon (CO₂e) flux by pool on forest land by disturbance type and ownership, 2001-2006 to 2011-2016 (Continued).

	USDA Forest Service								Other Public				Private				Total			
	Timberland		Reserved		Low productive, unreserved		Total		Other federal		State and local govt.		Corporate		Non Corporate		Total	Total		
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE		
<i>thousand metric tons CO2 equivalent per year</i>																				
Insect and Disease																				
Mortality	-2,893	179	-1,148	211	-37	18	-4,079	275	-333	122	-46	31	-273	75	-135	53	-408	91	-4,865	316
Cut	-55	24	-4	4	--	--	-60	24	-3	3	--	--	-3	2	-10	6	-13	6	-76	25
Gross Growth	5,140	222	1,391	170	31	12	6,562	279	749	159	208	110	1,687	324	699	145	2,385	352	9,905	489
Net Live	2,192	198	239	179	-7	16	2,424	268	413	159	163	83	1,410	265	553	129	1,963	293	4,963	435
Standing Dead Change	185	139	-84	191	7	12	108	237	46	89	16	15	18	44	-65	45	-47	63	123	261
Dead Woody Debris Change	-377	141	-230	161	-9	9	-616	214	24	90	-30	48	-177	76	-102	65	-278	100	-900	257
Total Net	2,566	261	-92	257	-9	9	2,465	367	554	165	196	133	1,629	344	483	134	2,112	367	5,326	560
Other cut and weather																				
Mortality	-359	81	-165	126	--	--	-524	149	-98	57	-80	64	-728	256	-116	36	-844	258	-1,547	310
Cut	-32	13	--	--	--	--	-32	13	-22	16	--	--	-212	107	-221	119	-434	159	-488	160
Gross Growth	681	104	89	38	1	1	771	110	412	168	159	88	1,283	295	678	181	1,962	343	3,304	407
Net Live	289	92	-76	93	1	1	214	131	292	132	79	71	343	285	341	170	684	331	1,269	386
Standing Dead Change	-112	74	-15	11	--	--	-127	75	2	6	19	16	243	118	7	21	249	120	143	143
Dead Woody Debris Change	148	78	12	22			160	81	-24	45	48	68	-25	106	-88	105	-114	149	70	188
Total Net	362	148	-110	105	2	2	253	182	368	166	163	101	747	323	352	237	1,099	400	1,883	480
Less than 25% disturbed																				
Mortality	-5,656	226	-1,530	178	-86	22	-7,272	283	-1,866	228	-757	185	-1,872	162	-922	120	-2,793	192	-12,689	449
Cut	-142	29	-3	2			-145	29	-174	69	-193	182	-1,184	559	-249	103	-1,433	568	-1,944	602
Gross Growth	21,379	420	3,892	281	186	29	25,456	481	9,878	497	3,749	380	19,082	1,031	6,671	576	25,753	1,083	64,837	1,317
Net Live	15,581	433	2,359	258	100	24	18,039	495	7,838	528	2,799	416	16,027	1,095	5,500	520	21,527	1,149	50,204	1,405
Standing Dead Change	-971	204	-1,030	308	-36	20	-2,037	370	104	178	93	119	83	86	-77	51	6	100	-1,834	439
Dead Woody Debris Change	-1,215	312	793	263	27	44	-395	410	-1,159	282	-232	144	-3,092	401	-259	162	-3,351	430	-5,137	671
Total Net	17,072	594	2,538	454	98	56	19,708	735	8,890	682	3,459	508	17,340	1,456	6,561	656	23,901	1,535	55,958	1,885
Total																				
Mortality	-11,880	467	-4,679	525	-166	38	-16,725	697	-2,753	321	-989	195	-3,221	316	-1,654	210	-4,875	365	-25,341	870
Cut	-3,183	310	-11	5	-3	2	-3,197	310	-954	259	-3,105	775	-22,908	2,140	-4,618	827	-27,526	2,228	-34,782	2,373
Gross Growth	30,178	392	5,808	261	236	32	36,222	425	12,139	472	4,970	333	27,368	1,065	9,498	642	36,866	1,048	90,197	1,220
Net Live	15,115	674	1,118	550	67	35	16,300	866	8,432	619	876	863	1,239	2,395	3,226	908	4,465	2,558	30,074	2,897
Standing Dead Change	-30	362	-347	450	-16	25	-393	578	265	235	108	127	-129	189	-31	141	-160	236	-181	679
Dead Woody Debris Change	-1,860	375	500	318	3	47	-1,357	493	-1,411	316	-179	231	-3,409	486	-460	220	-3,869	530	-6,817	820
Total Net	16,999	793	1,477	603	59	61	18,535	987	9,594	780	1,045	1,116	-2,119	3,098	3,470	1,160	1,351	3,307	30,525	3,706

Total Net value includes change from roots and understory vegetation which are not enumerated in this table.

Table 4.7b. Average annual carbon (CO₂e) flux in live trees from growth, harvest, mortality by county, 2001-2006 to 2011-2016. See also Appendix 2, Table B9.2.

County	Standing Live														All Pools			
	Gross Growth		Harvest		Fire killed		Cut and fire		Insects and disease		Natural/other		Total Mortality		Net Flux		Net Flux	
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
	<i>Thousand Metric Tons CO₂ equivalent per year</i>																	
Baker	1,119	98	-127	52	-287	271	-8	9	-131	32	-121	24	-546	274	446	271	460	196
Benton	1,524	321	-840	410	--	--	--	--	--	--	-328	102	-328	102	356	400	344	578
Clackamas	3,817	398	-1,194	469	--	--	--	--	-133	48	-876	144	-1,009	149	1,614	543	2,509	759
Clatsop	2,812	486	-1,966	656	--	--	--	--	-36	33	-561	238	-597	240	249	771	471	1,013
Columbia	2,131	430	-1,161	594	--	--	--	--	-50	31	-226	88	-276	94	693	651	1,007	849
Coos	4,836	587	-2,550	807	--	--	--	--	-42	25	-446	89	-488	92	1,798	877	1,684	1,149
Crook	704	65	-70	21	-15	9	--	--	-27	11	-84	20	-126	24	508	65	287	146
Curry	3,834	486	-1,689	591	-320	117	-44	44	-29	14	-777	112	-1,169	165	975	677	1,464	797
Deschutes	1,854	127	-345	81	-574	217	-23	13	-369	95	-251	47	-1,217	216	291	236	344	240
Douglas	12,102	709	-4,289	967	-1,073	360	--	--	-391	78	-2,052	190	-3,516	405	4,296	1,115	4,602	1,416
Grant	2,952	155	-209	48	-299	95	-5	4	-375	49	-459	51	-1,139	111	1,605	168	1,259	227
Harney	570	53	-177	50	-189	51	-31	29	-42	13	-58	15	-320	61	73	78	56	98
Hood River	968	170	-33	23	--	--	--	--	-126	60	-193	52	-320	77	616	136	679	180
Jackson	4,631	396	-809	298	-70	51	--	--	-322	104	-1,061	161	-1,453	196	2,369	423	2,762	511
Jefferson	618	108	-326	254	-452	200	-10	10	-38	21	-83	32	-583	203	-292	311	-559	417
Josephine	2,672	275	-375	239	-546	255	--	--	-17	10	-646	111	-1,210	276	1,087	383	1,157	421
Klamath	5,508	288	-1,334	240	-370	176	-16	13	-922	153	-883	144	-2,192	265	1,983	348	1,851	463
Lake	1,813	137	-360	102	-172	54	-82	64	-421	91	-329	64	-1,004	136	449	173	9	254
Lane	12,361	711	-3,046	698	-279	156	-1	1	-252	94	-2,068	204	-2,600	267	6,714	911	7,581	1,168
Lincoln	2,921	438	-2,156	749	--	--	--	--	-34	26	-307	61	-340	67	425	765	64	1,061
Linn	4,194	449	-2,514	790	-155	155	-24	19	-79	38	-535	89	-793	184	887	843	131	1,121
Malheur	10	5	--	--	-37	23	--	--	-3	3	--	--	-40	23	-31	20	--	11
Marion	1,353	266	-949	464	--	--	--	--	-105	45	-176	52	-281	69	123	478	199	645
Morrow	346	68	-61	35	-7	6	--	--	-36	14	-28	10	-72	18	213	68	152	107
Multnomah	646	185	-13	9	--	--	--	--	-134	79	-125	50	-260	93	373	166	619	204
Polk	1,518	326	-1,299	561	--	--	--	--	--	--	-151	51	-151	51	69	531	89	673
Tillamook	3,191	430	-1,890	690	--	--	--	--	-5	5	-625	176	-630	176	671	720	906	909
Umatilla	1,239	161	-217	160	-6	7	--	--	-105	49	-229	49	-340	69	683	202	428	244
Union	1,850	172	-766	240	--	--	--	--	-200	74	-302	63	-502	96	582	212	303	270
Wallowa	1,877	173	-469	157	-76	40	--	--	-225	56	-435	78	-736	101	672	181	333	274
Wasco	1,137	165	-326	155	-211	137	--	--	-117	37	-143	35	-472	146	339	229	498	275
Washington	1,251	284	-2,953	869	--	--	--	--	-41	30	-154	58	-194	65	-1,896	797	-2,309	1,077
Wheeler	318	50	-47	33	-46	24	--	--	-57	27	-44	13	-147	38	124	56	126	82
Yamhill	1,520	362	-222	145	--	--	--	--	--	--	-289	115	-289	115	1,008	342	1,407	437
All counties	90,197	1,220	-34,782	2,373	-5,187	678	-245	88	-4,865	316	-15,044	540	-25,341	870	30,074	2,897	30,914	3,773

Table 4.7c: Average annual carbon (CO₂e) flux in live trees from growth, harvest, mortality by National Forest, 2001-2006 to 2011-2016. See also Appendix 2, Table B9.3.

	Standing Live														All Pools					
	Gross Growth		Harvest		Fire killed		Cut and fire		Insects and disease		Natural/other		Total Mortality		Net Flux		Net Flux			
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE		
<i>Thousand Metric Tons CO2 equivalent per year</i>																				
Region 5																				
Klamath	77	38	--	--	--	--	--	--	--	--	--	--	--	--	--	--	77	38	94	46
Total	77	38	--	--	--	--	--	--	--	--	--	--	--	--	--	--	77	38	94	46
Region 6																				
Deschutes	2,283	88	-354	81	-874	266	-27	15	-452	99	-472	67	-1,825	246	104	265	-173	302		
Fremont	1,626	105	-270	74	-174	54	-19	15	-622	146	-311	61	-1,126	162	230	153	90	184		
Malheur	2,215	98	-157	34	-608	284	-32	29	-317	44	-345	38	-1,303	287	755	296	973	215		
Mt. Hood	3,651	143	-250	87	-22	27	--	--	-551	116	-827	96	-1,400	134	2,001	200	3,162	330		
Ochoco	768	39	-150	43	-107	46	-1	1	-73	29	-114	22	-295	56	322	71	81	155		
Rogue River / Siskiyou	5,197	224	-290	96	-1,095	289	-44	44	-221	52	-1,489	135	-2,848	311	2,059	381	2,865	404		
Sisuslaw	3,139	124	-457	156	--	--	--	--	-124	55	-746	75	-870	88	1,813	217	2,578	278		
Umatilla	2,077	98	-113	27	-70	32	-4	4	-254	44	-386	54	-713	63	1,251	101	550	196		
Umpqua	3,536	136	-153	64	-857	311	-1	1	-269	59	-855	91	-1,983	319	1,400	349	1,770	393		
Wallowa-Whitman	3,225	115	-151	37	-105	42	-8	9	-437	83	-645	86	-1,194	115	1,880	143	1,607	220		
Willamette	6,092	195	-563	173	-437	220	-24	19	-273	92	-1,649	188	-2,384	286	3,145	400	4,148	470		
Winema	2,293	131	-289	65	--	--	--	--	-486	68	-296	58	-782	82	1,222	130	1,316	176		
Columbia River Gorge National Scenic Area	42	31	--	--	--	--	--	--	--	--	-1	1	-1	1	41	31	63	47		
Crooked River National Grassland	1	1	--	--	-2	2	--	--	--	--	--	--	-2	2	-1	1	2	1		
Total	36,145	424	-3,197	310	-4,351	624	-160	61	-4,079	275	-8,136	314	-16,725	697	16,223	865	19,031	1,019		
All National Forests	36,222	425	-3,197	310	-4,351	624	-160	61	-4,079	275	-8,136	314	-16,725	697	16,300	866	19,125	1,020		

4.1.2.6 Implications of recent tree mortality events on carbon flux

Recent large fires, insect outbreaks, and drought conditions in Oregon's forests have caused tree mortality to fluctuate. Concerns are sometimes raised that high levels of mortality, particularly on National Forest lands that are not managed as intensively as other ownerships, have caused the forests in Oregon to become net emitters of carbon due to dead tree decay. Here we summarize recent trends in mortality in relation to other carbon fluxes.

On average, between 2001-2016, there were approximately 9.7 billion live trees in Oregon, of which about 137 million died each year, for an annual mortality rate of $1.42\% \pm 0.097\%$ (95% CI). For National Forests, there were 5.1 billion live trees, of which 73 million died each year, for an annual mortality rate of $1.44\% \pm 0.15\%$. As shown in report table 4.3, storage of carbon in live trees increased on most ownerships over this time-period, while storage in dead wood remained stable or declined. Mortality rates in terms of carbon were highest on National Forest system lands ($1.0 \pm 0.08\%$), with 47% of the mortality occurring on plots with no significant disturbance, and 21% occurring on plots disturbed by fire (Table B9 Disturbance). Despite the mortality on National Forest, the increase in the aboveground live tree wood pool was large (16.3 ± 1.7 MMT CO₂e per year) with a modest decrease in the snag plus down wood pool (-1.8 ± 1.0 MMT CO₂e per year).

The amount of carbon in mortality trees ranged between 20-40 MMT CO₂e over the assessment period, with the exception of 2002 (Figure 4.10). The large fires in 2002, including the 500 thousand acre Biscuit Fire in southwest Oregon, caused the spike in tree mortality in 2002. Overall, the most prominent mortality causes in terms of C were fire (23%), disease (20%), insect (18%), and wind (13%). Mortality rates in terms of live tree C was 0.7% per year for the state and ranged from 1.0% in the East Cascades to 0.4% in the Willamette Valley ecoregions.

The immediate effect of a pulse of tree mortality is to reduce storage in the live tree pool and the transfer of live tree carbon to dead tree carbon. The decreasing dead wood pool in recent years (Table 4.3) indicates that wood was being added at a slower rate than it was decaying, possibly in response to prior pulses of mortality (e.g., in high fire years). Live tree growth is the engine that drives forest carbon sequestration. For the balance to result in a net emission, mortality would have to exceed growth for an extended period such that the live tree pool declines and decay of the larger dead wood pool results in greater emissions.

Given a total aboveground dead pool of 145 ± 3.5 MMT C on National Forests (not including litter or duff), annual decay could range from a low of 1.5 MMT CO₂e per year (1%) to 7.2 MMT CO₂e per year (5%) (decay rates are highly variable—Kahl et al. 2017 found the former rate for conifers and the latter for hardwoods). In order for forests on National Forests to be net emitters, the sum of additions to dead wood (mortality) and live wood (net live), or gross

growth minus harvest, currently 33.0 ± 1.0 MMT CO₂e per year) would need to fall below the actual flux from decomposition.

The available data on mean carbon storage in recent years in Oregon, and on National Forests in particular, indicates that the forests are still a net sink of carbon from the atmosphere. It is possible that during specific years of severe drought, growth rates can become so low and mortality so high that decay exceeds new storage. A physiological model based on annual climate would likely be required to assess that question (e.g., Turner et al. 2016).

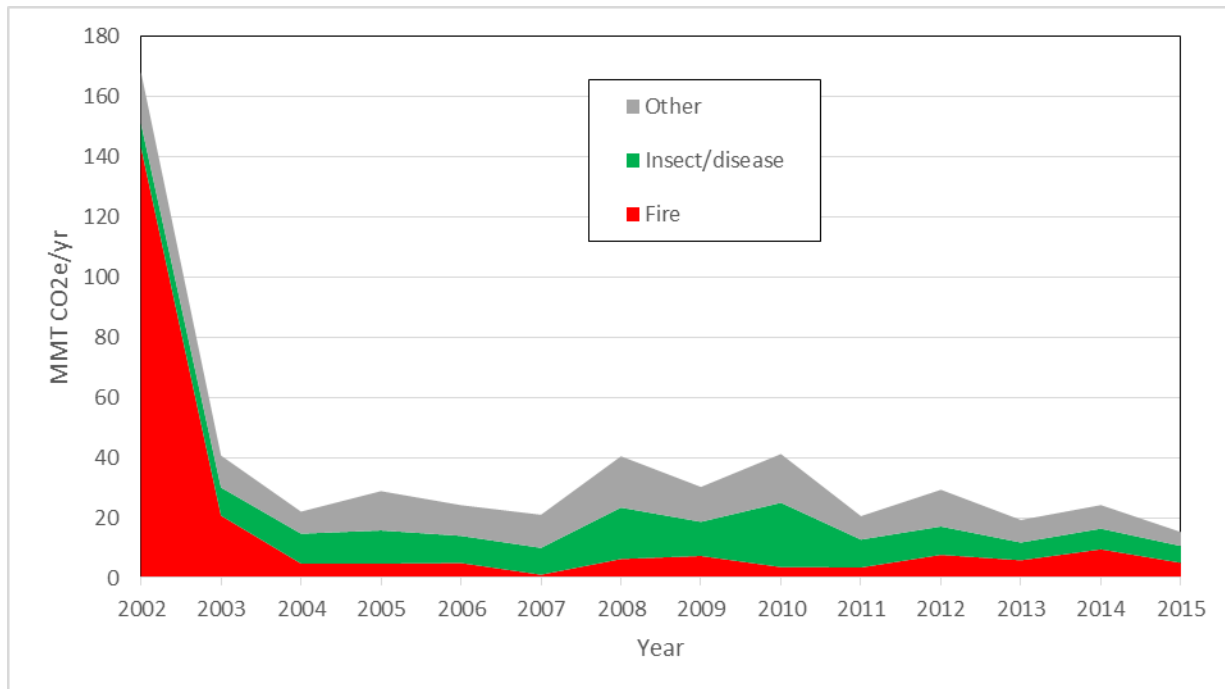


Figure 4.10. Estimated amount of carbon in mortality trees in Oregon by year and cause of death, 2002-2015.

4.1.2.7 Net flux from non-CO₂ GHG emissions from wildfire

Fire was estimated to affect 103 ± 16 thousand acres per year (95% CI), with an additional 16 ± 7 thousand acres per year affected by both fire and cutting. Emissions of methane and nitrous oxides due to fires on forest land are estimated to add 192 ± 47 thousand metric tons of CO₂e per year (95% CI) to Oregon's statewide emissions (Table 4.8, Figure 4.11). (Note that CO₂ emissions are already included in the previous net flux tables and are included here only for context.) The greatest source of these emissions was from fire on National Forest lands. A substantial amount was also estimated for the "cut and fire" category on private corporate lands. There are a few uncertainties with this estimate that may result in compensating effects. Our approach underestimates non-CO₂ gas emissions because we currently do not have an estimate of combustion of forest floor; and because, in the use of net change in C, some of the

C that was combusted would be masked by subsequent forest growth. Alternatively, our approach may overestimate non- CO₂ gas emissions because some of the cut and fire category were cut before they were burned, so the amount combusted was less than the net change; and because some of the change in C of dead wood came from decay after the fire, and not entirely from combustion. We will examine options to refine this estimate. Nevertheless, we believe the calculation based on field measurements will be more accurate than a default emission factor applied to an estimate of area burned as in the default approach for IPCC 2006.

Table 4.8. Annual Net Emissions of CO₂ and Non- CO₂ Greenhouse Gases from Fire, 2001-2006 to 2011-2016: All Oregon. CO₂ values are from table 4.4 and were used to calculate the other gases. See also Appendix 2, Table F1.

	National Forest		Public				Private				Total		Total	
	Total SE		Other Federal		State and local govt.		Corporate		Non Corporate		Total SE		Total SE	
	<i>thousand metric tons CO2 equivalent per year</i>													
Cut and Fire														
CO ₂	-412	175	--	--	--	--	-511	315	-398	341	-908	463	-1,320	495
CH ₄	-13	6	--	--	--	--	-16	10	-13	11	-29	15	-42	16
N ₂ O	-9	4	--	--	--	--	-11	7	-8	7	-19	10	-28	10
Fire														
CO ₂	-1,922	358	-211	118	-1	2	-27	22	-141	83	-168	86	-2,302	387
CH ₄	-62	11	-7	4			-1	1	-5	3	-5	3	-74	12
N ₂ O	-41	8	-4	2			-1		-3	2	-4	2	-49	8
Total Fire														
CO ₂	-2,334	397	-211	118	-1	2	-538	316	-539	351	-1,076	470	-3,622	627
CH ₄	-75	13	-7	4			-17	10	-17	11	-34	15	-116	20
N ₂ O	-49	8	-4	2			-11	7	-11	7	-23	10	-76	13

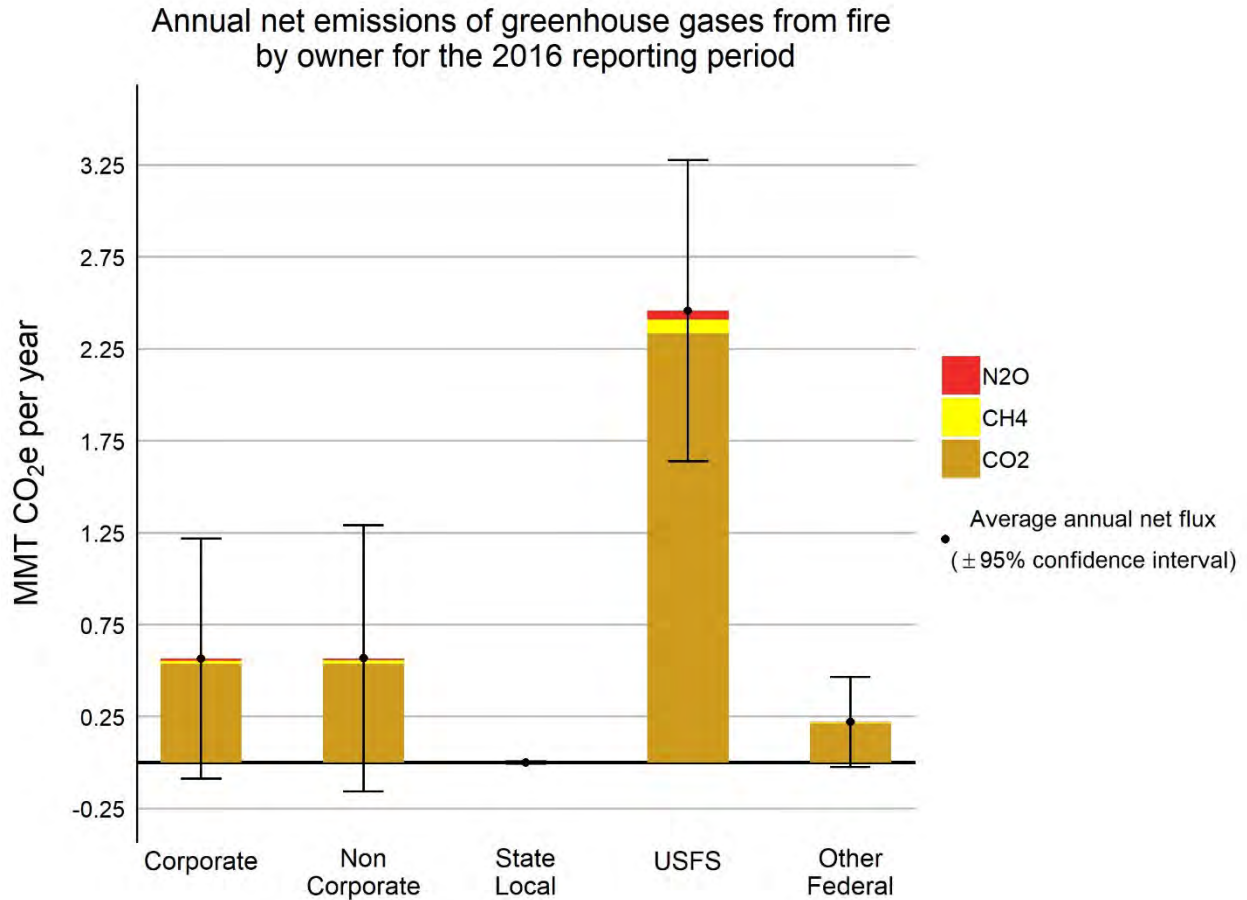


Figure 4.11. Annual net emissions of greenhouse gases from fire by owners, 2001-2006 to 2011-2016: All Oregon. See table 4.8, also Appendix 2, Table F1.

4.1.3 Net carbon flux associated with forest land conversions (LF)

4.1.3.1 Changes in forest land area from forest land conversions

Approximately 20 ± 7 thousand acres (95% CI) of forest land were converted to non-forest (i.e., deforested) every year in Oregon between 2001-2006 and 2011-2016 (Table 4.9). Most of the deforestation (53%) was conversion to grassland, 88% of which consisted of mechanical removal (e.g., chaining of juniper), and the remaining 12% due to lack of forest regeneration more than 30 years after a disturbance, primarily fire. Another 34% of the deforestation was conversion to developed, 90% of which was to rights-of-way (i.e., powerlines and roads, including logging roads). Approximately 24 ± 7 thousand acres of non-forest land were converted to forest every year (i.e., afforestation). Most of the afforestation (43%) occurred on developed uses (primarily rights of way—e.g., abandoned logging roads), with another 37% from grassland (natural tree encroachment). Overall, the estimate for the net loss of forest land

is not statistically significant at the rate of 4.5 ± 9.3 thousand acres per year. The confidence interval is high compared to the estimate because it is a relatively rare event at the scale of the inventory. Net forest land losses appeared to occur (not significant) on non-productive “other forest”, with gains seen on timberland, and some apparent gains on reserved lands as well.

Table 4.9. Annual change in forest land area to/from other IPCC land-use classes in Oregon, 2001-2006 to 2011-2016. See also Appendix 2, Table E1.

	Timberland ¹		Other forest ²		Reserved		All forest land	
	Total	SE	Total	SE	Total	SE	Total	SE
<i>Acres per year</i>								
Forest to nonforest:								
Cropland	359	284	582	499			942	574
Developed	5,718	931	922	695	21	16	6,660	1,160
Grassland	435	169	9,805	3,023	93	84	10,333	3,029
Other	471	355	22	20	126	130	619	378
Water	596	236	51	46	314	331	961	409
Total	7,579	1,078	11,382	3,150	554	365	19,515	3,345
Nonforest to forest:								
Cropland	2,668	1,402	389	286			3,057	1,431
Developed	8,660	935	381	189	1,198	1,179	10,239	1,512
Grassland	2,852	799	5,613	2,192	473	244	8,938	2,345
Other	160	88	75	79	1,252	1,248	1,486	1,254
Water	301	165	21	18			322	166
Total	14,641	1,850	6,478	2,222	2,923	1,733	24,042	3,368
Net change to forest land:								
Cropland	2,309	1,431	-194	576			2,115	1,542
Developed	2,942	1,310	-541	719	1,177	1,179	3,579	1,901
Grassland	2,417	815	-4,192	3,737	380	261	-1,395	3,837
Other	-311	365	53	82	1,126	1,255	867	1,310
Water	-294	255	-31	27	-314	331	-639	419
Total	7,062	2,130	-4,904	3,857	2,369	1,771	4,527	4,752

4.1.3.2 Net carbon flux from forest land conversions

Deforestation resulted in a loss of 2.4 ± 0.8 (95% CI) MMT CO₂e from forest carbon pools per year (Table 4.10). This was compensated for by the addition of 3.4 ± 0.8 MMT CO₂e per year due to afforestation, resulting in an insignificant net gain of 0.9 ± 1.1 MMT CO₂e per year. Most of the gains and losses were due to the live tree pool. Uncertainties in land classification are low, because FIA plots are visited on the ground in the case where there is any potential for forest land to be present on the plot (based on past history, the vegetation of the local area,

and examination of aerial photography). Non-forest plots which are not field visited are classified from aerial photography of at least one-meter resolution. Where definitions have changed over time, field crew measurements and detailed written descriptions are used to correctly assess change between forested lands and other land-uses.

Table 4.10. Annual change in carbon pools due to change in land-use between forest and non-forest in Oregon, 2001-2006 to 2011-2016. See also Appendix 2, Table E2.

	Forest to nonforest		Nonforest to forest		Net change	
	Total	SE	Total	SE	Total	SE
Carbon pool	<i>Thousand metric tons CO2 equivalent per year</i>					
Live tree	-1,536	300	2,199	318	663	436
Standing dead	-84	21	101	23	17	31
Down wood	-227	36	204	40	-23	54
Understory veg	-203	30	259	35	55	46
Litter	-441	64	651	95	211	114
Soil*	0		0		0	
All pools	-2,491	388	3,414	410	923	563

* No changes in landuse involved cultivated land so soil organic carbon change was assumed to be zero (Ogle et al. 2003)

4.2 Carbon stocks for forest land remaining forest land (FF)

4.2.1 FF land area

For the 2007-2016 reporting period, FIA estimates there are approximately 30 million acres of forest land across all ownerships in Oregon. Approximately 64% (19.0 million acres) of these forests are managed by federal agencies and state/local governments (Table 4.11). Private ownerships are divided between corporate forest lands, approximately 6.6 million acres, and private individuals owning 4.1 million acres. By region, over half (54%) of the forested acres are found within the Westside regions comprised of the Oregon Coast Range, Willamette Valley, Western Cascades, and Klamath Mountains (Figure 4.6a, Table 4.11). The region with the greatest share of forested area is the Western Cascades having 22% of all forested acres in the state. The Willamette Valley region is the only region that has a disproportionately larger share of privately owned forests (87%) compared to those managed by public agencies (13%). Douglas-fir has the greatest area of all forest types at approximately 37%, or 11.0 ± 0.3 million acres, followed by ponderosa pine at approximately 17%, or 5.2 ± 0.2 million acres (Table 4.12).

Table 4.11. Area of forest land remaining forest land by ownership group and region in Oregon, 2007-2016. Table derived from Appendix 2, Tables A10-A16.

	Public		Private		All Ownerships	
	Total	SE	Total	SE	Total	SE
<i>Thousand acres</i>						
Blue Mountains:						
Unreserved forest land	3,871	43	1,197	80	5,067	91
Reserved forest land	855	41	--	--	855	41
Total forest land	4,726	55	1,197	80	5,922	97
East Cascades+Modoc:						
Unreserved forest land	3,251	54	1,773	86	5,024	100
Reserved forest land	189	28	--	--	189	28
Total forest land	3,440	59	1,773	86	5,213	103
Eastern OR Lowlands:						
Unreserved forest land	1,383	76	1,031	75	2,414	107
Reserved forest land	50	16	--	--	50	16
Total forest land	1,433	76	1,031	75	2,464	107
Klamath Mountains:						
Unreserved forest land	1,695	68	1,130	78	2,825	103
Reserved forest land	255	29	--	--	255	29
Total forest land	1,950	73	1,130	78	3,080	107
Oregon Coast Range:						
Unreserved forest land	2,172	70	2,953	111	5,126	130
Reserved forest land	129	26	--	--	129	26
Total forest land	2,301	72	2,953	111	5,254	131
Western Cascades:						
Unreserved forest land	3,634	64	1,683	90	5,317	111
Reserved forest land	1,361	54	--	--	1,361	54
Total forest land	4,995	77	1,683	90	6,678	119
Willamette Valley:						
Unreserved forest land	124	26	909	68	1,033	73
Reserved forest land	10	8	--	--	10	8
Total forest land	135	27	909	68	1,043	73
All Oregon:						
Unreserved forest land	16,129	107	10,676	118	26,805	147
Reserved forest land	2,850	65	--	--	2,850	65
Total forest land	18,979	101	10,676	118	29,655	141

Table 4.12. Area of forest land remaining forest land by forest type, ownership group and region in Oregon, 2007-2016. See also Appendix 2, Table A17.

Forest type group	USDA Forest Service		Other federal		State and local government		Private corporate		Private non-corporate		All owners											
	Timberland	Other forest land	Timberland	Other forest land	Timberland	Other forest land	Timberland	Other forest land	Timberland	Other forest land	Total	SE										
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE										
<i>thousand acres</i>																						
Softwoods:																						
Douglas-fir	3,487	54	688	46	1,585	56	51	17	565	42	22	12	3,402	111	6	5	1,143	75	7	7	10,956	151
Fir / spruce / mountain hemlock	1,821	51	962	57	82	22	97	24	19	10	6	6	409	49	2	2	171	32	19	11	3,589	101
Western Hemlock / Sitka spruce	284	22	78	17	65	19	6	6	65	18	17	9	307	41	--	--	100	23	--	--	922	61
Lodgepole pine	1,165	41	260	32	47	17	82	22	13	9	11	8	284	40	7	6	68	19	13	9	1,948	75
Pinyon / juniper	1		8	3	--	--	5	5	--	--	--	--	--	--	--	--	--	--	12	9	26	11
Ponderosa pine	3,120	58	217	30	193	31	18	10	83	21	--	--	837	65	14	10	698	61	10	7	5,192	111
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	6	6	--	--	--	--	--	--	6	6
Western juniper	197	18	243	21	23	12	1,042	69	7	7	90	23	43	16	157	30	51	17	647	60	2,499	105
Western larch	129	15	62	19	--	--	--	--	--	--	--	--	7	6	--	--	15	9	--	--	212	26
Western white pine	15	5	3	3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	18	6
Other western softwoods	12	4	41	13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	52	14
Total	10,230	59	2,562	58	1,994	57	1,302	77	752	45	146	29	5,295	128	186	32	2,247	102	708	63	25,421	170
Hardwoods:																						
Alder / maple	121	13	19	7	29	12	6	5	170	28	5	5	398	43	--	--	326	40	13	7	1,090	67
Aspen / birch	5	3	6	3	--	--	16	10	--	--	--	--	8	7	--	--	16	9	6	6	58	17
Elm / ash / cottonwood	4	3	2	2	--	--	--	--	--	--	8	6	31	14	11	8	47	16	--	--	104	23
Tanoak / laurel	208	19	167	25	40	15	8	7	--	--	--	--	125	26	--	--	65	19	--	--	613	47
Western oak	51	9	56	14	71	21	77	22	14	9	13	8	80	22	58	17	92	22	233	35	744	61
Woodland hardwoods	3	2	12	5	--	--	10	8	--	--	--	--	7	6	--	--	12	9	2	2	44	15
Exotic hardwoods			--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	62	10	23	11	90	23	15	10	14	8	5	5	77	20	6	6	101	24	34	13	427	46
Total	455	26	284	29	230	35	133	28	198	31	32	12	726	59	74	20	660	57	288	39	3,079	111
Nonstocked	394	26	148	26	37	14	63	19	12	8	9	7	285	39	18	10	160	29	29	13	1,155	68
All forest types	11,079	53	2,994	54	2,260	57	1,498	81	961	42	186	32	6,306	129	278	40	3,067	114	1,025	74	29,655	141

Note: Totals may be off because of rounding; data subject to sampling error; SE = standard error; -- = less than 500 acre were estimated.
 Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.
 Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

4.2.2 FF carbon stock by ownership and land status, all Oregon

FIA plot measurements indicate that for the most recent 10-year reporting cycle (2007-2016) there are 3.2 ± 0.03 billion metric tons of carbon stocks stored on forest land including forest floor and forest soils across all ownerships in Oregon (Table 4.13a, Figure 4.12). Approximately 70% of these carbon stocks are found on public forest land with the National Forests containing over half of all carbon stocks (52%) (Table 4.13a, Figures 4.12 and 4.13). Just under half of all stored carbon is found belowground in forest soils (49%), and about a third is found aboveground in the live tree pool (32%) (Figure 4.12). The remaining stored carbon is distributed among the dead trees (2%), roots (7%), down wood (5%), forest floor (4%) and understory vegetation pools (1%). By land status, approximately 82% of the forest carbon stores are found on unreserved timberland, with about 12% found within areas reserved from timber harvest (Figure 4.14). Less productive unreserved forest land accounts for the remaining 6% of carbon stores. Table 4.13a below provides detailed estimates of forest carbon stocks for each pool by ownership and land status for the ten-year measurement period between 2007 and 2016.

In general, there is a close relationship between the proportion of forest land area by ownership and total stored carbon. Differences in this relationship between ownerships is a reflection of current management priorities, forest policy, recent disturbances, and the inherent productive ability of the land base. For example the national forests are storing over half of the carbon stocks (52%) and manage just under half of the forest land base (47%) (Figure 4.13). While private ownerships store 30% of the carbon stocks and managed 36% of forest land. This difference in the proportion of carbon stores per area of land base illustrates the generally older over-story stands, denser tree stocking, and additional dead and down wood carbon stores found on national forests as compared to more intensively managed private ownerships. On private ownerships more live tree carbon is transferred out of forest carbon through timber harvest and stored as harvested wood products (Section 4.2.2.1 below provides additional information on forest carbon density with stand age). State and local government store 4.5% of the carbon stocks and manage 3.9% of forest land.

The counties with the highest carbon stocks are Douglas County with 380.1 ± 25.9 MMT C, and Lane County with 377.6 ± 25.3 MMT C (Table 4.13b). These counties have the largest area of forest land in western Oregon. Counties east of the Cascade Mountains tend to have the largest amount of carbon stored in standing dead and down wood pools relative to carbon stored in all other forest vegetation pools. Jefferson County has greatest amount with 32% of forest vegetation carbon stored in standing dead or down wood followed by Wheeler County with 26%.

The Willamette National Forest has the highest total carbon stocks at 273.5 ± 9.9 MMT C and is also one of the largest National Forests in the state (Table 4.13c). However, in terms of carbon stocks per acre, the Siuslaw National Forest has the greatest density of forest carbon per acre with 185.8 thousand MT C per acre on average.

Table 4.13a. Forest land carbon stock for each pool by ownership and land status, 2007-2016: all Oregon. Table derived from Appendix 2, C tables.

	Live trees				Dead trees				Understory vegetation				Down wood		Forest Floor		Soil		Total C		Acres	
	Aboveground		Belowground		Aboveground		Belowground		Aboveground		Belowground		Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
	<i>Million metric tons C¹</i>																					
National Forests																						
Timberland	449.54	4.80	91.03	1.01	40.08	0.94	10.87	0.25	11.60	0.07	1.29	0.01	67.61	0.96	49.65	0.27	583.78	2.87	1,305.45	8.55	11,078.80	52.89
Other forest	5.73	0.59	1.08	0.12	0.92	0.13	0.23	0.03	0.69	0.04	0.08	0.00	1.25	0.14	1.60	0.10	27.50	1.53	39.08	2.34	527.22	29.06
Reserved - productive	114.01	4.68	23.25	0.99	16.69	0.99	4.46	0.26	2.40	0.06	0.27	0.01	17.03	0.81	11.07	0.27	125.47	2.92	314.64	8.76	2,271.67	51.84
Reserved - other	3.97	1.05	0.76	0.21	1.02	0.28	0.26	0.07	0.22	0.04	0.02	0.00	0.52	0.13	0.84	0.15	10.49	1.81	18.11	3.32	194.82	33.41
Total	573.25	5.93	116.12	1.26	58.71	1.32	15.81	0.35	14.90	0.07	1.66	0.01	86.41	1.19	63.16	0.27	747.24	2.72	1,677.27	9.23	14,072.52	48.30
Other Federal																						
Timberland	142.53	4.91	30.17	1.05	7.20	0.57	2.00	0.16	2.54	0.07	0.28	0.01	14.26	0.74	8.84	0.25	120.60	3.14	328.42	8.90	2,260.40	57.49
Other forest	5.24	0.69	0.90	0.14	0.56	0.17	0.14	0.05	1.61	0.10	0.18	0.01	0.77	0.11	1.95	0.14	57.74	3.62	69.10	4.49	1,179.52	73.41
Reserved - productive	12.42	2.14	2.40	0.42	1.30	0.29	0.35	0.08	0.21	0.03	0.02	0.00	1.18	0.23	1.29	0.20	13.03	1.94	32.21	5.04	247.85	36.51
Reserved - other	1.11	0.67	0.21	0.13	0.11	0.08	0.03	0.02	0.09	0.03	0.01	0.00	0.18	0.13	0.18	0.06	3.50	1.03	5.43	1.86	71.10	20.83
Total	161.30	4.65	33.68	1.00	9.17	0.62	2.52	0.17	4.45	0.11	0.49	0.01	16.39	0.75	12.26	0.25	194.88	3.98	435.15	8.49	3,758.87	78.04
State and Local Government																						
Timberland	44.80	2.68	9.61	0.59	2.36	0.30	0.70	0.08	1.10	0.05	0.12	0.01	8.32	0.70	3.79	0.17	58.63	2.46	129.46	5.62	961.44	41.78
Other forest	0.61	0.26	0.12	0.06	0.04	0.03	0.01	0.00	0.17	0.04	0.02	0.00	0.06	0.03	0.21	0.05	6.03	1.29	7.27	1.57	122.10	26.14
Reserved - productive	4.16	1.62	0.87	0.34	0.15	0.08	0.05	0.02	0.05	0.02	0.01	0.00	0.21	0.10	0.31	0.12	3.13	1.05	8.94	3.19	53.97	18.05
Reserved - other	0.29	0.32	0.04	0.05	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.02	0.02	0.06	0.04	0.63	0.44	1.05	0.78	10.16	7.15
Total	49.86	2.81	10.64	0.61	2.55	0.30	0.76	0.08	1.35	0.06	0.15	0.01	8.61	0.69	4.37	0.19	68.42	2.70	146.71	5.77	1,147.67	48.01
Total Public																						
Timberland	636.87	7.29	130.81	1.56	49.64	1.13	13.57	0.30	15.24	0.11	1.69	0.01	90.20	1.39	62.28	0.40	763.02	4.78	1,763.32	13.26	14,300.65	86.27
Other forest	11.58	0.94	2.11	0.19	1.51	0.21	0.38	0.06	2.48	0.11	0.28	0.01	2.08	0.18	3.77	0.18	91.27	4.12	115.45	5.28	1,828.83	82.74
Reserved - productive	130.60	5.40	26.51	1.12	18.14	1.03	4.85	0.28	2.66	0.07	0.30	0.01	18.42	0.85	12.67	0.35	141.63	3.66	355.78	10.59	2,573.50	65.93
Reserved - other	5.37	1.29	1.01	0.25	1.14	0.29	0.29	0.07	0.32	0.05	0.04	0.01	0.72	0.18	1.08	0.17	14.63	2.13	24.58	3.89	276.08	40.02
Total	784.42	7.95	160.44	1.70	70.44	1.49	19.09	0.40	20.70	0.14	2.30	0.02	111.41	1.56	79.79	0.40	1,010.54	5.36	2,259.14	13.45	18,979.05	100.76
Private Corporate																						
Timberland	161.66	5.48	33.40	1.18	5.28	0.37	1.52	0.10	7.82	0.17	0.87	0.02	33.66	1.17	23.35	0.51	341.26	7.12	608.82	13.50	6,306.31	129.12
Other forest	2.57	0.88	0.50	0.19	0.06	0.03	0.02	0.01	0.39	0.06	0.04	0.01	0.49	0.14	0.61	0.09	13.89	1.97	18.57	2.86	278.29	39.62
Total	164.23	5.53	33.89	1.19	5.34	0.37	1.54	0.11	8.21	0.17	0.91	0.02	34.15	1.17	23.97	0.51	355.14	7.27	627.39	13.66	6,584.60	132.76
Private Noncorporate																						
Timberland	83.80	4.39	17.19	0.92	2.99	0.33	0.87	0.09	3.66	0.15	0.41	0.02	10.41	0.62	11.35	0.45	159.13	5.98	289.79	11.53	3,066.65	114.28
Other forest	6.74	0.71	1.30	0.14	0.33	0.08	0.09	0.02	1.38	0.10	0.15	0.01	0.86	0.15	2.08	0.16	50.46	3.65	63.40	4.62	1,024.58	73.96
Total	90.55	4.41	18.49	0.93	3.32	0.34	0.95	0.09	5.04	0.17	0.56	0.02	11.27	0.64	13.43	0.47	209.59	6.75	353.19	12.11	4,091.23	131.05
Total Private																						
Timberland	245.46	5.76	50.59	1.24	8.27	0.47	2.39	0.13	11.48	0.16	1.28	0.02	44.07	1.17	34.70	0.46	500.38	6.13	898.61	11.98	9,372.96	111.72
Other forest	9.31	1.12	1.80	0.24	0.39	0.09	0.10	0.02	1.77	0.11	0.20	0.01	1.35	0.20	2.70	0.18	64.35	4.09	81.97	5.36	1,302.87	82.77
Total	254.78	5.78	52.38	1.25	8.66	0.48	2.49	0.13	13.25	0.17	1.47	0.02	45.42	1.18	37.40	0.45	564.73	6.36	980.58	11.95	10,675.83	118.41
All Ownerships																						
Timberland	882.33	9.13	181.40	1.96	57.91	1.23	15.96	0.33	26.72	0.18	2.97	0.02	134.27	1.79	96.98	0.57	1,263.40	7.19	2,661.94	16.91	23,673.61	130.00
Other forest	20.90	1.47	3.90	0.30	1.91	0.23	0.48	0.06	4.25	0.16	0.47	0.02	3.43	0.28	6.46	0.25	155.62	5.80	197.42	7.52	3,131.70	116.95
Reserved - productive	130.60	5.40	26.51	1.12	18.14	1.03	4.85	0.28	2.66	0.07	0.30	0.01	18.42	0.85	12.67	0.35	141.63	3.66	355.78	10.59	2,573.50	65.93
Reserved - other	5.37	1.29	1.01	0.25	1.14	0.29	0.29	0.07	0.32	0.05	0.04	0.01	0.72	0.18	1.08	0.17	14.63	2.13	24.58	3.89	276.08	40.02
Total	1,039.20	9.63	212.83	2.07	79.10	1.56	21.58	0.42	33.95	0.21	3.77	0.02	156.83	1.93	117.19	0.55	1,575.27	7.55	3,239.72	16.73	29,654.88	141.17

¹Multiply carbon (C) by 3.667 to calculate equivalent carbon dioxide (CO₂e)

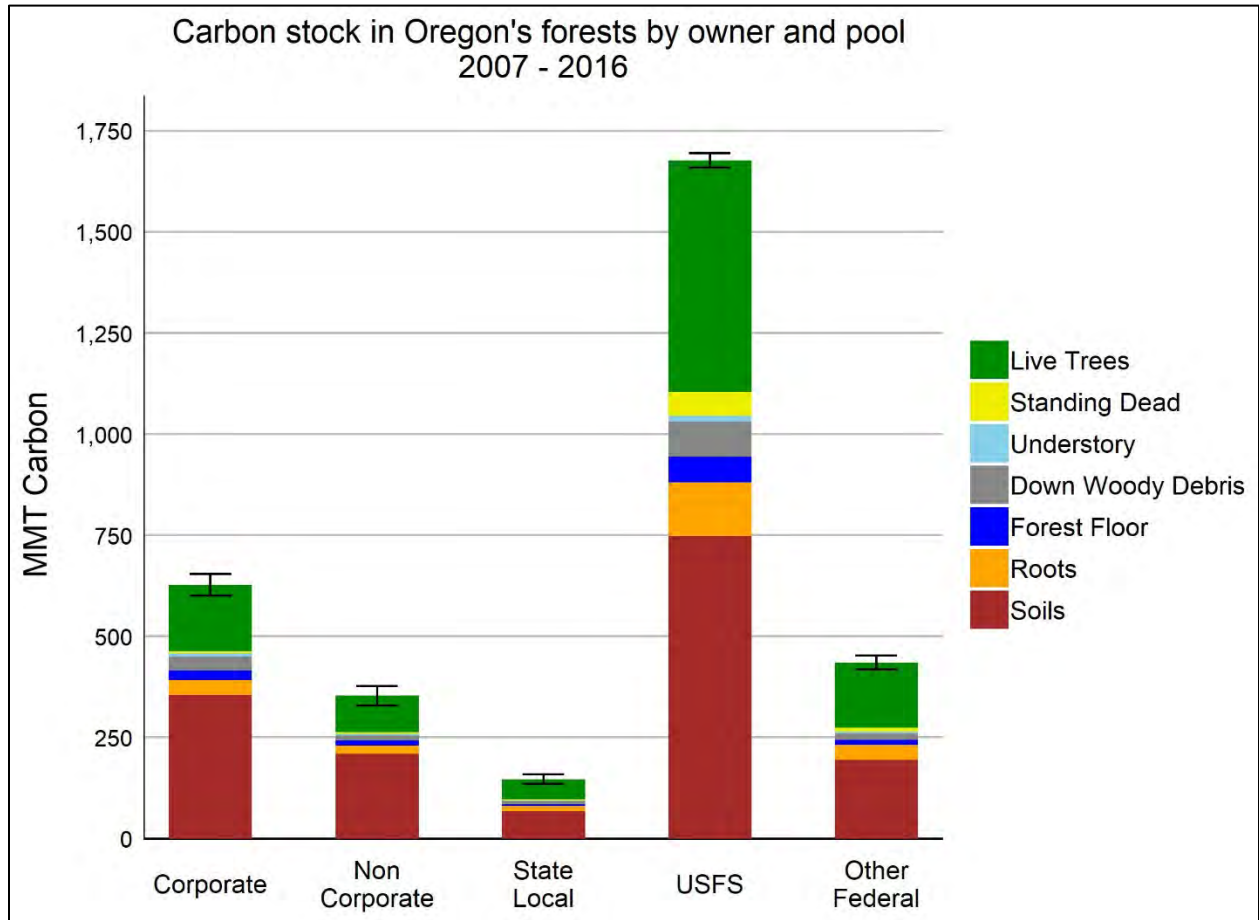


Figure 4.12. Oregon statewide average forest carbon stock by pool and ownership, 2007-2016 (MMT C). Error bars represent 95% interval of estimated total stock for each ownership. Figure derived from table 4.12.

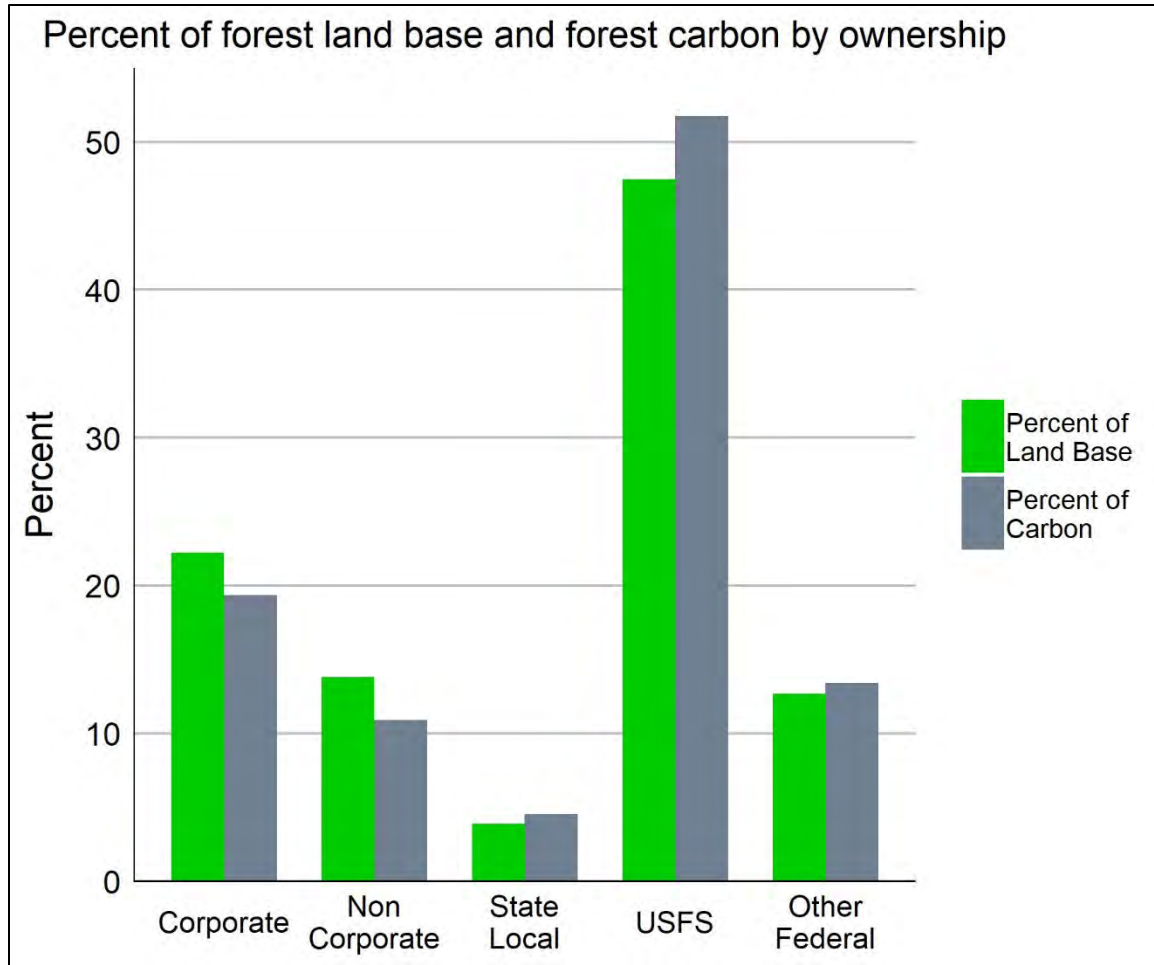


Figure 4.13. Oregon statewide percent of forest land base and carbon stocks by owner, 2007-2016 (MMT C). Figure derived from Table 4.12.

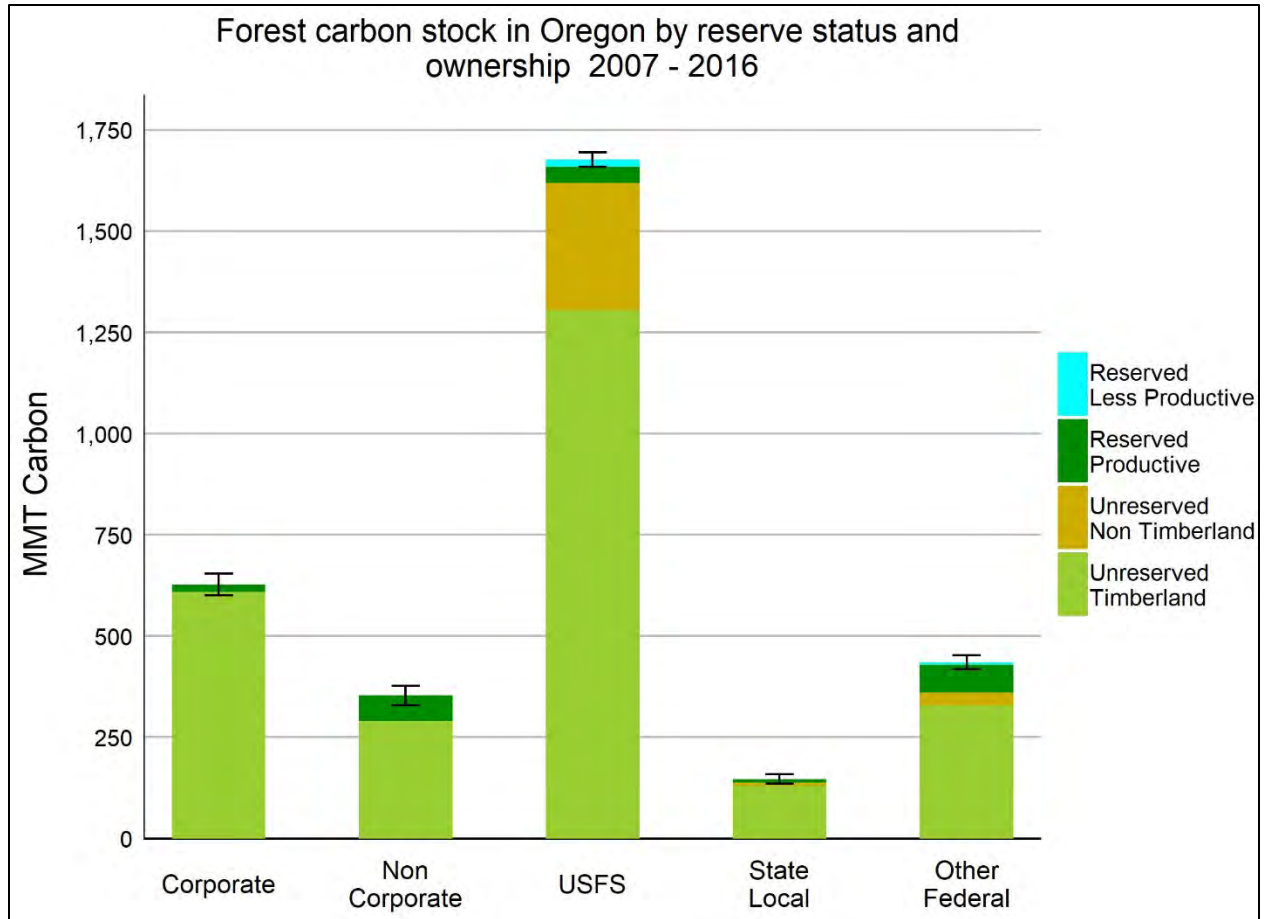


Figure 4.14. Oregon statewide average forest carbon stock by land status and ownership, 2007-2016 (MMT C). Error bars represent 95% confidence interval of estimated total stock for each ownership. Figure derived from table 4.12.

Table 4.13b. Forest land carbon stock by county, 2007-2016: COUNTY

County	Live trees				Dead trees				Understory vegetation				Down wood		Forest Floor		Soil		Total C		Acres	
	Aboveground		Belowground		Aboveground		Belowground		Aboveground		Belowground		Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
	<i>Million metric tons C¹</i>																					
Baker	13.34	0.84	2.61	0.17	1.37	0.29	0.35	0.08	0.79	0.05	0.09	0.01	2.56	0.27	2.93	0.17	38.80	2.33	62.84	3.58	736.76	43.77
Benton	16.38	2.82	3.55	0.62	0.41	0.11	0.13	0.03	0.34	0.05	0.04	0.01	1.60	0.31	0.83	0.12	15.26	2.18	38.53	5.84	279.72	39.78
Clackamas	49.06	3.24	10.24	0.69	3.67	0.35	1.02	0.10	1.03	0.09	0.11	0.01	7.70	0.65	4.04	0.24	47.29	2.97	124.17	7.43	838.08	52.10
Clatsop	18.20	2.54	3.77	0.53	0.95	0.19	0.29	0.06	0.56	0.06	0.06	0.01	4.69	0.69	1.90	0.22	29.96	3.34	60.38	7.07	462.76	51.35
Columbia	11.36	2.07	2.39	0.44	0.27	0.07	0.08	0.02	0.47	0.06	0.05	0.01	2.03	0.35	1.14	0.15	19.86	2.54	37.65	5.17	361.73	46.25
Coos	38.78	4.09	8.13	0.87	1.57	0.27	0.48	0.08	1.07	0.09	0.12	0.01	5.37	0.60	3.24	0.27	49.37	3.96	108.12	9.19	850.89	68.37
Crook	10.49	0.81	2.04	0.16	1.19	0.24	0.31	0.06	1.22	0.08	0.14	0.01	2.18	0.23	3.02	0.18	51.11	3.20	71.70	4.32	1,017.29	64.74
Curry	50.92	3.61	10.31	0.74	3.53	0.37	0.90	0.09	1.21	0.08	0.13	0.01	4.52	0.39	3.55	0.22	61.86	3.67	136.94	8.19	990.01	59.00
Deschutes	21.04	1.12	4.00	0.22	2.86	0.37	0.68	0.09	1.31	0.07	0.15	0.01	4.02	0.25	4.71	0.18	57.90	2.56	96.67	4.05	1,256.99	54.71
Douglas	153.26	6.24	31.88	1.32	10.45	0.72	2.84	0.19	3.38	0.12	0.38	0.01	18.32	0.83	11.04	0.37	148.58	5.13	380.14	13.23	2,845.97	99.10
Grant	34.28	1.43	6.66	0.28	3.76	0.30	0.98	0.08	1.97	0.07	0.22	0.01	8.50	0.41	7.89	0.27	95.84	3.30	160.11	5.47	1,861.05	64.51
Harney	8.48	0.64	1.72	0.13	0.55	0.06	0.13	0.02	1.02	0.07	0.11	0.01	1.65	0.15	2.75	0.16	43.53	2.75	59.93	3.60	851.49	54.10
Hood River	13.50	1.88	2.79	0.39	1.40	0.28	0.38	0.08	0.31	0.04	0.03	0.00	2.16	0.42	1.44	0.18	15.39	1.88	37.40	4.69	272.52	33.30
Jackson	55.34	3.26	11.23	0.67	4.38	0.38	1.16	0.10	1.72	0.10	0.19	0.01	6.76	0.46	6.08	0.32	78.10	4.19	164.96	8.64	1,479.94	79.89
Jefferson	6.97	1.03	1.39	0.21	1.79	0.37	0.46	0.10	0.78	0.07	0.09	0.01	2.16	0.35	1.97	0.19	30.26	2.69	45.87	4.33	620.25	54.51
Josephine	39.94	3.25	8.02	0.66	4.62	0.56	1.14	0.13	1.14	0.08	0.13	0.01	4.23	0.40	3.73	0.25	52.27	3.36	115.22	7.84	947.19	61.48
Klamath	67.30	3.12	12.43	0.57	5.33	0.45	1.31	0.11	2.87	0.10	0.32	0.01	10.87	0.47	12.52	0.39	142.30	4.51	255.24	8.53	2,964.57	93.09
Lake	21.97	1.22	4.02	0.21	2.58	0.23	0.62	0.05	1.53	0.08	0.17	0.01	4.71	0.29	5.53	0.24	71.30	3.27	112.44	4.97	1,451.11	66.55
Lane	163.70	6.40	34.96	1.39	9.78	0.55	2.93	0.16	2.96	0.11	0.33	0.01	19.40	0.84	10.49	0.36	133.10	4.59	377.65	12.92	2,504.53	88.33
Lincoln	27.09	3.22	5.73	0.70	1.06	0.18	0.37	0.06	0.64	0.06	0.07	0.01	3.48	0.42	2.02	0.21	32.58	3.10	73.06	7.12	522.47	49.59
Linn	51.60	4.01	10.94	0.87	3.77	0.40	1.09	0.11	1.25	0.09	0.14	0.01	8.71	0.74	4.34	0.28	57.56	3.70	139.41	9.23	1,015.88	66.14
Malheur	0.38	0.14	0.07	0.03	0.08	0.03	0.02	0.01	0.14	0.03	0.02	0.00	0.11	0.05	0.21	0.06	5.30	1.27	6.33	1.53	103.06	24.76
Marion	19.05	2.52	3.90	0.52	1.74	0.35	0.50	0.10	0.49	0.05	0.05	0.01	2.64	0.39	1.74	0.18	22.25	2.33	52.35	5.84	403.23	42.60
Morrow	3.20	0.48	0.61	0.09	0.23	0.04	0.06	0.01	0.24	0.03	0.03	0.00	1.09	0.17	0.79	0.10	10.94	1.47	17.19	2.22	209.87	28.13
Multnomah	8.77	1.96	1.81	0.41	1.07	0.39	0.34	0.11	0.12	0.02	0.01	0.00	1.34	0.29	0.58	0.11	6.54	1.26	20.58	4.24	107.49	21.13
Polk	11.58	2.39	2.54	0.54	0.40	0.14	0.12	0.04	0.40	0.06	0.04	0.01	2.03	0.39	1.03	0.15	18.26	2.58	36.40	5.62	299.72	41.68
Tillamook	31.51	3.07	6.66	0.66	1.85	0.27	0.62	0.09	0.67	0.06	0.07	0.01	6.25	0.71	2.63	0.23	41.76	3.60	92.01	8.03	586.97	50.46
Umatilla	11.04	1.05	2.12	0.21	1.20	0.17	0.33	0.04	0.63	0.05	0.07	0.01	2.47	0.22	2.22	0.18	28.71	2.21	48.78	3.74	563.92	43.64
Union	17.35	1.24	3.28	0.24	1.61	0.23	0.43	0.06	0.83	0.05	0.09	0.01	3.74	0.27	3.26	0.21	40.63	2.59	71.22	4.44	792.87	50.60
Wallowa	21.45	1.54	4.27	0.31	2.50	0.26	0.67	0.07	1.03	0.06	0.11	0.01	4.33	0.37	4.15	0.24	49.21	2.82	87.72	5.09	942.34	54.18
Wasco	15.72	1.91	3.16	0.39	1.24	0.26	0.31	0.06	0.68	0.07	0.08	0.01	2.58	0.34	2.23	0.21	28.10	2.61	54.10	5.19	559.10	51.98
Washington	7.74	1.65	1.68	0.37	0.50	0.21	0.14	0.06	0.32	0.05	0.04	0.01	1.62	0.35	0.80	0.13	12.97	2.01	25.80	4.28	243.04	37.22
Wheeler	5.32	0.58	1.05	0.12	0.79	0.18	0.20	0.04	0.57	0.06	0.06	0.01	1.48	0.22	1.57	0.15	24.75	2.45	35.78	3.39	480.88	47.81
Yamhill	13.09	2.35	2.85	0.52	0.60	0.22	0.19	0.07	0.28	0.04	0.03	0.00	1.53	0.31	0.82	0.13	13.63	2.09	33.02	5.30	231.19	35.40
All counties	1,039.20	9.63	212.83	2.07	79.10	1.56	21.58	0.42	33.95	0.21	3.77	0.02	156.83	1.93	117.19	0.55	1,575.27	7.55	3,239.72	16.73	29,654.88	141.17

¹Multiply carbon (C) by 3.667 to calculate equivalent carbon dioxide (CO₂e)

Table 4.13c. Forest land carbon stock, 2007-2016: National Forest

	Live trees				Dead trees				Understory vegetation				Down wood		Forest Floor		Soil		Total C		Acres	
	Aboveground		Belowground		Aboveground		Belowground		Aboveground		Belowground		Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>Million metric tons C¹</i>																						
Region 5																						
Klamath	0.98	0.18	0.18	0.03	0.06	0.01	0.02	0.00	0.03	0.00	0.00	0.00	0.07	0.02	0.12	0.02	1.25	0.18	2.70	0.42	23.41	3.39
Total	0.98	0.18	0.18	0.03	0.06	0.01	0.02	0.00	0.03	0.00	0.00	0.00	0.07	0.02	0.12	0.02	1.25	0.18	2.70	0.42	23.41	3.39
Region 6																						
Deschutes	30.88	0.97	5.93	0.19	4.79	0.40	1.18	0.10	1.43	0.02	0.16	0.00	6.22	0.29	6.30	0.07	67.65	0.79	124.54	1.83	1,459.02	15.17
Fremont	21.14	1.16	3.93	0.21	2.82	0.27	0.68	0.06	1.01	0.03	0.11	0.00	4.19	0.22	4.68	0.17	52.03	1.72	90.59	3.42	1,038.00	34.15
Malheur	27.16	0.85	5.42	0.17	2.92	0.30	0.76	0.08	1.52	0.03	0.17	0.00	6.30	0.27	6.52	0.13	76.45	1.49	127.23	2.72	1,475.31	28.63
Mt. Hood	67.50	2.59	13.91	0.54	7.16	0.58	1.99	0.16	1.05	0.03	0.12	0.00	10.53	0.64	5.38	0.15	55.41	1.45	163.04	5.17	979.78	24.25
Ochoco	12.17	0.69	2.48	0.14	1.95	0.29	0.50	0.07	0.75	0.03	0.08	0.00	3.07	0.28	2.94	0.11	36.18	1.34	60.12	2.47	692.70	25.82
Rogue River / Siskiyou	89.02	2.75	17.83	0.56	9.63	0.60	2.42	0.15	1.87	0.03	0.21	0.00	9.00	0.33	6.62	0.10	94.27	1.29	230.87	4.35	1,608.06	21.07
Siuslaw	50.13	2.51	10.78	0.56	2.76	0.23	1.13	0.10	0.66	0.02	0.07	0.00	5.21	0.31	2.28	0.07	36.46	0.86	109.47	4.13	589.10	13.53
Umatilla	22.09	0.81	4.29	0.17	2.82	0.23	0.77	0.06	1.00	0.02	0.11	0.00	6.11	0.28	3.94	0.09	48.04	1.02	89.17	2.06	937.44	19.93
Umpqua	63.65	1.84	13.05	0.39	6.68	0.57	1.73	0.14	1.08	0.02	0.12	0.00	7.97	0.34	4.27	0.05	51.92	0.55	150.48	2.71	950.66	8.55
Wallowa-Whitman	39.16	1.02	7.59	0.21	4.40	0.30	1.14	0.08	1.78	0.04	0.20	0.00	8.17	0.37	7.35	0.13	88.42	1.63	158.20	2.78	1,684.57	29.94
Willamette	120.24	3.40	25.28	0.73	10.75	0.51	3.03	0.14	1.77	0.03	0.20	0.00	15.27	0.53	7.97	0.11	88.95	1.14	273.46	5.07	1,580.88	18.64
Winema	28.68	1.28	5.36	0.24	1.97	0.19	0.48	0.05	0.92	0.03	0.10	0.00	4.26	0.24	4.74	0.15	49.21	1.57	95.71	3.27	1,032.52	32.68
Columbia River Gorge National Scenic Area	0.43	0.24	0.10	0.05	0.00	0.00	0.00	0.00	0.02	0.01	0.00	0.00	0.05	0.03	0.05	0.02	0.67	0.19	1.33	0.45	13.77	3.82
Crooked River National Grassland	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.01	0.00	0.33	0.17	0.36	0.18	7.29	3.70
Total	572.28	5.93	115.94	1.26	58.65	1.32	15.80	0.35	14.87	0.07	1.65	0.01	86.35	1.19	63.04	0.27	745.99	2.71	1,674.57	9.22	14,049.11	48.26
All National Forests	573.25	5.93	116.12	1.26	58.71	1.32	15.81	0.35	14.90	0.07	1.66	0.01	86.41	1.19	63.16	0.27	747.24	2.72	1,677.27	9.23	14,072.52	48.30

¹Multiply carbon (C) by 3.667 to calculate equivalent carbon dioxide (CO₂e)

4.2.2.1 Patterns of forest carbon density with stand age

After a stand-replacing disturbance (e.g., severe fire or clearcutting) carbon stocks tend to decline initially and then accumulate over time as trees regenerate and grow to store more carbon than what is being released by decaying dead wood and soils. Because there is very little data that has measured individual trees and stands over multiple decades or centuries, a common approach to approximate this pattern is to examine how carbon density (MMT per acre) differs with stand age, termed a chronosequence. However there are many reasons why chronosequences may provide inaccurate results:

1. Stand age is not the same as time since severe disturbance (Stevens et al. 2016). Many forests experience multiple disturbances during their development and may have trees that span a wide range of ages. Because FIA stand age is a mean of the ages of the dominant size class of trees, it will not reflect the last severe disturbance in stands that receive uneven-age management or experience multiple moderate disturbances. Stands that have developed for a century or more since the last severe disturbance are likely to have experienced mortality events such that the mean age of the dominant size class will usually be less than the time since stand origin.
2. Intensively-managed forests in Oregon, which rarely attain advanced age, tend to occur on more productive sites than federally-managed forests where most old stands are found (Bansal et al. 2017). In addition, many are planted with genetically-improved seedlings, which can result in a 25% gain in volume over stands with standard local seed sources (St. Clair et al. 2004, Ye et al. 2010).
3. Even controlling for productivity (e.g., using site index), many older forests are generally old because they might be difficult to access (e.g., remote locations or steep and rough terrain) and/or had low amounts of merchantable timber (e.g., less desirable species, poor tree form). In addition, estimates of productivity using site index assume “normal” stands that are “fully stocked”, yet many site factors can affect stocking, including rock outcrops, cliffs, coarse or shallow soils, competing vegetation, or pockets of root disease (e.g., MacLean and Bolsinger 1974, Cochran et al. 1994).

For this analysis, we grouped stands based on their estimated productivity at culmination of mean annual increment (MAI) where FIA site classes 1, 2, and 3 have estimated MAI of >120 ft³/ac/yr, site classes 4 and 5 have estimated MAI of 50 - 120 ft³/ac/yr, and site classes 6 and 7 have estimated MAI of <50 ft³/ac/yr (Hanson et al. 2002). In spite of the grouping by site class, there was still a distinct pattern of decreasing MAI with age (Figure 4.15), indicating that the estimates from different age classes were not strictly comparable.

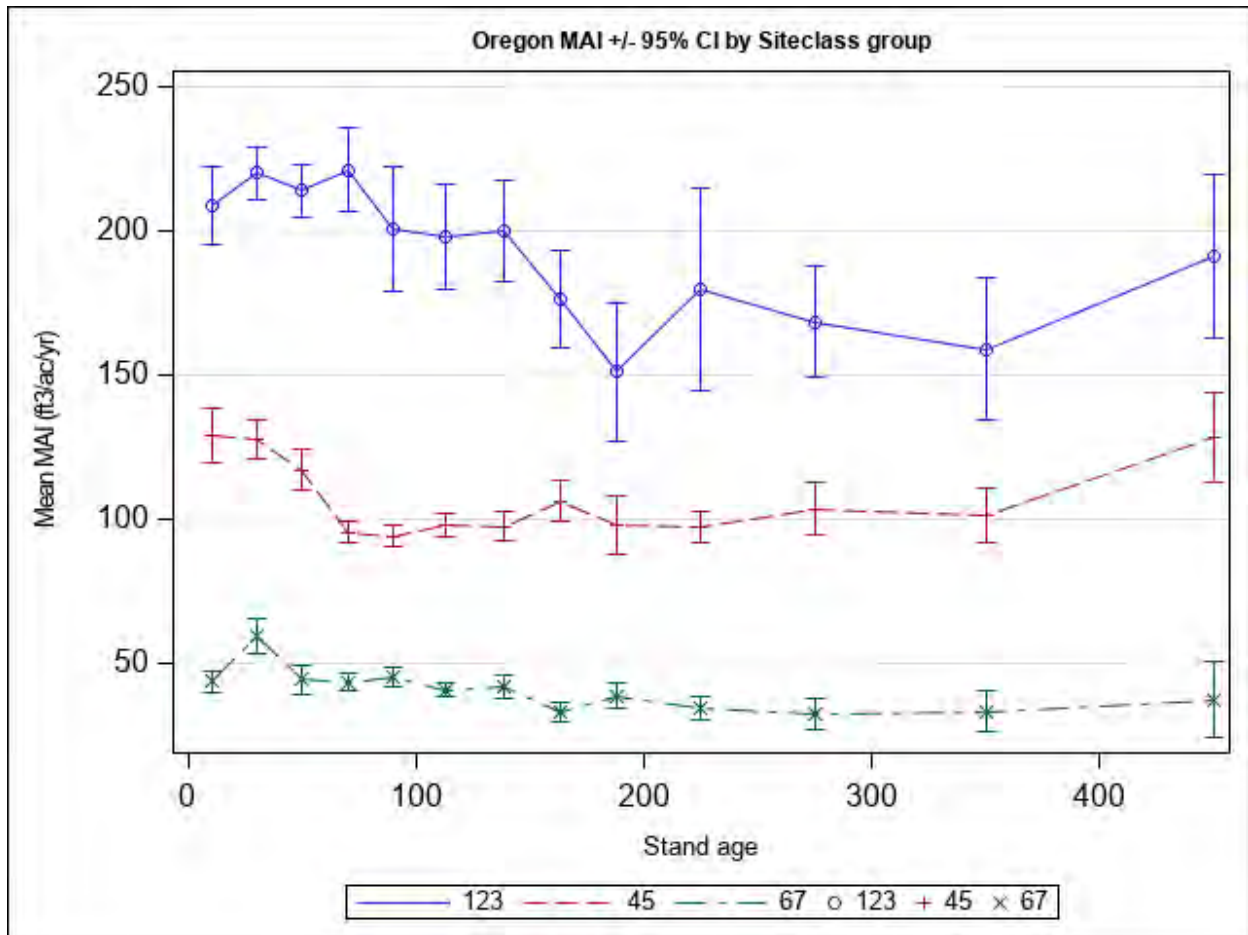
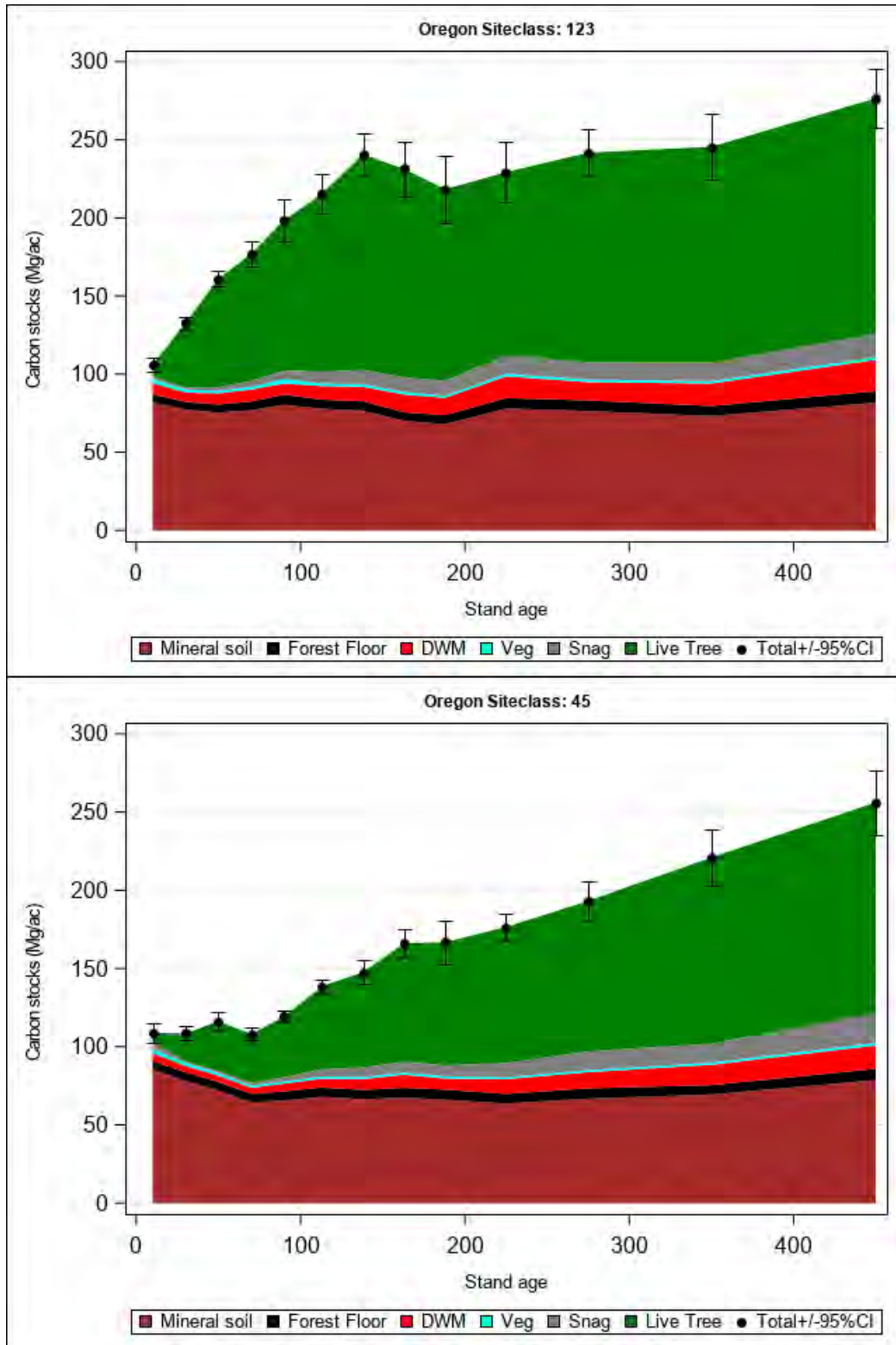


Figure 4.15. Mean productivity in terms of estimated mean annual increment at culmination (MAI) with stand age for grouped site classes (classes 123, 45, and 67 have estimated MAI of >120, 50 – 120, and <50 ft³/ac/yr, respectively).

Stands on more productive sites had higher carbon densities (1 Mg/ac = 1 MT/ac) than stands on less productive sites (e.g., classes 1, 2, and 3 vs. 6 and 7). Older stands had greater carbon density than younger stands across all classes, primarily due to differences in live tree carbon, although snag and down wood carbon contributed to that pattern as well (Figure 4.16). Given the caveats described above, it is difficult to attach too much meaning to the different shapes of the figures, other than to say that the difference in carbon density among younger stands tends to be greater than the difference in carbon density among older stands.



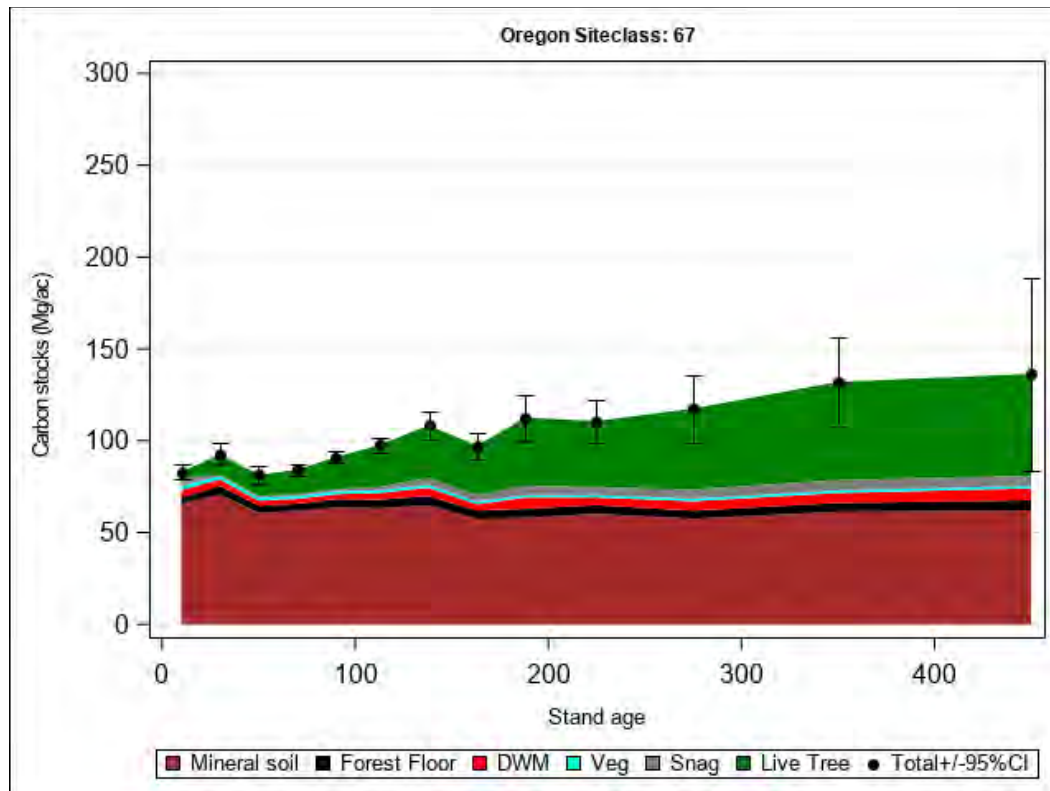


Figure 4.16. Patterns of carbon density by pool and total by stand age and site productivity class. Values for different ages within a site class group are not strictly comparable due to a wide range of differences in site conditions and stand management and disturbance history.

4.2.3 FF carbon stocks by pool and region

Figures 4.17, 4.18 and Tables 4.14 to 4.21 below summarize forest land carbon stocks by specific pool as found on both public and private ownerships for each region of the state. Similar to forested acres, the greatest proportion of Oregon's forest carbon stocks are found in the forests of the Westside. Two Westside regions account for over half of Oregon's forest carbon stocks (52%), the Western Cascades (30%) and the Oregon Coast Range (22%) (Tables 4.19 and 4.20, Figure 4.17). Of these two regions, the Oregon Coast Range has the greatest proportion of total carbon stocks managed by private ownerships (46%). However, within these two regions, publically managed carbon stocks in all pools tend to carry a greater density of carbon per acre compared to privately managed ownerships. For example, in the Oregon Coast Range public forests have on average 168.4 MT of carbon stocks per acre. While the privately managed forests have 111.8 MT of carbon stocks per acre within this same region. This does not account for carbon removed from the live tree pool because some of the harvested timber is now stored in wood products.

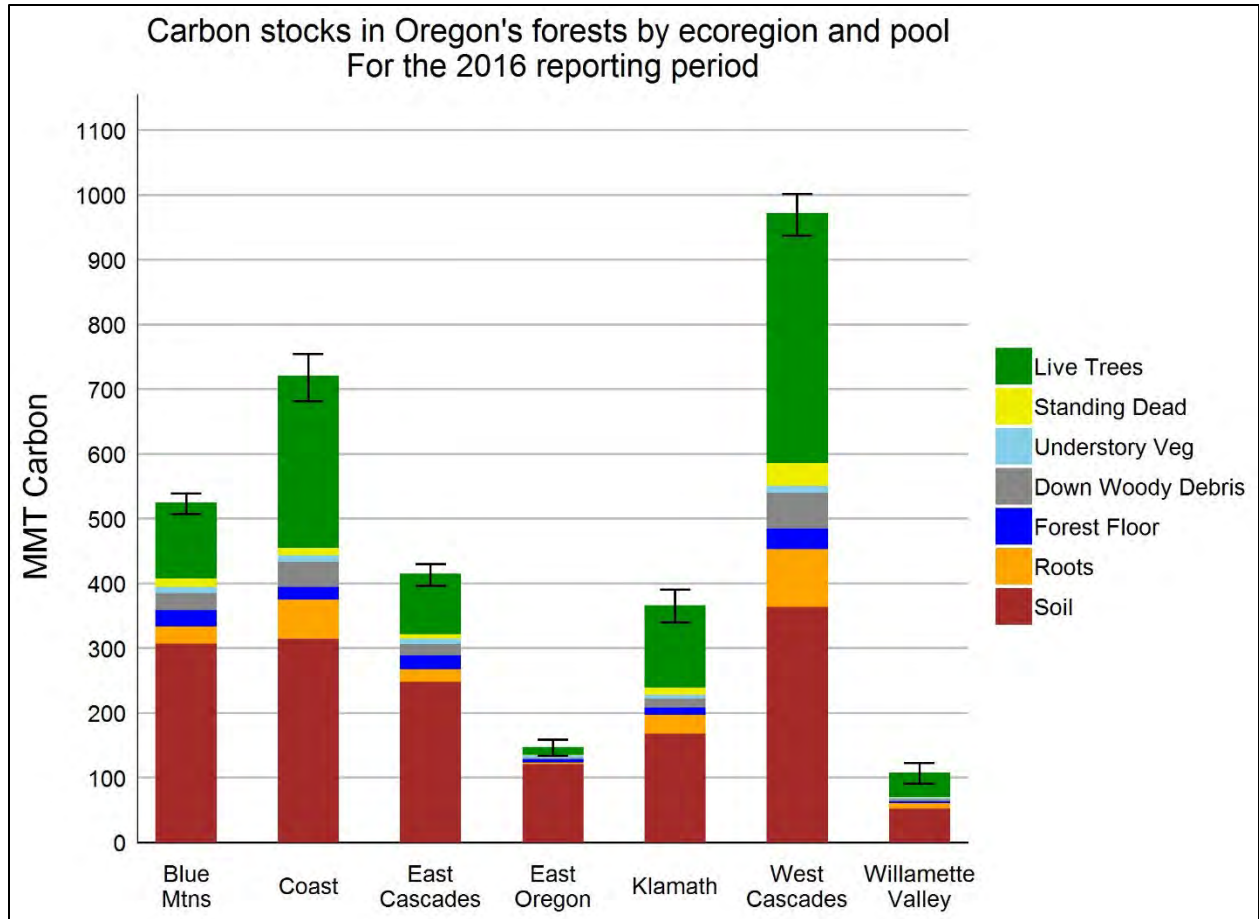


Figure 4.17. Average carbon stock (MMT C) by pool and ecological region, 2007-2016. Error bars represent 95% confidence interval of estimated total stock for each region.

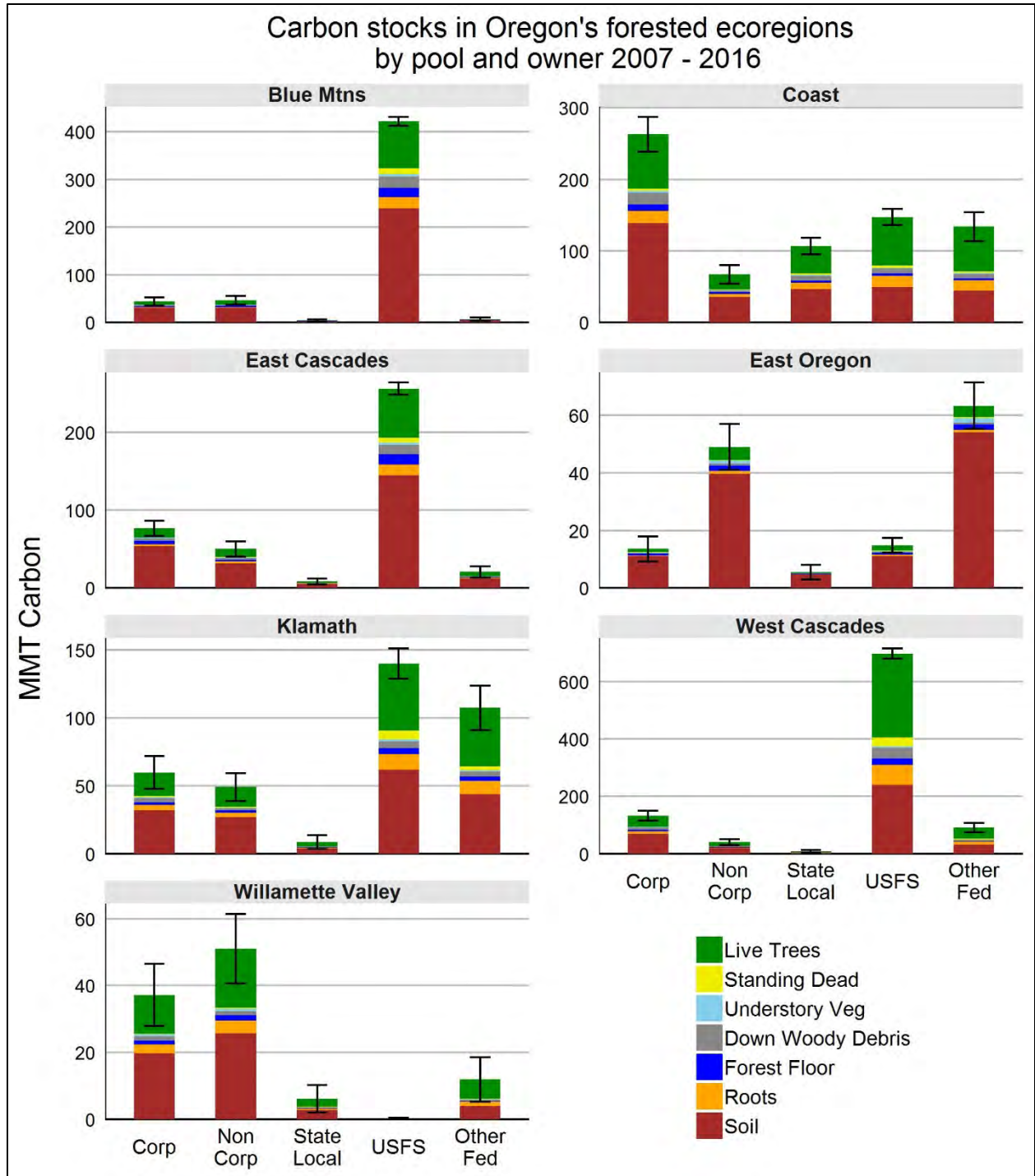


Figure 4.18. Oregon statewide average forest carbon stock by pool, ownership, and ecoregion, 2007-2016 (MMT C). Error bars represent 95% interval of estimated total stock for each ownership. Figure derived from Appendix 2, C tables. Note the different y-axis scales on individual graphs.

Table 4.14. Forest land carbon stocks by ownership and pool, 2007-2016: All Oregon. Table derived from Appendix 2, C tables.

	Live Trees		Dead Trees		Understory		Down wood		Forest Floor		Soil		Total C		Acres	
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>Million metric tons C¹</i>																
Public reserved	163.5	6.4	24.4	1.3	3.3	0.1	19.1	0.8	13.7	0.3	156.3	3.6	380.4	10.2	2,849.6	64.9
Public unreserved	781.4	8.8	65.1	1.4	19.7	0.2	92.3	1.4	66.0	0.4	854.3	5.6	1,878.8	13.5	16,129.5	106.8
Private corporate	198.1	6.7	6.9	0.5	9.1	0.2	34.2	1.2	24.0	0.5	355.1	7.3	627.4	13.7	6,584.6	132.8
Private noncorporate	109.0	5.3	4.3	0.4	5.6	0.2	11.3	0.6	13.4	0.5	209.6	6.7	353.2	12.1	4,091.2	131.0
Total	1,252.0	11.7	100.7	2.0	37.7	0.2	156.8	1.9	117.2	0.5	1,575.3	7.5	3,239.7	16.7	29,654.9	141.2

¹Multiply carbon (C) by 3.667 to calculate equivalent carbon dioxide (CO₂e)

Table 4.15. Forest land carbon stocks by ownership and pool, 2007-2016: Blue Mountains. Table derived from Appendix 2, C tables.

	Live Trees		Dead Trees		Understory		Down wood		Forest Floor		Soil		Total C		Acres	
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>Million metric tons C¹</i>																
Public reserved	26.0	1.6	5.5	0.6	1.0	0.1	5.3	0.5	3.9	0.2	45.4	2.2	87.1	4.3	855.2	41.1
Public unreserved	95.1	1.6	10.0	0.4	4.5	0.1	18.4	0.4	16.8	0.2	200.6	2.2	345.5	3.9	3,870.5	43.4
Private corporate	8.3	1.1	0.3	0.1	0.7	0.1	1.7	0.2	2.3	0.2	30.6	3.0	44.0	4.4	596.2	59.2
Private noncorporate	10.7	1.4	0.4	0.1	0.7	0.1	1.3	0.2	2.3	0.2	30.6	2.9	46.1	4.6	600.5	57.9
Total	140.1	2.7	16.2	0.7	7.0	0.1	26.8	0.7	25.3	0.4	307.2	5.0	522.6	8.1	5,922.4	97.2

¹Multiply carbon (C) by 3.667 to calculate equivalent carbon dioxide (CO₂e)

Table 4.16. Forest land carbon stocks by ownership and pool, 2007-2016: East Cascades and Modoc. Table derived from Appendix 2, C tables.

	Live Trees		Dead Trees		Understory		Down wood		Forest Floor		Soil		Total C		Acres	
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>Million metric tons C¹</i>																
Public reserved	7.0	1.2	1.1	0.3	0.2	0.0	1.0	0.2	0.9	0.1	9.2	1.4	19.3	3.0	189.2	27.7
Public unreserved	77.3	2.5	6.6	0.4	3.6	0.1	11.9	0.4	13.7	0.2	153.4	2.6	266.5	5.1	3,250.7	54.2
Private corporate	13.8	1.2	0.5	0.1	1.3	0.1	3.2	0.3	4.3	0.3	53.7	3.4	76.9	5.0	1,119.0	71.4
Private noncorporate	12.5	1.8	1.1	0.3	0.9	0.1	1.9	0.3	2.2	0.2	31.8	3.0	50.4	5.0	654.4	60.8
Total	110.6	3.5	9.3	0.6	6.0	0.1	18.0	0.6	21.1	0.4	248.1	5.0	413.1	8.7	5,213.3	102.8

¹Multiply carbon (C) by 3.667 to calculate equivalent carbon dioxide (CO₂e)

Table 4.17. Forest land carbon stocks by ownership and pool, 2007-2016. Eastern Oregon Basins. Table derived from Appendix 2, C tables.

	Live Trees		Dead Trees		Understory		Down wood		Forest Floor		Soil		Total C		Acres	
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>Million metric tons C¹</i>																
Public reserved	0.2	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	2.4	0.8	2.8	0.9	50.0	16.5
Public unreserved	7.0	0.5	0.5	0.1	2.1	0.1	1.0	0.1	2.6	0.2	67.6	3.7	80.8	4.4	1,383.2	76.0
Private corporate	1.4	0.3	0.1	0.0	0.3	0.1	0.2	0.1	0.5	0.1	11.1	1.8	13.6	2.2	220.9	36.0
Private noncorporate	5.5	0.7	0.1	0.0	1.2	0.1	0.7	0.1	1.8	0.2	39.7	3.3	49.0	4.1	809.6	66.5
Total	14.1	1.0	0.7	0.1	3.6	0.2	1.9	0.2	5.1	0.3	120.8	5.3	146.2	6.4	2,463.8	107.1

¹Multiply carbon (C) by 3.667 to calculate equivalent carbon dioxide (CO₂e)

Table 4.18. Forest land carbon stocks by ownership and pool, 2007-2016: Klamath Mountains. Table derived from Appendix 2, C tables.

	Live Trees		Dead Trees		Understory		Down wood		Forest Floor		Soil		Total C		Acres	
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
	<i>Million metric tons C¹</i>															
Public reserved	13.6	2.6	1.7	0.4	0.4	0.0	1.2	0.2	0.9	0.1	15.3	1.7	32.9	4.4	255.2	29.2
Public unreserved	101.4	5.3	10.4	0.8	2.2	0.1	8.2	0.5	6.6	0.3	94.1	3.7	222.9	9.6	1,694.6	68.3
Private corporate	20.8	2.6	0.9	0.2	0.8	0.1	3.2	0.4	2.1	0.2	31.9	3.1	59.8	6.1	599.0	58.2
Private noncorporate	17.6	2.2	0.9	0.1	0.7	0.1	1.3	0.2	1.7	0.2	26.8	2.7	49.0	5.2	531.4	53.7
Total	153.4	6.8	13.8	0.9	4.1	0.1	13.8	0.7	11.4	0.4	168.1	5.7	364.6	13.0	3,080.4	106.5

¹Multiply carbon (C) by 3.667 to calculate equivalent carbon dioxide (CO₂e)

Table 4.19. Forest land carbon stocks by ownership and pool, 2007-2016: Oregon Coast Range. Table derived from Appendix 2, C tables.

	Live Trees		Dead Trees		Understory		Down wood		Forest Floor		Soil		Total C		Acres	
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
	<i>Million metric tons C¹</i>															
Public reserved	10.9	3.0	0.6	0.2	0.2	0.0	0.7	0.2	0.7	0.2	7.9	1.6	20.9	4.8	128.6	25.9
Public unreserved	193.3	7.7	10.5	0.7	2.8	0.1	19.1	1.0	8.4	0.3	132.5	4.2	366.6	12.5	2,172.3	69.6
Private corporate	92.4	5.7	3.4	0.4	3.4	0.2	16.4	1.0	8.5	0.4	139.0	6.2	263.0	12.3	2,346.0	103.0
Private noncorporate	25.6	3.2	0.6	0.1	0.8	0.1	2.5	0.3	2.3	0.2	35.5	3.4	67.3	6.7	607.4	57.7
Total	322.3	10.3	15.0	0.8	7.1	0.2	38.7	1.4	19.8	0.5	314.8	7.9	717.7	18.4	5,254.2	131.3

¹Multiply carbon (C) by 3.667 to calculate equivalent carbon dioxide (CO₂e)

Table 4.20. Forest land carbon stocks by ownership and pool, 2007-2016: Western Cascades. Table derived from Appendix 2, C tables.

	Live Trees		Dead Trees		Understory		Down wood		Forest Floor		Soil		Total C		Acres	
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
	<i>Million metric tons C¹</i>															
Public reserved	105.1	5.5	15.6	1.1	1.5	0.1	11.0	0.7	7.3	0.3	75.6	3.0	216.0	9.2	1,360.9	54.4
Public unreserved	297.8	6.6	26.9	1.0	4.4	0.1	33.1	0.9	17.5	0.3	200.0	3.5	579.8	10.8	3,634.0	63.6
Private corporate	47.4	4.1	1.4	0.2	1.9	0.1	8.1	0.7	5.1	0.3	69.0	4.3	132.9	8.7	1,311.9	80.8
Private noncorporate	15.7	2.5	0.8	0.2	0.5	0.1	2.3	0.4	1.6	0.2	19.5	2.4	40.4	5.3	370.9	46.4
Total	466.0	9.3	44.7	1.5	8.3	0.2	54.4	1.4	31.5	0.5	364.1	6.4	969.1	16.3	6,677.6	118.6

¹Multiply carbon (C) by 3.667 to calculate equivalent carbon dioxide (CO₂e)

Table 4.21. Forest land carbon stocks by ownership and pool, 2007-2016: Willamette Valley. Table derived from Appendix 2, C tables.

	Live Trees		Dead Trees		Understory		Down wood		Forest Floor		Soil		Total C		Acres	
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
	<i>Million metric tons C¹</i>															
Public reserved	0.7	0.5	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.5	0.4	1.3	1.0	10.4	7.8
Public unreserved	9.4	2.5	0.2	0.1	0.2	0.0	0.6	0.2	0.4	0.1	6.1	1.3	16.8	3.9	124.2	26.1
Private corporate	14.0	2.3	0.3	0.1	0.6	0.1	1.4	0.2	1.1	0.1	19.8	2.4	37.2	4.7	391.6	47.2
Private noncorporate	21.4	2.7	0.4	0.1	0.8	0.1	1.2	0.2	1.5	0.2	25.7	2.5	51.0	5.3	517.0	50.7
Total	45.5	4.3	0.9	0.1	1.5	0.1	3.2	0.3	3.0	0.2	52.1	3.7	106.3	8.1	1,043.2	73.4

¹Multiply carbon (C) by 3.667 to calculate equivalent carbon dioxide (CO₂e)

4.2.4 FF carbon stocks by forest type

The Douglas-fir forest type by far contains the largest total carbon stocks compared to all other major forest types, storing approximately 1,511.1 ± 42.0 MMT C (Table 4.22, Figure 4.19). This is 47% of Oregon's forest carbon stocks. Douglas-fir forests store more than 3 times the carbon stocks of the next most abundant forest types which are split between fir/spruce/mountain hemlock and ponderosa pine forest types. Of the hardwood forest types, the alder/maple forests are currently storing the most total forest carbon at 122.7 ± 15.5 MMT C. Across all forest types live trees account for roughly 32% of the total forest carbon and forest soils make up about 49% of all carbon pools. As of 2016, dead trees comprise only about 2% of all carbon stocks across the major forest types. Down wood accounts for 5% of total forest carbon. Of the major forest types western white pine has the greatest proportion of carbon in dead trees (26%) compared to Douglas-fir with 6%.

Most softwood carbon stocks are found on unreserved timberland (73%) (Table 4.23, Figure 4.20). However, of the distinct forest types, the fir/spruce/mountain hemlocks forests have the greatest proportion of carbon in reserved forests with 31% of this type mostly in reserved-productive forests. Approximately 78% of the carbon stocks associated with hardwood forest types are found in unreserved timberland (Table 4.23, figure 4.20). Although Douglas-fir forests have the largest carbon stocks and covers a substantial area, the western hemlock/Sitka spruce forest type has the highest carbon density per acre (figure 4.21), probably due to a combination of the high inherent productivity of these types and the management and disturbance history where they are found. For information on forest types by region refer to appendix 1.

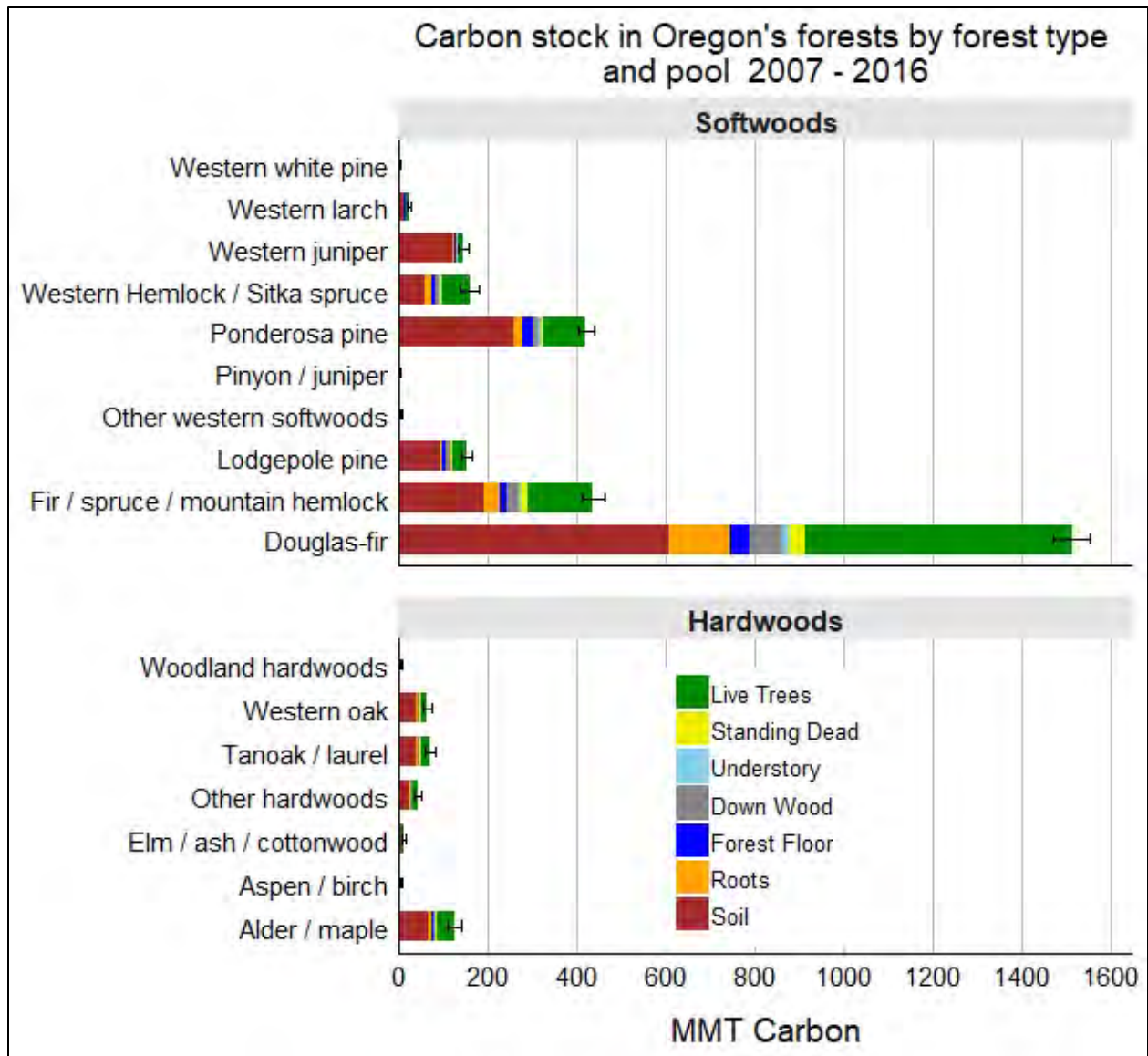


Figure 4.19. Oregon statewide average carbon stock by pool and forest type, 2007-2016 (thousand metric tons C). Error bars represent the 95% confidence interval of total stock for each forest type. Figure derived from Table 4.21; compare to Appendix 2, D tables.

Table 4.22: Forest land carbon stocks by forest type and pool, 2007-2016: All Oregon. Compare to Appendix 2, D tables.

	Live Trees		Dead Trees		Roots		Understory		Down wood		Forest Floor		Soil		All pools	
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>Thousand metric tons C</i>																
Softwoods:																
Douglas-fir	599,115	10,477	34,082	1,133	136,900	2,421	15,197	228	74,973	1,614	43,775	608	607,038	8,465	1,511,080	21,436
Fir / spruce / mountain hemlock	145,880	5,121	18,332	837	32,742	1,137	3,676	108	24,142	850	18,189	513	192,351	5,437	435,312	12,677
Western Hemlock / Sitka spruce	61,585	4,386	5,059	495	13,924	994	1,050	73	11,165	929	6,098	409	58,951	3,977	157,831	10,396
Lodgepole pine	31,636	1,462	3,643	314	6,029	294	1,952	78	9,439	450	7,650	308	92,204	3,565	152,553	5,969
Pinyon / juniper	19	8	--	--	3	1	28	12	11	5	47	18	1,253	516	1,363	557
Ponderosa pine	94,810	2,590	5,363	347	20,645	564	5,388	121	14,928	470	22,880	480	255,441	5,541	419,454	9,144
Redwood	54	51	--	--	10	9	9	9	38	36	27	25	367	346	505	476
Western juniper	10,425	552	415	63	1,874	105	3,648	157	1,565	135	4,569	199	121,448	5,100	143,943	6,030
Western larch	6,211	952	930	238	1,487	237	313	39	1,459	201	1,063	136	10,568	1,312	22,031	2,871
Western white pine	312	152	81	40	80	40	21	6	82	38	75	25	925	288	1,577	528
Other western softwoods	501	189	182	63	136	45	70	20	151	55	204	59	2,753	739	3,996	1,038
Total	950,548	10,021	68,087	1,405	213,828	2,296	31,353	251	137,955	1,850	104,576	675	1,343,298	9,081	2,849,645	19,944
Hardwoods:																
Alder / maple	38,362	2,875	1,558	205	8,082	610	1,328	84	6,255	609	3,495	217	63,607	3,934	122,687	7,906
Aspen / birch	540	194	19	6	102	38	102	30	141	48	171	47	3,059	878	4,134	1,154
Elm / ash / cottonwood	2,629	762	51	24	488	140	157	36	230	70	293	65	5,514	1,233	9,362	2,140
Tanoak / laurel	20,743	2,356	2,554	365	4,626	476	906	72	3,244	423	1,838	147	36,116	2,799	70,027	5,779
Western oak	14,331	1,740	1,285	257	3,327	391	1,131	94	1,716	239	1,883	154	38,378	3,123	62,051	5,317
Woodland hardwoods	215	89	38	27	56	24	79	26	90	33	141	48	2,384	785	3,004	998
Exotic hardwoods	3	3	--	--									7	7	11	11
Other hardwoods	10,301	1,518	865	188	2,444	354	635	68	1,492	250	1,572	171	23,610	2,529	40,920	4,594
Total	87,125	4,302	6,370	517	19,125	916	4,339	162	13,169	813	9,395	344	172,675	6,202	312,196	11,784
Nonstocked	1,525	285	4,639	689	1,459	205	2,028	119	5,704	584	3,221	204	59,300	3,519	77,877	4,818
All forest types	1,039,197	9,632	79,096	1,558	234,412	2,190	37,720	233	156,828	1,925	117,192	548	1,575,273	7,547	3,239,718	16,733

Note: Totals may be off because of rounding

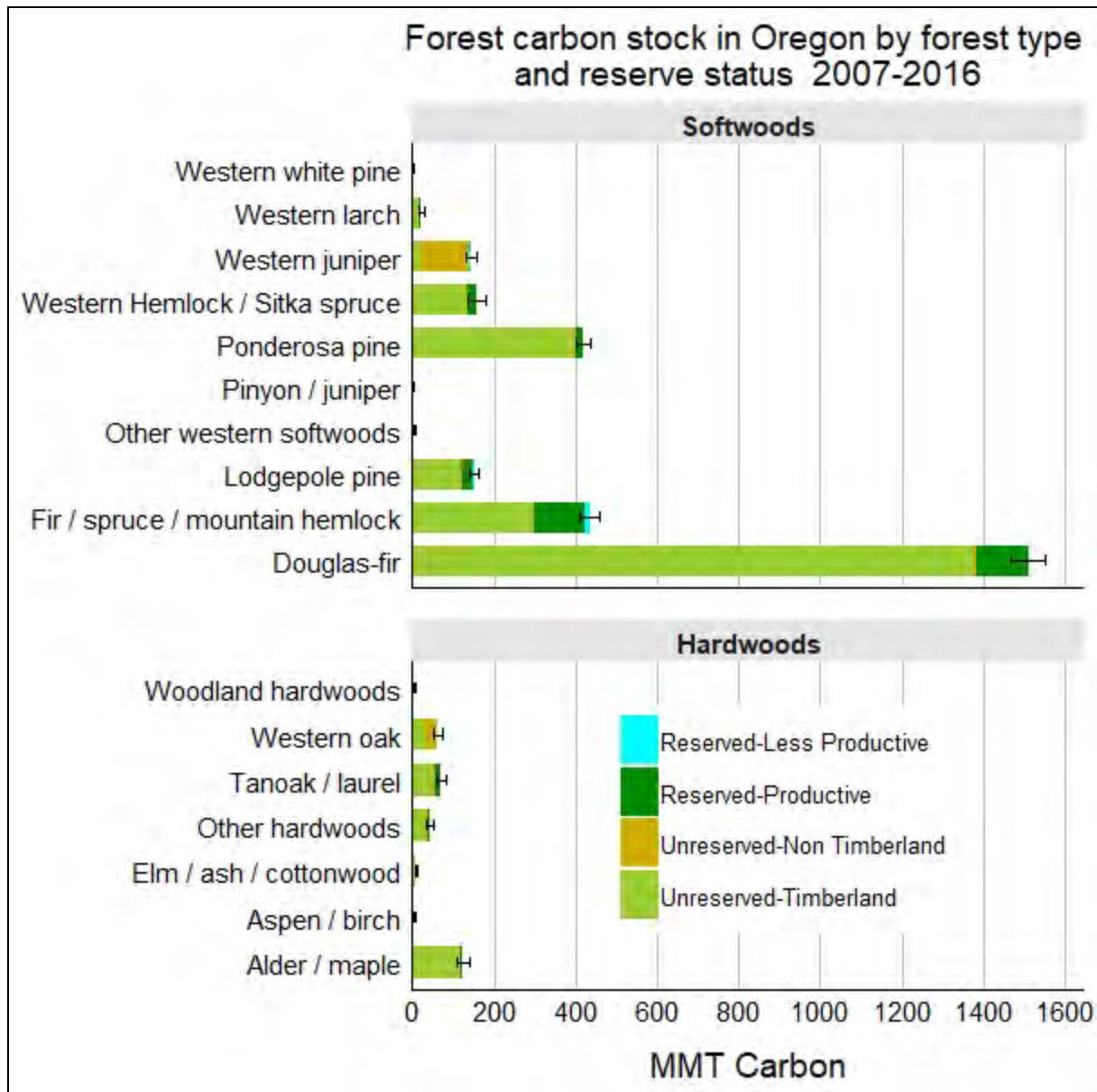


Figure 4.20. Oregon statewide average forest carbon stock by land status and forest type, 2007-2016 (thousand metric tons C). Error bars represent the 95% confidence interval of total stock for each forest type. Figure derived from Table 4.23; compare to Appendix 2, D tables.

Table 4.23. Forest land carbon stocks (thousand metric tons C) by forest type and land status, 2007-2016: All Oregon. Table derived from Appendix 2, D tables.

	Unreserved Forests:				Reserved Forests:				All forest land	
	Timberland		Other Forest		Productive		Other Forest		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE		
<i>Thousand metric tons C</i>										
Softwoods:										
Douglas-fir	1,375,756	19,750	6,620	1,296	128,045	9,869	658	651	1,511,080	21,436
Fir / spruce / mountain hemlock	293,425	9,479	7,210	1,488	123,140	8,431	11,537	3,099	435,312	12,677
Western Hemlock / Sitka spruce	136,152	9,569	67	65	21,304	4,227	308	266	157,831	10,396
Lodgepole pine	119,934	4,776	3,800	1,087	24,954	3,333	3,864	1,342	152,553	5,969
Pinyon / juniper	36	29	1,326	557	--	--	--	--	1,363	557
Ponderosa pine	395,930	8,659	4,434	1,033	18,202	2,929	888	718	419,454	9,144
Redwood	505	476	--	--	--	--	--	--	505	476
Western juniper	21,006	2,106	119,082	5,638	1,229	759	2,626	906	143,943	6,030
Western larch	14,678	1,761	463	318	6,890	2,250	--	--	22,031	2,871
Western white pine	1,351	499	225	175	--	--	--	--	1,577	528
Other western softwoods	1,061	350	1,099	381	724	599	1,112	673	3,996	1,038
Total	2,359,835	19,078	144,328	6,186	324,490	10,811	20,992	3,632	2,849,645	19,944
Hardwoods:										
Alder / maple	117,918	7,809	1,660	673	3,056	1,187	54	55	122,687	7,906
Aspen / birch	2,137	843	1,998	787	--	--	--	--	4,134	1,154
Elm / ash / cottonwood	7,403	1,913	1,162	656	312	311	485	656	9,362	2,140
Tanoak / laurel	52,894	5,142	3,650	954	12,418	2,449	1,064	787	70,027	5,779
Western oak	28,363	3,699	29,827	3,581	2,110	1,190	1,750	1,001	62,051	5,317
Woodland hardwoods	1,443	759	1,561	649	--	--	--	--	3,004	998
Exotic hardwoods	11	11	--	--	--	--	--	--	11	11
Other hardwoods	33,884	4,222	5,598	1,694	1,394	813	44	45	40,920	4,594
Total	244,052	10,742	45,457	4,274	19,290	2,998	3,398	1,435	312,196	11,784
Nonstocked	58,049	3,776	7,631	1,541	12,004	2,574	193	128	77,877	4,818
All forest types	2,661,937	16,914	197,416	7,517	355,783	10,590	24,583	3,887	3,239,718	16,733

Note: Totals may be off because of rounding

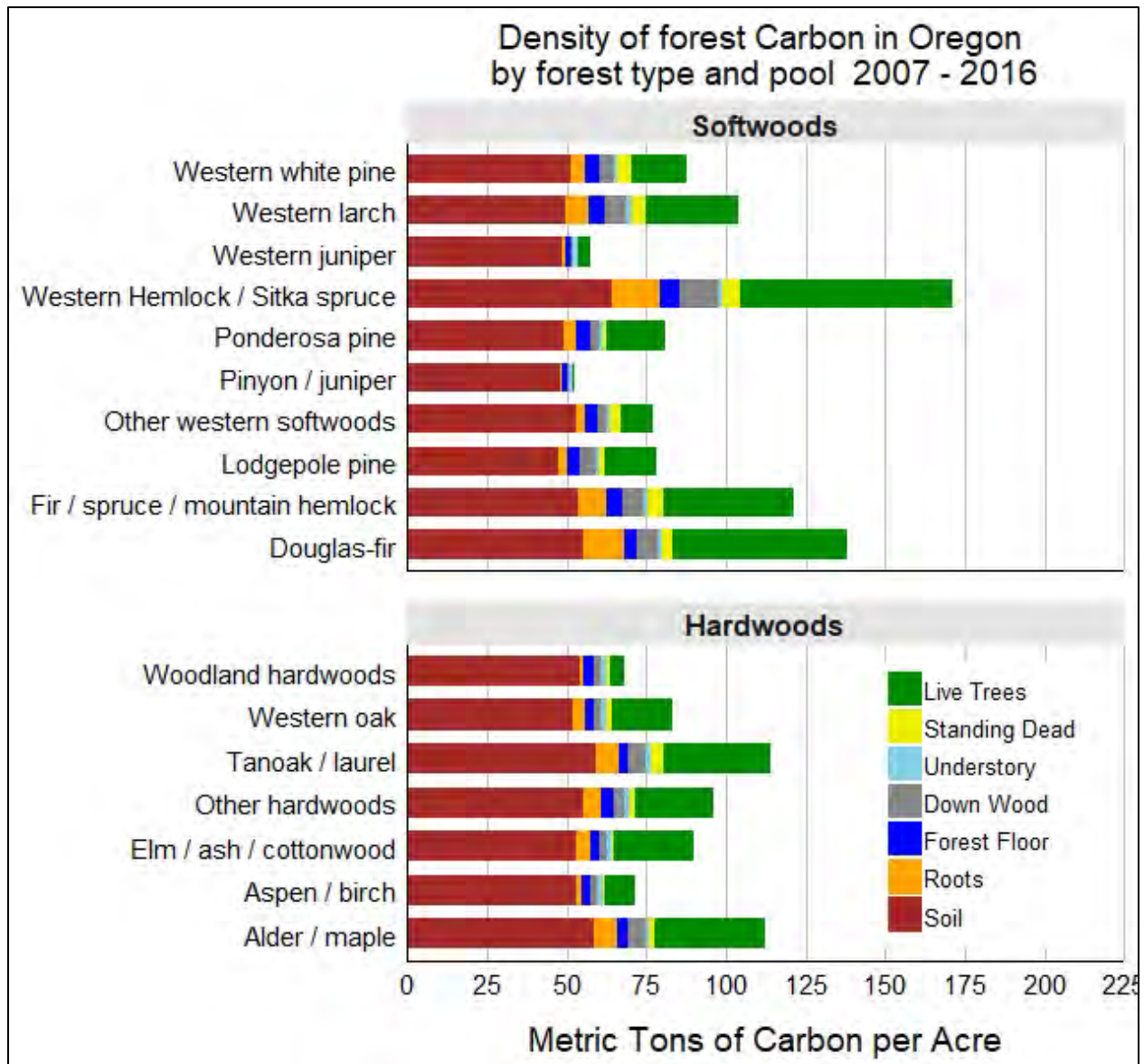


Figure 4.21. Oregon statewide carbon density by pool and forest type, 2007-2016 (metric tons C/acre).

4.2.5 FF carbon pools stock and flux

The following tables provide carbon stock and flux data for each pool by ownership group. These carbon stock results are also compiled in table 4.13a as the totals for each pool for each ownership group. Carbon flux results are also compiled in table 4.3 as the totals for each pool for each ownership group.

4.2.5.1 Aboveground live carbon

The aboveground carbon pool includes all live trees 1-inch dbh and larger and includes estimates of the live understory vegetation component (Tables 4.24, 4.25). Carbon in live tree foliage is included in estimates of live tree stocks and flux.

Table 4.24: Aboveground live carbon (C) stocks on forest land by ownership, 2007-2016. Compare to Table 4.13; Appendix 2, Tables C1 and C19.

	Public						Private				All ownerships	
	National Forest		Other Federal		State and local govt.		Corporate		Non Corporate			
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>Million metric tons C¹</i>												
Live trees	573.25	5.93	161.30	4.65	49.86	2.81	164.23	5.53	90.55	4.41	1,039.20	9.63
Live understory	14.90	0.07	4.45	0.11	1.35	0.06	8.21	0.17	5.04	0.17	33.95	0.21

¹Multiply carbon (C) by 3.667 to calculate equivalent carbon dioxide (CO₂e)

Table 4.25 Aboveground average annual live carbon flux (CO₂e) on forest land by ownership, 2001-2006 to 2011-2016. Compare to table 4.3 and Appendix 2, Table B1.

	Public						Private				Total			
	National forest		Other federal		State and local govt.		Corporate		Non Corporate					
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE		
<i>Million Metric Tons CO₂ Equivalent Per Year</i>														
Live trees	16.30	0.87	8.43	0.62	0.88	0.86	1.24	2.39	3.23	0.91	4.47	2.56	30.07	2.90
Foliage	0.94	0.05	0.49	0.04	0.05	0.05	0.08	0.14	0.14	0.05	0.22	0.15	1.69	0.17
Live understory	-0.07	0.02	-0.05	0.01	0.00	0.01	-0.03	0.03	-0.04	0.01	-0.07	0.03	-0.20	0.03

4.2.5.2 Belowground live and dead carbon

The belowground carbon pool in stocks and calculated flux includes estimates of carbon in live and dead tree roots (Tables 4.26, 4.27). Estimated carbon in understory roots is also included with this pool.

Table 4.26. Belowground live and dead carbon (C) stocks on forest land by ownership, 2007-2016. Compare to Table 4.13; Appendix 2, Tables C28, C36 and C45.

	Public						Private				All ownerships	
	National Forest		Other Federal		State and local govt.		Corporate		Non Corporate			
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>Million metric tons C¹</i>												
Live tree roots	116.12	1.26	33.68	1.00	10.64	0.61	33.89	1.19	18.49	0.93	212.83	2.07
Dead tree roots	15.81	0.35	2.52	0.17	0.76	0.08	1.54	0.11	0.95	0.09	21.58	0.42
Understory roots	1.66	0.01	0.49	0.01	0.15	0.01	0.91	0.02	0.56	0.02	3.77	0.02

¹Multiply carbon (C) by 3.667 to calculate equivalent carbon dioxide (CO₂e)

Table 4.27. Belowground live and dead average annual carbon flux (CO₂e) on forest land by ownership, 2001-2006 to 2011-2016. Compare to table 4.3 and Appendix 2, Table B1.

	Public						Private				Total	
	National forest		Other federal		State and local govt.		Corporate		Non Corporate		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE		
<i>Million metric tons CO₂ Equivalent</i>												
Live tree roots	3.32	0.19	1.89	0.15	0.20	0.20	0.23	0.56	0.68	0.21	6.32	0.67
Dead tree roots	-0.19	0.14	-0.02	0.06	0.00	0.04	-0.09	0.06	-0.04	0.03	-0.33	0.17
Understory roots	-0.01	0.00	-0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.02	0.00

4.2.5.3 Aboveground dead and down wood

The aboveground dead wood carbon pool includes measurements of standing dead trees, and down wood as measured along FIA’s down wood transects at each sampled field plot (Tables 4.28, 4.29). Please note that standing dead tree stocks are based on dead trees greater than 5.0 inches dbh.

Table 4.28. Aboveground dead wood carbon (C) stocks on forest land by ownership, 2007-2016. Compare to Table 4.13; Appendix 2, Tables C10 and C62.

	Public						Private				All ownerships	
	National Forest		Other Federal		State and local govt.		Corporate		Non Corporate		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE		
<i>Million metric tons C¹</i>												
Standing dead trees	58.71	1.32	9.17	0.62	2.55	0.30	5.34	0.37	3.32	0.34	79.10	1.56
Down woody material	86.41	1.19	16.39	0.75	8.61	0.69	34.15	1.17	11.27	0.64	156.83	1.93

¹Multiply carbon (C) by 3.667 to calculate equivalent carbon dioxide (CO₂e)

Table 4.29. Aboveground dead wood average annual carbon flux (CO₂e) on forest land by ownership, 2001-2006 to 2011-2016. Compare to table 4.3 and Appendix 2, Table B1.

	Public						Private				Total	
	National forest		Other federal		State and local govt.		Corporate		Non Corporate		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE		
<i>Million metric tons CO₂ Equivalent</i>												
Standing dead trees	-0.39	0.58	0.26	0.24	0.11	0.13	-0.13	0.19	-0.03	0.14	-0.18	0.68
Down woody material	-1.36	0.49	-1.41	0.32	-0.18	0.23	-3.41	0.49	-0.46	0.22	-6.82	0.82

4.2.5.4 Forest floor and Soil organic carbon

Tables 4.30 and 4.31 provide estimates of current forest floor and soil organic carbon stocks by ownership. FIA forest floor estimates based on Domke et al. (2016) and soil organic carbon estimates based on Domke et al. (2017). See section 3.2.3 for additional details about the forest floor and soil organic carbon pools.

Table 4.30: Soil organic carbon and forest floor (C) stocks on forest land by ownership, 2007-2016. Compare to Table 4.13; Appendix 2, Table C53 and C71.

	Public						Private				All ownerships	
	National Forest		Other Federal		State and local govt.		Corporate		Non Corporate			
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
	<i>Million metric tons C¹</i>											
Forest Floor	63.16	0.27	12.26	0.25	4.37	0.19	23.97	0.51	13.43	0.47	117.19	0.55
Soil organic carbon	747.24	2.72	194.88	3.98	68.42	2.70	355.14	7.27	209.59	6.75	1,575.27	7.55

¹Multiply carbon (C) by 3.667 to calculate equivalent carbon dioxide (CO₂e)

Table 4.31: Soil organic carbon and forest floor average annual flux (CO₂e) on forest land by ownership, 2001-2006 to 2011-2016. Compare to table 4.3 and Appendix 2, Table B1.

	Public						Private				Total	
	National forest		Other federal		State and local govt.		Corporate		Non Corporate			
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
	<i>Million metric tons CO₂ Equivalent</i>											
Forest Floor	0.44	0.06	0.09	0.04	0.00	0.02	-0.14	0.09	0.17	0.06	0.56	0.13
Soil organic carbon	0.15	0.15	-0.21	0.11	0.02	0.05	-0.09	0.19	-0.04	0.09	-0.17	0.29

4.3 Forest management reference levels (FMRL) and C stock-change

As described in the 1992 Kyoto Protocols and Guidelines, the concept of a forest management reference level (FMRL) is used to establish baseline forest carbon stock values so that average annual net change from managed forests can be calculated (IPCC 2014, section 2.7.5) and for comparing long term projections to reference conditions in a consistent fashion. For this report, we have established FIA’s initial 10-year forest inventory in Oregon as the FMRL baseline, which was installed from 2001 through 2010. Calculating a current stock in a consistent way with the FMRL is an IPCC-recommended approach to carbon accounting and allows evaluation of relative changes in Oregon forest carbon stocks by pool and ownership between measurement periods. In this way progress toward specific statewide climate objectives can be estimated. However, estimates of change between 10-year stock averages (i.e., Stock-Change approach) are not as accurate or precise as those made using the Growth, Removals and Mortality (GRM) approach.

Each successive 10-year period includes 9 years of the previous period's measurements. For example, the periods 2005-2014 and 2006-2015 share data for years 2006-2014. Although these 10-year moving stock averages can be used for estimating the relative direction of change between periods, especially between two full 10-year inventories, it is problematic to use for evaluating flux until then. A more accurate and meaningful way to calculate change and the magnitude of flux is by using the Growth, Removals and Mortality (GRM) approach. This GRM approach is considered an IPCC Tier 3 approach to carbon accounting, which refers to using more advanced country-specific data and methods. The GRM method compares measurements taken on the same set of plots and trees at different times. This method measures trees 10 years apart to allow enough growth between each measurement to reliably distinguish measurement of actual change from possible measurement error. In addition, it makes it possible to identify causes of changes to individual plots instead of simply comparing total stocks. The GRM approach to calculate change is the approach used nationally by the FIA Program and is also used for this report (see section 4.1).

Our estimate of C flux and current trends is determined by comparing measurements taken in 2001-2006 to those taken on the same plots and trees in 2011-2016. This provides 6 years of re-measured tree data to calculate actual growth, removals, and mortality on the same set of trees. However, because the current estimates of change use only 6 years of re-measured plot data, only 60% of all the plots initially installed from 2001 to 2010 are included. One would expect estimates of flux to change slightly as more data are collected, with improvements in sampling error as plots approach 100% re-measurement in 2020 and beyond. See section 3.1.2 for more information about FMRL and methods used.

Table 4.32 provides FMRL estimates from 2001-2010 by forest carbon pools including the total estimated carbon for this initial 10-year period. The 2001-2010 FMRL for total carbon from all pools including estimates for soil organic carbon and carbon found on the forest floor is $3,198.25 \pm 39$ MMT C. The live tree pool accounts for approximately 31% of the entire forest carbon pool, while organic carbon in forest soils account for 50% of the total carbon. Standing dead trees, down wood, understory vegetation, forest floor and roots account for the remaining carbon. The current stock values for each of these pools are estimated as stock totals for each 10-year period (i.e., complete plot set) through the current period of 2007-2016. During this time, there is no meaningful change in most carbon pools from the established FMRL except in growth from live trees (Figure 4.22), demonstrating the limitation in using this approach as it does not take full advantage of re-measurement information. The 2016 statewide rate of carbon sequestration with the GRM approach on all forest land including flux from forest land conversions but excluding other greenhouse gas emissions from fire, is estimated at 30.3 ± 7.2 MMT CO_{2e} per year. The 2001-2010 FMRL baseline for live tree carbon is 982.34 ± 23.2 MMT C and in 2007-2016 total carbon in live trees increased to $1,039 \pm 18.9$ MMT C. Using the stock-change approach to compare the 2007-2016 time-period to the FMRL, which is equivalent to a difference of 6 years, puts the net change in carbon stocks on all forest land at approximately 57 MMT C. When this value is converted to CO_{2e} and annualized over a 6-year period, it is equivalent to approximately 34.7 MMT CO_{2e} per year. This value is greater than the net live tree sequestration rate determined by the direct-measurement GRM approach

and again highlights some of the challenges with using the stock-change approach until full re-measurement is complete. Future forest carbon pools are projected out to the year 2020 by applying current flux estimates based on re-measured trees to each 2007-2016 C pool estimate (Figure 4.22) assuming a constant flux rate.

Table 4.32: Forest carbon pools by 10-year inventory period, 2001-2010 through 2007-2016. Compare to Appendix 2, C tables. Please review section 4.3 for an understanding of how stock changes calculated from this table differ from flux determined by directly measuring growth, removals and mortality on the same plots over time.

	Live Trees		Dead Trees		Down wood		Understory		Belowground		Forest Floor		Soil		Total carbon	
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
	<i>Million metric tons C¹</i>															
2001 - 2010	982.34	11.84	78.24	2.02	166.00	2.31	38.68	0.26	223.09	2.69	116.91	0.68	1,592.99	8.39	3,198.25	20.13
2002 - 2011	992.34	11.89	80.48	2.06	163.16	2.33	38.29	0.25	225.59	2.70	116.75	0.68	1,583.46	8.31	3,200.06	20.17
2003 - 2012	999.85	9.27	80.05	1.64	161.69	1.89	38.27	0.24	227.04	2.13	116.76	0.56	1,583.44	7.57	3,207.11	16.35
2004 - 2013	1,008.09	9.34	79.46	1.60	160.77	1.91	38.03	0.23	228.35	2.14	116.77	0.56	1,578.41	7.52	3,209.88	16.36
2005 - 2014	1,019.59	9.45	79.48	1.61	159.15	1.91	37.90	0.23	230.71	2.17	117.01	0.56	1,576.95	7.51	3,220.77	16.50
2006 - 2015	1,030.32	9.56	79.34	1.56	157.54	1.91	37.79	0.23	232.84	2.18	117.19	0.55	1,575.43	7.53	3,230.47	16.62
2007 - 2016	1,039.20	9.63	79.10	1.56	156.83	1.93	37.72	0.23	234.41	2.19	117.19	0.55	1,575.27	7.55	3,239.72	16.73

¹Multiply carbon (C) by 3.667 to calculate equivalent carbon dioxide (CO₂e)

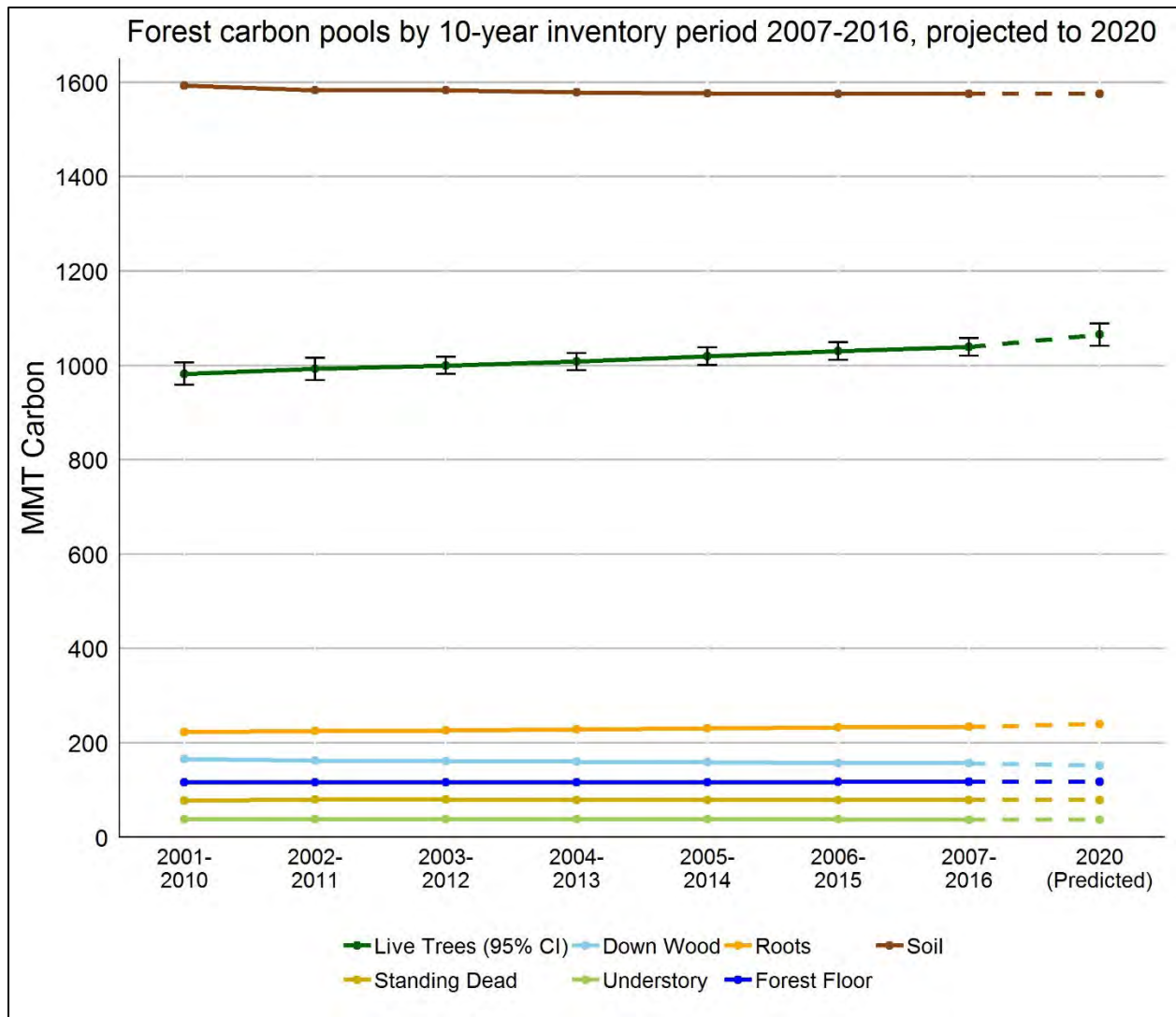


Figure 4.22. Oregon carbon stocks by source pool, 2001-2010 through 2007-2016 with projection to 2020. Error bars represent the 95% confidence interval of live tree carbon stocks to 2020.

We also evaluate current C stocks by ownership from the 2001-2010 FMRL in 10-year periods to 2007-2016. The aboveground live tree C pool by ownership and land status is highlighted in Table 4.33. The live tree pool is evaluated on its own since re-measurement has so far suggested an elevated rate of annual flux relative to all other C pools. Most ownerships and land status (timberland and reserved forest land) indicate increasing or flat C stocks throughout this time-period based on the 2001-2010 FMRL and the standard error of each estimate. This same trend appears to persist when evaluating the sum of all C pools by the same ownership and land status groups (Table 4.34).

Table 4.33: Live tree carbon stocks by ownership and land status, 2001-2010 through 2007-2016. Compare to Appendix 2, C tables. Please review section 4.3 for an understanding of how stock changes calculated from this table differ from flux determined by directly measuring growth, removals and mortality on the same plots over time. The all ownerships category includes all other state and federal agencies managing forest land in Oregon.

	Unreserved timberland						Reserved forest land		All forest land	
	Private - corporate		Private - noncorporate		National forests		National forests		All ownerships	
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
	<i>Million metric tons C ¹</i>									
2001 - 2010	143.38	5.49	89.23	4.58	443.64	9.44	97.20	6.11	982.34	11.84
2002 - 2011	146.89	5.56	89.37	4.58	449.50	9.49	95.08	5.99	992.34	11.89
2003 - 2012	153.16	5.23	88.34	4.42	435.65	5.03	109.93	4.52	999.85	9.27
2004 - 2013	153.44	5.29	86.68	4.40	439.03	5.05	112.36	4.55	1,008.09	9.34
2005 - 2014	154.86	5.28	86.38	4.46	442.27	4.97	114.68	4.57	1,019.59	9.45
2006 - 2015	158.86	5.44	84.86	4.38	446.01	4.95	116.17	4.60	1,030.32	9.56
2007 - 2016	161.66	5.48	83.80	4.39	449.54	4.80	117.98	4.56	1,039.20	9.63

¹Multiply carbon (C) by 3.667 to calculate equivalent carbon dioxide (CO₂e)

Table 4.34. Forest carbon stocks by ownership and land status, 2001-2010 through 2007-2016. Compare to Appendix C tables. Standard errors not included due to combining mixed estimates from separate pools. Please review section 4.3 for an understanding of how stock changes calculated from this table differ from flux determined by directly measuring growth, removals and mortality on the same plots over time. The all ownerships category includes all other state and federal agencies managing forest land in Oregon.

	Unreserved timberland						Reserved forest land		All forest land	
	Private - corporate		Private - noncorporate		National forests		National forests		All ownerships	
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
	<i>Million metric tons C ¹</i>									
2001 - 2010	558.62	14.19	327.63	12.18	1,325.28	18.18	282.30	14.29	3,198.25	20.13
2002 - 2011	562.29	14.18	326.18	12.14	1,335.92	18.25	280.98	14.21	3,200.06	20.17
2003 - 2012	582.72	13.55	316.96	11.79	1,292.89	9.03	318.93	8.14	3,207.11	16.35
2004 - 2013	584.68	13.53	311.41	11.74	1,295.99	9.06	322.79	8.18	3,209.88	16.36
2005 - 2014	591.64	13.46	304.62	11.74	1,299.77	8.89	327.29	8.17	3,220.77	16.50
2006 - 2015	600.89	13.54	297.01	11.58	1,303.83	8.92	328.64	8.16	3,230.47	16.62
2007 - 2016	608.82	13.50	289.79	11.53	1,305.45	8.55	332.74	8.10	3,239.72	16.73

¹Multiply carbon (C) by 3.667 to calculate equivalent carbon dioxide (CO₂e)

Chapter 5. Comparison with other reports

5.1 National Greenhouse Gas Inventory

The U.S. National Greenhouse Gas Inventory (NGHGI) is aggregated at the national level, so state-level estimates are not available to compare to those produced here. However, a report that uses the same data and methods is produced periodically that provides disaggregated results at regional and state levels. The most recent version of this report provides forest carbon stock and flux estimates for 2013 (USDA OCE Climate Change Program Office 2016). The USDA report estimates live tree net stock change at 51.7 MMT CO₂e per year for Oregon, while in this report we estimate the change at 38.1 MMT CO₂e per year (Table 5.1). The primary cause for this difference is in the use of regional equations used to calculate biomass from the tree measurements; the difference in time periods is also a factor. While both methods are based on the same merchantable tree volume calculations as described in section 3, we use a set of regionally-derived biomass equations while the NGHGI uses national component ratio equations. Both approaches use equations with built-in assumptions and are based on small datasets resulting in estimates of unknown accuracy (Weiskittel et al. 2015). This issue is further discussed in chapter 6 of this report. In addition, the USDA flux estimates use a stock-change approach as opposed to a GRM approach, but given the similarity of the estimates from both approaches in this report the effect is likely minor.

Table 5.1. Differences between net carbon sequestration rates for Oregon in the U.S. NGHGI and this report (MMT CO₂e/yr).

Inventory	Live Tree ¹	Non-live tree, non-soil	Method/year
	<i>Net Sequestration, MMT CO₂e/yr</i>		
U.S. NGHGI (USDA OCE Climate Change Program Office 2016)	51.7	1.0	Stock-change, FIA direct-measurement 2013
OR Forest Ecosystem (i.e., this report)	38.1	-7.6	GRM, FIA direct-measurement 2016

¹ Live tree includes aboveground wood, foliage, and roots

The USDA (2016) report estimates total non-soil stock change at 52.7 MMT CO₂e; after subtracting the live tree change this results in a non-live tree, non-soil stock change of 1.0 MMT CO₂e per year. In comparison, we estimate losses in those pools of 7.6 MMT CO₂e per year, with most of the change attributed to down wood. While the difference in tree-level biomass equations may have played a role, the use of models based on forest type and stand age to estimate down wood, the use of older soil models, and the lack of inclusion of land-use change in the NGHGI report may have been a factor as well.

5.2 Other comprehensive carbon research in Oregon

The Oregon Global Warming Commission (OGWC) produced a carbon accounting report based primarily on an earlier, less complete FIA dataset than that used in this report and compilation

by Dr. Mark Harmon, Oregon State University (Oregon Global Warming Commission 2018). Despite having to make some assumptions about down wood and snag decay, the mid-point estimate reported by OGWC for non-soil forest carbon stocks were very similar to the value in this report (1,621 vs. 1,664 MMT C, respectively). The mineral soil values differed because the OGWC analysis relied on older FIA modeled values while this report uses values from an improved model (1,078 vs. 1,575 MMT C, respectively). The OGWC reported a midpoint estimate of flux that was higher than our estimate at 39.6 vs. 30.9 MMT CO₂e/yr. While the live tree net change was similar (35.2 vs. 38.1 MMT CO₂e/yr), the OGWC analysis did not have data on change in standing and down dead wood, and assumed a small increase, while we found from our analysis a decrease in those pools for this time period.

A study of aboveground live-tree carbon on non-federal lands in Oregon used FIA data to estimate change between 1985-9 to 1995-9 (Gray and Whittier 2014). That study estimated forestland increase in the state to be 27 thousand acres per year, primarily due to establishment of western juniper on rangelands, while our current study suggests the increase from 2001-6 to 2011-16 was only 5 thousand acres per year. Though not definitive, the conversion of juniper stands back to range with chaining and cutting seen in recent plot records suggest there has been more effort to limit juniper expansion. The previous study estimated net land use change resulted in a loss of 1.2 MMT CO₂e/yr, while this report estimated a gain of 0.7 MMT CO₂e/yr. The difference appears to be that most of the afforestation in the previous study was low C-density juniper, while in the current analysis it was primarily higher C-density timberland. Aboveground live tree net change on non-federal lands was estimated at 1.8 MMT CO₂e/yr in Gray and Whittier (2014), and 5.3 MMT CO₂e/yr in this report, primarily due to higher mortality rates in the older data, which included a period of severe spruce budworm activity in eastern Oregon. Gray and Whittier estimated less aboveground live tree C on non-federal lands than this report, 290.7 vs. 304.6 MMT C in 1995-9 vs. 2007-16, respectively. The modest increases in live tree C on non-federal lands in the intervening years could explain the difference.

A more comprehensive study of live and dead carbon pools was done for National Forests in Oregon and Washington using their CVS inventory and assessing change from 1993-7 to 1997-2007 (Gray et al. 2014). The field measurements and data compilation methods were quite similar to those of FIA, with the primary difference to this report being that Gray et al. (2014) used a modified CRM method (Woodall et al. 2011) rather than regional biomass equations. From Table 4 in Gray et al. (2014) and area of NFS forestland in each region, the sum of non-soil C pools was 811 MMT C, compared to 867 MMT C in this report. Although the live tree C accounted for most of the difference in estimates, the effect of using different biomass equations is not clear, given that the CRM method appears to under-estimate or over-estimate some species in our region, but is quite accurate for Douglas-fir, the most abundant species in Oregon (Poudel et al. 2018). Instead, the ~10-year time difference and the estimated increase of 4.4 MMT C/yr for live trees on NFS lands from this report could account for most of the difference in stock estimates. Flux estimates could not be readily compared because they were not reported at the state or sub-state level in Gray et al. (2014).

A recent study of forest carbon balance in Oregon combined information from FIA plots, satellite-based land cover and change detection, intensive ecosystem plots, and a wood decomposition database (Law et al. 2018). They report forest stocks for 2011-15 of 3,036 MMT C, compared to 3,240 MMT C for 2007-2016 in this report. The greatest differences are in live trees (this report is lower by 277 MMT) and in soils (this report is higher by 610 MMT). Given the overlap in source data, the difference in live tree C is likely due to the use of different allometric equations for volume and biomass components, though these are not specified sufficiently in Hudiburg et al. (2009) to evaluate. It is not clear how Law et al. (2018) estimated soil carbon stocks. Law et al. (2018) estimated net ecosystem productivity (NEP, the balance of photosynthesis and respiration) of 103 MMT CO₂e/yr, compared to the estimate in this report (all fluxes except for harvest removals and fire emissions) of 66 MMT CO₂e/yr. The results are not broken down by individual pools, precluding more detailed comparisons. Law et al. (2018) derives NEP by estimating net primary production and heterotrophic respiration, including foliage and fine root production and decay, while this report estimates NEP through stock-change calculation, so it is possible that small errors or omissions from either approach can result in sizeable differences for the large carbon pools found in Oregon forests. Harvest removal estimates were similar between Law et al. (2018) and this report (31 vs. 35 MMT CO₂e/yr), but fire emission estimates were lower for this report (6.3 vs. 3.6 MMT CO₂e/yr, respectively).

Campbell et al. 2007 estimated the combustion of carbon pools in the 2002 Biscuit fire emitted 3.83 MMT C over an area of 203,000 ha, or 18.9 MT C/ha. Our change analysis for all fires in Oregon 2001-2016 suggested flux of 14.8 MT C/ha. In addition to the different spatial and temporal scales, our analysis did not try to estimate change in litter, duff, and soil, which accounted for approximately 10 MT C/ha in Campbell et al.'s analysis. The higher loss in the live and dead tree pools in our analysis may be due to post-fire decay of burnt and killed trees, snags, and down wood captured by our measurements.

Chapter 6. Strategies to improve the inventory

6.1 Potential improvements to data collection

6.1.1 Increased number of plots measured per year

The possibility of increasing the intensity of the FIA inventory has been raised as a way to get more precise information on conditions and changes in Oregon's forest land. Concerns revolve around getting more precise estimates of the timing and causes of changes to forests, and getting more precise estimates of the changes on specific ownerships or vegetation types. The options to improve inventory precision include doubling the number of plots in the state (spatial intensification) and halving the measurement interval (temporal intensification).

While the number of plots measured each year would be the same for the temporal and spatial intensification, the implications for analysis of forest resources would differ. In the case of temporal intensification, a shorter cycle would provide better resolution on the timing of changes. However, the precision of estimates for any specific year (e.g., area burned in 2009) would be the same as the current inventory, as all the plots are used to do the calculation. Under temporal intensification, change and carbon flux estimates for the full set of re-measured plots would span 10 years instead of 20 under the current or spatially-intensified design. Measurement errors (e.g., shrinking trees, timing of plot measurements affecting number of growing seasons) would increase in importance. In the case of spatial intensification, more plots would provide more information on specific forest types, land owners, and regions and smaller confidence intervals for all the inventory estimates. National Forest lands outside of designated Wilderness in Oregon, and Bureau of Land Management lands in western Oregon, are already being measured with a spatial intensification using FIA protocols, at a plot density of one per 1,850 acres. This spatial intensification is funded by the respective land management agencies; FIA funding covers the base national measurement of one plot per 6,000 acres.

Doubling the number of plots (spatial intensification) enables more precise estimates for particular types of forest that are of interest. In general, the standard error for a doubling of plots will decrease by a factor of 0.71 ($=1/\sqrt{2}$). For example, for the estimate of live tree carbon change on private lands in the Coast Range of 1.040 ± 1.944 (SE) MMT CO₂e (Table B6), based on available re-measurement of 6/10 of the plots in Oregon, the SE for double-intensity of plots would be 1.375. The SE using all the re-measured plots (10-year cycle) with a double-intensity would be 1.064, or almost half the current error estimate (1.944). The effect of spatial intensification is also illustrated by SEs that tend to be proportionally lower for National Forests compared to other owners, where the proportion = SE/Total.

There are substantial logistical considerations involved in doubling the FIA sample each year, whether by spatial or temporal intensification, to ensure the resulting data are useful and accurate. There are 10,367 plots on the base grid (all ownerships) that could be subject to temporal intensification, or 7,686 base grid land plots on lands that are not already spatially-intensified that could be added to. The current federal cost (field, data management, analysis,

and overhead combined) is approximately \$1500 per plot. In many states, it has been advantageous to having the field work done by state crews or contractors. Regardless of who employs the field crews, significant training and field testing would be desirable to ensure high-quality data. Fluctuation in budgets that result in changing the number and timing of plot measurement would complicate the analysis of the inventory and could render some intensified data unusable. Additional analysis of goals and options will be needed to flesh out potential strategies.

This report can serve as a starting point to identify specific concerns surrounding uncertainty values, such as for a particular ownership or region, or timing of estimates with further discussion regarding the best strategies to address these concerns.

6.1.2 Improved estimation of non-sampled plots

Many analysts within FIA share the concern expressed about the numbers of non-sampled plots we are experiencing in some states, particularly as a result of denied access on private non-industrial ownerships. The current national FIA approach for accounting for non-sampled plots assumes that non-sampled plots have the same characteristics as the mean of the rest of the plots in the same stratum, but the strata are fairly coarse and this assumption could be resulting in biased estimates (i.e., inaccuracies). These biases could affect state-level or ecoregion-level estimates as well as the particular areas that are under-sampled. Several ideas have been generated for researching approaches to create better estimates that rely on different kinds of remote sensing, statistical procedures, and/or modeling. However, given current research capacity and priorities, we are not aware of a study currently focused on this issue. It should also be noted that under a temporal intensification strategy, it's possible that more frequent contact of private landowners could result in greater rates of denied access.

6.1.3 Increased use of remote sensing

There is substantial interest in using remote sensing of disturbances to provide modeled up-to-date estimates of change; however, this would also require modeling growth, mortality, and decay on the undisturbed plots which could require substantial effort and potentially introduce bias in the sample. Remotely-sensed data are already an integral part of inventory estimation as it is a key attribute used to post-stratify the data and build estimates and sampling errors. It might be possible to develop more precise estimates of change by incorporating remote-sensing change detection layers into the stratification. Change detection from satellite images is often used to model potential changes in disturbed areas, but those model estimates have difficulty assessing growth and land-use change, and would essentially be independent estimates outside the inventory estimation framework. As mentioned in section 6.1.2, use of high-resolution imagery (e.g., aerial photography) could greatly improve estimation of characteristics of non-sampled plots.

Improved estimation of changes in land-use and land cover on non-forest plots, and more rapid assessment of change on forest plots, should be possible by additional analysis of inventory plots with high-resolution imagery. FIA is currently developing the Image-based Change

Estimation (ICE) project that interprets changes in cover and land-use at every forest and non-forest plot location on a 2-3 year schedule in order to provide more consistent and timely estimates of change. These data could be useful in estimating change in carbon stocks on non-forest land-uses that FIA currently is not funded to measure in the field (e.g., chaparral, agriculture, urban).

6.1.4 Better understanding of changes in dead wood

Concerns have been expressed about our findings of substantial declines in carbon in the dead and down wood pool in Oregon. While we are able to accurately assess the changes in this pool, because we don't track individual pieces through time (as we do with live trees and snags), we are unable to tease apart the relative impacts of mortality, snag-fall, combustion, and decay on these changes. We are able to provide some insights on inputs from mortality and snag-fall at an aggregate level, but because down wood is sampled on transects and not identified as individuals on plots, we are not able to track inputs from the tree pool and losses from decay at the plot level. Tracking the status, density, and causes of change of individual pieces of dead and down wood over time could provide insights on these changes. It would take some time to develop reliable field and laboratory protocols (e.g., through pilot studies), and would require additional funding (or dropping of other measurements) to implement in the inventory, potentially on a subset of plots.

6.2 Potential improvements to data compilation

6.2.1 Better tree biomass equations

One of the weakest links in any and all forest carbon estimates may be the equations used to calculate tree biomass. The tree carbon estimates in this report are based on a combination of tree volume, bark, and branch equations that were created from independent datasets. Most of the biomass equations were developed to provide initial approximations, and are almost all based on small numbers of trees with a narrow range of sizes from one or two locations. These equations are then applied to all the trees in a region, resulting in estimates of unknown accuracy (Temesgen et al. 2015, Weiskittel et al. 2015). For example, the bark and branch calculations for all Ponderosa pine on the west coast are based on a sample of 23 trees at Pringle Falls Experimental Forest in central Oregon. While alternative national-scale biomass equations developed by Jenkins et al. (2003) are often used, they are essentially a reformulation and averaging of the same limited sets of regional equations. The national FIA component ratio estimates described in Woodall et al. (2011) are a potential improvement because they are scaled to the volume equations used by FIA, which generally are based on much larger samples than the biomass equations, but the overall accuracy of the estimates is still unknown.

The FIA program has attempted to reduce this uncertainty by funding detailed biomass studies to collect new data in geographically-distributed samples of trees growing in a range of conditions, that combine taper-based volume measurements with biomass measurements so that estimates will be additive and accurate. The initial effort is focused on the most abundant species in the nation (and includes the species that make up 75% of cubic volume in the west)

and is incorporating existing and publicly-available volume and biomass data into an open library to aid in model development (Weiskittel et al. 2015). While many of the most important species in the West also occur in Oregon, several species that are abundant in the state are not on the initial list (e.g., western redcedar, Pacific silver fir, bigleaf maple). The current plan is to wrap up data collection for the initial list by 2019 and produce a set of improved equations for implementation in FIA estimates in the following year or two.

6.2.2 Potential improvements – Carbon reporting

- 1) Separate out woodlands from forest using the NGHGI approach designed to exclude vegetation types where tree species rarely form single stems and do not attain a height of at least 16 feet in situ. Because the minimum height criteria could exclude recently-disturbed sites which merely haven't had enough time for the trees to reach site potential, we could add an additional limitation that the site has not had a severe disturbance within the last 30 years (or as far back as records go).
- 2) Remove forests less than 10 acres in size entirely surrounded by urban area, as in the NGHGI criteria, where they are classified as settlements. There might be a relatively simple (though imprecise) way to do this by identifying all forest plots within urban areas, or by classifying satellite-based vegetation maps and identifying plots where tree cover patches are too small.
- 3) For down wood carbon compilation, we could use the hardwood/softwood decay-reduction parameters from Harmon et al. (2011) instead of the species-level ones from the same publication which are currently used by FIA. The source data for the species-level parameters has small sample sizes for many species and exhibits unusual patterns of proportional decay with decay class when comparing among apparently-similar species. In the longer term, more rigorous studies of decay classes and biomass decay factors would provide more accurate, consistent parameters to use.
- 4) Include data for dead trees <5.0 inches dbh when it becomes available, rather than greater than 5.0 inches dbh.

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Glossary

Afforestation: An increase in the area of forest land caused by a change in land-use; includes intentionally planted and tended lands as well as lands naturally occupied by establishing trees.

Biomass energy: The use of harvested wood, particularly unmerchantable residues, to meet commercial and residential energy and/or heating needs, potentially reducing the use of fossil fuels to meet those needs instead. Considered by many to be a net reduction in carbon emissions since those residues would otherwise decay and result in emissions anyway (albeit at a slower rate).

Carbon sink saturation point: The point at which annual forest emission equals uptake as forests age.

Culmination of mean annual increment: The point in stand development when the rate of accumulation of wood over the life of the stand reaches a maximum, calculated as the amount of wood accumulated divided by the number of years elapsed.

Decomposition: Consumption of organic matter, primarily by microbes, resulting in carbon dioxide emissions to the atmosphere.

Deforestation: A decrease in the area of forest land caused by a change in land-use; does not include areas of temporary tree mortality from logging or fire where planting or natural regeneration is expected to occur.

Forest land: Under the FIA definition, Land that has at least 10% crown cover by live tally trees of any size or has had at least 10% canopy cover of live tally species in the past, based on the presence of stumps, snags, or other evidence. To qualify, the area must be at least 1.0 acre in size and 120.0 feet wide. Forest land includes transition zones, such as areas between forest and non-forest lands that meet the minimal tree stocking/cover and forest areas adjacent to urban and built—up lands. Roadside, streamside, and shelterbelt strips of trees must have a width of at least 120 feet and continuous length of at least 363 feet to qualify as forest land. Unimproved roads, trails, and meadows less than 120 feet wide or less than an acre in size, and streams less than 30 feet wide in forest areas are classified as forest. Tree-covered areas in agricultural production settings, such as fruit orchards, or tree—covered areas in urban settings subjected to regular mowing, such as city parks, are not considered forest land. Per this definition, chaparral is not included in the definition for forest land unless it also meets the minimum stocking or crown cover requirements to qualify as forest land.

Forest land status: Refers to the different FIA categories of forest land (i.e., productive forest land, timberland, other forest land) including the reserve categories (i.e., reserved or unreserved), defined below.

Flux: In this report, flux describes the net change in carbon in one or more pools over a specific period of time, expressed as either a total or a rate (to distinguish change from C stocks), with a negative flux meaning a loss of carbon from the pool. Often expressed as an exchange with the atmosphere, not all carbon exchanges occur with the atmosphere (e.g., live trees convert to dead wood when they die).

Gross Growth: The increase in wood volume or biomass between the previous and current measurement of trees that were alive at the previous measurement.

IPCC: The Intergovernmental Panel on Climate Change is a United Nations-sponsored panel of scientists that develops guidance on the conduct of carbon emissions assessments, among other things.

Key category analysis: An assessment where key carbon emission categories are identified and prioritized, called for in the 2006 IPCC Guidelines.

Land status: Refers to the FIA distinction between forest land and non-forest (i.e., crops, improved pasture, residential areas, city parks, etc.) or other area (i.e., water). Also includes forest land status categories.

Leakage: Where increases in carbon stores in one region from reduced harvest are offset by decreases in carbon stores in another region from increased harvest to meet demand, resulting in no net reduction in carbon emissions to the atmosphere.

Logging residues: Slash, such as tops and limbs, and sub-merchantable material left on-site after harvest.

Loss: A net decrease in carbon stores in one or more pools (categories) over a specific period of time.

Managed land: An IPCC designation of lands included in carbon emission assessments, consisting of those where human interventions and practices have affected production, ecological or social functions. In practice, the United States considers all lands except for portions of interior Alaska as managed.

Mortality: The wood volume or biomass of live trees that died between the previous and current measurement.

Net Growth: The net change in live tree wood volume or biomass between the previous and current measurement, equivalent to gross growth minus mortality.

Other forest land: Forested lands not capable of producing at least 20 cubic feet of wood per acre at culmination of mean annual increment.

Permanence: Refers to the desire for increases in carbon stores to last over the long term, particularly in the calculation of carbon credits, and not result in increased risk of losses from natural disturbance.

Pool: A category containing carbon mass, e.g., live trees, down wood, harvested wood products.

Productive Capacity: Ability for land to grow commercial tree species.

Productive forest land: Forested lands capable of producing at least 20 cubic feet of wood per acre per year at culmination of mean annual increment.

Reserve status: Lands where management for the production of wood products is precluded permanently by law, including Wildernesses, National Parks, National Recreation Areas, and State Parks. In some cases, timber harvest can occur for various resource objectives (e.g., restoration, salvage, etc.).

Respiration: The process of living tissues using carbohydrates and producing carbon dioxide emissions to the atmosphere, for example leaves and roots of living trees.

Sequestration: A net increase in carbon stores in one or more pools (categories) over a specific period of time.

Substitution: Refers to the possibility that the use of wood products in construction or other products results in a net reduction of carbon emissions if the alternatives require more carbon-based energy to produce.

Stocks: The amount of carbon in one or more pools (categories) at one point in time (synonym: stores).

Stores: The amount of carbon in one or more pools (categories) at one point in time (synonym: stocks).

Timberland: Forested lands capable of producing at least 20 cubic feet of wood per acre at culmination of mean annual increment, and not reserved (i.e., where management for production of wood products is not precluded).

Working forests: Forests in which trees are harvested regularly.

Appendix 1: Forest carbon stock by forest type and region

Table D1: Aboveground Carbon, Dry Weight (Regional Biomass Method) of Live Trees Including Foliage (>= 1 inch) by Forest Type and Land Status, 2007-2016: All Oregon

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE		
	<i>thousand metric tons C</i>													
Softwoods:														
Douglas-fir	538,752	9,472	1,729	419	540,481	9,465	58,470	5,080	164	177	58,635	5,073	599,115	10,477
Fir / spruce / mountain hemlock	96,647	3,768	1,712	375	98,358	3,780	43,914	3,475	3,608	1,198	47,522	3,565	145,880	5,121
Western Hemlock / Sitka spruce	52,315	3,966	1	1	52,316	3,966	9,220	1,935	48	47	9,268	1,935	61,585	4,386
Lodgepole pine	24,335	1,110	634	190	24,969	1,123	5,954	917	714	288	6,668	956	31,636	1,462
Pinyon / juniper	4	3	15	7	19	8	--	--	--	--	--	--	19	8
Ponderosa pine	88,610	2,408	560	173	89,171	2,411	5,593	979	46	32	5,639	980	94,810	2,590
Redwood	54	51	--	--	54	51	--	--	--	--	--	--	54	51
Western juniper	2,536	284	7,575	467	10,112	541	157	106	157	64	314	124	10,425	552
Western larch	3,963	548	157	108	4,120	558	2,091	772	--	--	2,091	772	6,211	952
Western white pine	295	152	17	14	312	152	--	--	--	--	--	--	312	152
Other western softwoods	168	65	75	35	244	74	189	163	68	60	257	174	501	189
Total	807,679	9,389	12,476	781	820,155	9,371	125,587	5,402	4,805	1,237	130,393	5,345	950,548	10,021
Hardwoods:														
Alder / maple	36,891	2,838	440	197	37,331	2,844	1,021	455	10	10	1,030	455	38,362	2,875
Aspen / birch	368	184	172	64	540	194	--	--	--	--	--	--	540	194
Elm / ash / cottonwood	2,041	663	241	174	2,282	682	118	118	229	319	347	340	2,629	762
Tanoak / laurel	17,347	2,185	446	173	17,793	2,189	2,880	877	70	65	2,950	876	20,743	2,356
Western oak	7,851	1,288	5,818	1,094	13,669	1,684	418	418	244	146	662	443	14,331	1,740
Woodland hardwoods	102	64	113	61	215	89	--	--	--	--	--	--	215	89
Exotic hardwoods	3	3	--	--	3	3	--	--	--	--	--	--	3	3
Other hardwoods	9,001	1,436	1,176	510	10,177	1,516	117	82	8	8	124	83	10,301	1,518
Total	73,605	4,015	8,406	1,247	82,010	4,165	4,554	1,082	560	357	5,114	1,132	87,125	4,302
Nonstocked	1,050	169	13	7	1,063	169	461	230	--	--	461	230	1,525	285
All forest types	882,334	9,128	20,895	1,467	903,229	9,104	130,602	5,397	5,366	1,288	135,968	5,339	1,039,197	9,632

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D2: Aboveground Carbon, Dry Weight (Regional Biomass Method) of Live Trees Including Foliage (>= 1 inch) by Forest Type and Land Status, 2007-2016: Blue Mountains

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
	<i>thousand metric tons C</i>													
Softwoods:														
Douglas-fir	18,682	1,208	165	71	18,847	1,209	3,997	733	148	176	4,145	752	22,992	1,411
Fir / spruce / mountain hemlock	28,829	1,406	87	60	28,916	1,407	9,055	1,290	364	179	9,418	1,295	38,334	1,896
Western Hemlock / Sitka spruce	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lodgepole pine	6,623	567	--	--	6,623	567	2,189	600	--	--	2,189	600	8,812	824
Pinyon / juniper	4	3	--	--	4	3	--	--	--	--	--	--	4	3
Ponderosa pine	34,456	1,316	123	68	34,579	1,317	3,463	741	16	15	3,478	741	38,057	1,503
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western juniper	1,157	163	683	121	1,840	203	157	106	19	18	176	107	2,016	229
Western larch	3,823	530	157	108	3,980	540	2,091	772	--	--	2,091	772	6,071	941
Western white pine	10	12	--	--	10	12	--	--	--	--	--	--	10	12
Other western softwoods	44	27	57	30	101	40	--	--	68	60	68	60	169	72
Total	93,629	1,941	1,272	205	94,901	1,937	20,950	1,358	614	259	21,564	1,360	116,466	2,274
Hardwoods:														
Alder / maple	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aspen / birch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Elm / ash / cottonwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tanoak / laurel	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western oak	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Woodland hardwoods	56	50	26	19	82	54	--	--	--	--	--	--	82	54
Exotic hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	161	76	--	--	161	76	57	41	--	--	57	41	218	86
Total	217	91	26	19	243	93	57	41	--	--	57	41	300	102
Nonstocked	314	57	3	2	317	57	114	54	--	--	114	54	430	79
All forest types	94,160	1,940	1,301	206	95,461	1,937	21,121	1,358	614	259	21,735	1,360	117,196	2,274

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D3: Aboveground Carbon, Dry Weight (Regional Biomass Method) of Live Trees Including Foliage (>= 1 inch) by Forest Type and Land Status, 2007-2016: East Cascades+Modoc

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total			
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
Softwoods:														
Douglas-fir	8,208	1,294	--	--	8,208	1,294	1,180	467	--	--	1,180	467	9,388	1,373
Fir / spruce / mountain hemlock	19,290	1,951	97	63	19,387	1,952	1,825	753	149	117	1,974	762	21,361	2,122
Western Hemlock / Sitka spruce	699	646	--	--	699	646	--	--	--	--	--	--	699	646
Lodgepole pine	14,816	871	430	142	15,246	879	1,162	298	215	141	1,377	328	16,623	933
Pinyon / juniper	--	--	6	3	6	3	--	--	--	--	--	--	6	3
Ponderosa pine	39,047	1,390	148	88	39,195	1,391	904	341	--	--	904	341	40,099	1,424
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western juniper	904	184	1,269	247	2,173	303	--	--	--	--	--	--	2,173	303
Western larch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western white pine	112	113	--	--	112	113	--	--	--	--	--	--	112	113
Other western softwoods	50	33	17	17	67	37	148	159	--	--	148	159	215	164
Total	83,126	2,714	1,966	304	85,092	2,718	5,219	991	364	183	5,583	1,001	90,675	2,884
Hardwoods:														
Alder / maple	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aspen / birch	119	58	79	38	198	69	--	--	--	--	--	--	198	69
Elm / ash / cottonwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tanoak / laurel	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western oak	337	186	1,054	285	1,390	341	--	--	184	136	184	136	1,575	367
Woodland hardwoods	46	40	23	22	69	46	--	--	--	--	--	--	69	46
Exotic hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	95	38	35	31	131	48	--	--	--	--	--	--	131	48
Total	597	203	1,191	290	1,787	356	--	--	184	136	184	136	1,972	381
Nonstocked	262	44	--	--	262	44	117	135	--	--	117	135	379	142
All forest types	83,985	2,716	3,157	419	87,141	2,731	5,336	1,004	548	228	5,885	1,022	93,026	2,903

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D4: Aboveground Carbon, Dry Weight (Regional Biomass Method) of Live Trees Including Foliage (>= 1 inch) by Forest Type and Land Status, 2007-2016: Eastern OR Lowlands

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
Softwoods:														
Douglas-fir	744	226	--	--	744	226	9	10	--	--	9	10	753	227
Fir / spruce / mountain hemlock	22	19	--	--	22	19	--	--	--	--	--	--	22	19
Western Hemlock / Sitka spruce	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lodgepole pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pinyon / juniper	--	--	10	7	10	7	--	--	--	--	--	--	10	7
Ponderosa pine	3,947	580	24	18	3,971	580	40	37	--	--	40	37	4,011	581
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western juniper	475	144	5,614	383	6,089	408	--	--	138	62	138	62	6,227	411
Western larch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western white pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other western softwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	5,188	638	5,647	384	10,835	737	50	39	138	62	187	73	11,023	739
Hardwoods:														
Alder / maple	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aspen / birch	249	174	93	51	342	181	--	--	--	--	--	--	342	181
Elm / ash / cottonwood	41	41	--	--	41	41	--	--	--	--	--	--	41	41
Tanoak / laurel	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western oak	7	7	299	176	306	177	--	--	--	--	--	--	306	177
Woodland hardwoods	--	--	64	54	64	54	--	--	--	--	--	--	64	54
Exotic hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	--	--	140	126	140	126	--	--	--	--	--	--	140	126
Total	297	179	597	229	894	291	--	--	--	--	--	--	894	291
Nonstocked	29	14	11	7	40	15	--	--	--	--	--	--	40	15
All forest types	5,514	673	6,255	445	11,769	797	50	39	138	62	187	73	11,956	800

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D5: Aboveground Carbon, Dry Weight (Regional Biomass Method) of Live Trees Including Foliage (>= 1 inch) by Forest Type and Land Status, 2007-2016: Klamath Mountains

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
Softwoods:														
Douglas-fir	74,855	4,638	515	211	75,370	4,640	7,998	2,057	--	--	7,998	2,057	83,368	5,060
Fir / spruce / mountain hemlock	4,035	757	26	26	4,060	758	--	--	--	--	--	--	4,060	758
Western Hemlock / Sitka spruce	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lodgepole pine	35	36	--	--	35	36	--	--	9	11	9	11	44	37
Pinyon / juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ponderosa pine	6,687	1,272	266	132	6,952	1,279	572	407	--	--	572	407	7,524	1,340
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western larch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western white pine	146	97	17	14	164	98	--	--	--	--	--	--	164	98
Other western softwoods	9	9	--	--	9	9	--	--	--	--	--	--	9	9
Total	85,767	4,802	823	250	86,590	4,805	8,570	2,097	9	11	8,579	2,097	95,169	5,216
Hardwoods:														
Alder / maple	1,067	417	66	61	1,133	421	324	207	--	--	324	207	1,457	470
Aspen / birch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Elm / ash / cottonwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tanoak / laurel	11,081	1,786	414	170	11,495	1,792	1,813	735	70	65	1,883	735	13,378	1,936
Western oak	6,011	1,103	1,835	362	7,846	1,159	418	418	60	54	478	421	8,324	1,232
Woodland hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Exotic hardwoods	3	3	--	--	3	3	--	--	--	--	--	--	3	3
Other hardwoods	7,984	1,405	994	493	8,978	1,481	--	--	8	8	8	8	8,986	1,481
Total	26,146	2,510	3,309	637	29,455	2,571	2,555	870	138	85	2,692	869	32,147	2,708
Nonstocked	87	51	--	--	87	51	--	--	--	--	--	--	87	51
All forest types	111,999	5,210	4,132	689	116,132	5,225	11,125	2,177	146	86	11,271	2,167	127,403	5,607

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D6: Aboveground Carbon, Dry Weight (Regional Biomass Method) of Live Trees Including Foliage (>= 1 inch) by Forest Type and Land Status, 2007-2016: Oregon Coast Range

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
	<i>thousand metric tons C</i>													
Softwoods:														
Douglas-fir	195,177	7,749	133	112	195,310	7,748	4,967	2,105	17	19	4,984	2,105	200,294	8,001
Fir / spruce / mountain hemlock	1,183	687	--	--	1,183	687	--	--	--	--	--	--	1,183	687
Western Hemlock / Sitka spruce	24,366	2,875	--	--	24,366	2,875	2,330	1,108	48	47	2,378	1,109	26,743	3,082
Lodgepole pine	292	154	95	113	386	191	164	147	89	52	254	155	640	245
Pinyon / juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ponderosa pine	9	9	--	--	9	9	--	--	--	--	--	--	9	9
Redwood	54	51	--	--	54	51	--	--	--	--	--	--	54	51
Western juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western larch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western white pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other western softwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	221,080	7,987	228	159	221,308	7,987	7,461	2,382	154	72	7,615	2,383	228,923	8,259
Hardwoods:														
Alder / maple	28,376	2,591	210	148	28,586	2,593	326	258	--	--	326	258	28,912	2,602
Aspen / birch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Elm / ash / cottonwood	3	3	181	165	184	165	--	--	--	--	--	--	184	165
Tanoak / laurel	5,990	1,280	32	33	6,022	1,281	1,067	540	--	--	1,067	540	7,089	1,390
Western oak	--	--	317	317	317	317	--	--	--	--	--	--	317	317
Woodland hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Exotic hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	161	104	--	--	161	104	--	--	--	--	--	--	161	104
Total	34,529	2,878	739	388	35,269	2,902	1,393	599	--	--	1,393	599	36,661	2,959
Nonstocked	244	137	--	--	244	137	--	--	--	--	--	--	244	137
All forest types	255,854	8,165	967	419	256,821	8,173	8,854	2,458	154	72	9,008	2,459	265,828	8,437

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D7: Aboveground Carbon, Dry Weight (Regional Biomass Method) of Live Trees Including Foliage (>= 1 inch) by Forest Type and Land Status, 2007-2016: Western Cascades

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
	<i>thousand metric tons C</i>													
Softwoods:														
Douglas-fir	215,064	6,238	916	337	215,980	6,231	40,318	4,106	--	--	40,318	4,106	256,298	7,329
Fir / spruce / mountain hemlock	42,648	2,752	1,503	364	44,151	2,773	32,720	3,228	3,095	1,179	35,816	3,335	79,966	4,275
Western Hemlock / Sitka spruce	25,808	2,568	1	1	25,808	2,568	6,891	1,586	--	--	6,891	1,586	32,699	2,981
Lodgepole pine	2,547	380	110	57	2,657	383	2,439	613	401	245	2,840	657	5,497	759
Pinyon / juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ponderosa pine	4,315	719	--	--	4,315	719	615	356	30	28	645	357	4,960	802
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western juniper	--	--	9	9	9	9	--	--	--	--	--	--	9	9
Western larch	140	140	--	--	140	140	--	--	--	--	--	--	140	140
Western white pine	26	26	--	--	26	26	--	--	--	--	--	--	26	26
Other western softwoods	66	49	1	1	67	49	41	36	--	--	41	36	108	61
Total	290,614	6,676	2,539	498	293,153	6,666	83,023	4,568	3,527	1,194	86,550	4,533	379,703	7,666
Hardwoods:														
Alder / maple	3,809	829	45	38	3,854	831	358	311	10	10	367	312	4,222	887
Aspen / birch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Elm / ash / cottonwood	429	201	--	--	429	201	118	118	--	--	118	118	547	233
Tanoak / laurel	276	116	--	--	276	116	--	--	--	--	--	--	276	116
Western oak	344	263	279	135	623	295	--	--	--	--	--	--	623	295
Woodland hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Exotic hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	487	257	6	6	493	257	60	71	--	--	60	71	553	267
Total	5,345	934	331	140	5,676	945	536	340	10	10	545	341	6,221	1,004
Nonstocked	105	42	--	--	105	42	230	177	--	--	230	177	336	182
All forest types	296,064	6,724	2,870	517	298,934	6,714	83,790	4,578	3,537	1,194	87,326	4,543	386,260	7,709

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D8: Aboveground Carbon, Dry Weight (Regional Biomass Method) of Live Trees Including Foliage (>= 1 inch) by Forest Type and Land Status, 2007-2016: Willamette Valley

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
	<i>thousand metric tons C</i>													
Softwoods:														
Douglas-fir	26,022	3,041	--	--	26,022	3,041	--	--	--	--	--	--	26,022	3,041
Fir / spruce / mountain hemlock	640	616	--	--	640	616	313	313	--	--	313	313	954	690
Western Hemlock / Sitka spruce	1,443	839	--	--	1,443	839	--	--	--	--	--	--	1,443	839
Lodgepole pine	22	21	--	--	22	21	--	--	--	--	--	--	22	21
Pinyon / juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ponderosa pine	150	155	--	--	150	155	--	--	--	--	--	--	150	155
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western larch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western white pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other western softwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	28,277	3,212	--	--	28,277	3,212	313	313	--	--	313	313	28,591	3,225
Hardwoods:														
Alder / maple	3,640	861	118	108	3,758	868	14	19	--	--	14	19	3,772	868
Aspen / birch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Elm / ash / cottonwood	1,568	631	61	55	1,629	633	--	--	229	319	229	319	1,857	709
Tanoak / laurel	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western oak	1,152	591	2,034	916	3,186	1,091	--	--	--	--	--	--	3,186	1,091
Woodland hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Exotic hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	113	81	--	--	113	81	--	--	--	--	--	--	113	81
Total	6,473	1,217	2,213	924	8,686	1,515	14	19	229	319	242	318	8,928	1,540
Nonstocked	8	5	--	--	8	5	--	--	--	--	--	--	8	5
All forest types	34,758	3,430	2,213	924	36,971	3,532	327	313	229	319	556	446	37,527	3,553

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D9: Aboveground Carbon, Dry Weight (Regional Biomass Method) of Dead Trees (>= 5 inch) by Forest Type and Forest Land Status, 2007-2016: All Oregon

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
	<i>thousand metric tons C</i>													
Softwoods:														
Douglas-fir	28,818	955	248	65	29,066	956	4,999	635	17	19	5,016	635	34,082	1,133
Fir / spruce / mountain hemlock	10,347	491	297	78	10,643	496	7,084	668	604	205	7,689	679	18,332	837
Western Hemlock / Sitka spruce	3,922	387	--	--	3,922	387	1,137	313	--	--	1,137	313	5,059	495
Lodgepole pine	2,305	205	58	32	2,363	208	1,181	233	99	46	1,280	237	3,643	314
Pinyon / juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ponderosa pine	4,790	304	44	14	4,834	304	382	102	146	133	529	168	5,363	347
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western juniper	127	26	229	42	357	49	52	40	6	3	58	40	415	63
Western larch	386	88	32	22	419	91	511	220	--	--	511	220	930	238
Western white pine	79	40	3	2	81	40	--	--	--	--	--	--	81	40
Other western softwoods	91	47	67	34	158	58	23	26	1	1	24	26	182	63
Total	50,865	1,122	978	123	51,843	1,125	15,371	908	873	241	16,244	911	68,087	1,405
Hardwoods:														
Alder / maple	1,496	204	8	6	1,503	204	54	26			54	26	1,558	205
Aspen / birch	9	4	10	4	19	6	--	--	--	--	--	--	19	6
Elm / ash / cottonwood	27	11	2	1	29	11	21	21	1	2	22	21	51	24
Tanoak / laurel	1,707	303	320	150	2,027	338	422	122	104	77	527	139	2,554	365
Western oak	546	108	325	93	871	141	259	169	154	134	414	214	1,285	257
Woodland hardwoods	30	27	8	4	38	27	--	--	--	--	--	--	38	27
Exotic hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	687	173	136	67	823	185	42	33	--	--	42	33	865	188
Total	4,503	416	808	189	5,311	455	799	209	260	155	1,059	246	6,370	517
Nonstocked	2,540	409	122	39	2,662	410	1,973	554	4	4	1,977	554	4,639	689
All forest types	57,908	1,227	1,908	231	59,816	1,239	18,143	1,032	1,137	287	19,280	1,019	79,096	1,558

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D10: Aboveground Carbon, Dry Weight (Regional Biomass Method) of Dead Trees (>= 5 inch) by Forest Type and Forest Land Status, 2007-2016: Blue Mountains

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
	<i>thousand metric tons C</i>													
Softwoods:														
Douglas-fir	1,335	136	37	23	1,372	138	541	152	16	19	557	153	1,929	205
Fir / spruce / mountain hemlock	3,301	211	50	34	3,351	213	1,686	317	105	67	1,792	321	5,143	384
Western Hemlock / Sitka spruce	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lodgepole pine	668	98	--	--	668	98	384	111	--	--	384	111	1,052	148
Pinyon / juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ponderosa pine	1,852	140	11	6	1,862	140	281	96	2	2	283	96	2,146	169
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western juniper	97	24	19	6	116	25	52	40	--	--	52	40	168	47
Western larch	341	76	32	22	373	79	511	220	--	--	511	220	884	234
Western white pine	3	4	--	--	3	4	--	--	--	--	--	--	3	4
Other western softwoods	21	19	29	23	50	30	--	--	1	1	1	1	51	30
Total	7,619	282	178	55	7,796	285	3,455	402	125	70	3,580	405	11,376	490
Hardwoods:														
Alder / maple	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aspen / birch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Elm / ash / cottonwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tanoak / laurel	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western oak	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Woodland hardwoods	26	27	3	4	29	27	--	--	--	--	--	--	29	27
Exotic hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	24	13	--	--	24	13	41	33	--	--	41	33	65	35
Total	50	30	3	4	53	30	41	33	--	--	41	33	94	45
Nonstocked	666	152	--	--	666	152	693	302	4	4	697	302	1,362	338
All forest types	8,334	317	181	55	8,515	320	4,189	489	129	70	4,318	491	12,833	581

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D11: Aboveground Carbon, Dry Weight (Regional Biomass Method) of Dead Trees (>= 5 inch) by Forest Type and Forest Land Status, 2007-2016: East Cascades+Modoc

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
	<i>thousand metric tons C</i>													
Softwoods:														
Douglas-fir	462	137	--	--	462	137	63	29	--	--	63	29	525	140
Fir / spruce / mountain hemlock	1,753	178	1	1	1,754	178	405	195	9	6	415	195	2,169	270
Western Hemlock / Sitka spruce	82	81	--	--	82	81	--	--	--	--	--	--	82	81
Lodgepole pine	1,130	142	19	8	1,149	142	192	76	22	14	214	77	1,363	161
Pinyon / juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ponderosa pine	1,890	164	14	9	1,904	164	55	27	--	--	55	27	1,958	166
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western juniper	27	8	36	19	63	20	--	--	--	--	--	--	63	20
Western larch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western white pine	28	28	--	--	28	28	--	--	--	--	--	--	28	28
Other western softwoods	21	21	29	23	50	31	23	26	--	--	23	26	73	41
Total	5,393	308	99	32	5,492	310	739	208	31	16	770	208	6,262	374
Hardwoods:														
Alder / maple	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aspen / birch	3	2	5	2	8	3	--	--	--	--	--	--	8	3
Elm / ash / cottonwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tanoak / laurel	36	29	--	--	36	29	--	--	--	--	--	--	36	29
Western oak	3	2	20	9	24	9	--	--	6	5	6	5	29	11
Woodland hardwoods	4	3	3	2	7	4	--	--	--	--	--	--	7	4
Exotic hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	13	11	--	--	13	11	--	--	--	--	--	--	13	11
Total	60	32	28	10	88	33	--	--	6	5	6	5	94	33
Nonstocked	971	259	10	9	981	259	113	131	--	--	113	131	1,094	290
All forest types	6,425	400	137	35	6,562	401	852	246	36	16	888	247	7,450	472

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D12: Aboveground Carbon, Dry Weight (Regional Biomass Method) of Dead Trees (>= 5 inch) by Forest Type and Forest Land Status, 2007-2016: Eastern OR Lowlands

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
Softwoods:														
Douglas-fir	84	40	--	--	84	40	--	--	--	--	--	--	84	40
Fir / spruce / mountain hemlock	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western Hemlock / Sitka spruce	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lodgepole pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pinyon / juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ponderosa pine	166	82	4	4	170	82	3	3	--	--	3	3	173	82
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western juniper	3	3	174	36	177	37	--	--	6	3	6	3	183	37
Western larch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western white pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other western softwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	253	91	178	37	431	98	3	3	6	3	9	5	439	98
Hardwoods:														
Alder / maple	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aspen / birch	6	4	5	4	11	5	--	--	--	--	--	--	11	5
Elm / ash / cottonwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tanoak / laurel	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western oak	--	--	31	25	31	25	--	--	--	--	--	--	31	25
Woodland hardwoods	--	--	1	1	1	1	--	--	--	--	--	--	1	1
Exotic hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	6	4	38	25	43	25	--	--	--	--	--	--	43	25
Nonstocked	15	8	103	37	119	38	--	--	--	--	--	--	119	38
All forest types	274	92	319	58	592	108	3	3	6	3	9	5	601	108

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D13: Aboveground Carbon, Dry Weight (Regional Biomass Method) of Dead Trees (>= 5 inch) by Forest Type and Forest Land Status, 2007-2016: Klamath Mountains

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
	<i>thousand metric tons C</i>													
Softwoods:														
Douglas-fir	4,992	485	113	42	5,105	486	347	119	--	--	347	119	5,452	500
Fir / spruce / mountain hemlock	503	117	--	--	503	117	--	--	--	--	--	--	503	117
Western Hemlock / Sitka spruce	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lodgepole pine	3	3	--	--	3	3	--	--	9	10	9	10	11	11
Pinyon / juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ponderosa pine	440	105	15	9	456	105	20	14	--	--	20	14	476	106
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western larch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western white pine	41	28	3	2	44	28	--	--	--	--	--	--	44	28
Other western softwoods	47	37	9	10	56	38	--	--	--	--	--	--	56	38
Total	6,026	508	141	44	6,167	509	367	120	9	10	375	120	6,542	522
Hardwoods:														
Alder / maple	58	38	--	--	58	38	12	6	--	--	12	6	70	39
Aspen / birch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Elm / ash / cottonwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tanoak / laurel	1,394	293	313	150	1,707	329	405	122	104	77	509	140	2,217	357
Western oak	476	103	222	84	698	132	259	169	149	134	408	214	1,106	252
Woodland hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Exotic hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	592	170	96	55	689	179	--	--	--	--	--	--	689	179
Total	2,520	354	632	180	3,152	395	677	204	253	155	930	242	4,082	463
Nonstocked	285	207	6	6	291	208	51	46	--	--	51	46	343	213
All forest types	8,832	637	778	189	9,610	660	1,095	264	261	155	1,356	290	10,966	719

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D14: Aboveground Carbon, Dry Weight (Regional Biomass Method) of Dead Trees (>= 5 inch) by Forest Type and Forest Land Status, 2007-2016: Oregon Coast Range

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
Softwoods:														
Douglas-fir	7,965	560	4	4	7,969	560	246	138	1	1	246	138	8,215	576
Fir / spruce / mountain hemlock	5	4	--	--	5	4	--	--	--	--	--	--	5	4
Western Hemlock / Sitka spruce	1,413	241	--	--	1,413	241	157	84	--	--	157	84	1,570	255
Lodgepole pine	20	19	5	6	25	20	1	1	1	1	1	1	26	20
Pinyon / juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ponderosa pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western larch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western white pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other western softwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	9,403	600	9	7	9,412	600	403	161	1	1	405	161	9,816	618
Hardwoods:														
Alder / maple	1,195	194	8	6	1,203	194	6	5	--	--	6	5	1,209	194
Aspen / birch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Elm / ash / cottonwood	--	--	2	1	2	1	--	--	--	--	--	--	2	1
Tanoak / laurel	250	73	6	7	256	73	17	11	--	--	17	11	274	74
Western oak	--	--	28	28	28	28	--	--	--	--	--	--	28	28
Woodland hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Exotic hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	14	11	--	--	14	11	--	--	--	--	--	--	14	11
Total	1,459	207	43	29	1,502	209	24	13	--	--	24	13	1,526	209
Nonstocked	21	8	--	--	21	8	--	--	--	--	--	--	21	8
All forest types	10,883	625	52	30	10,935	625	427	162	1	1	428	162	11,364	642

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D15: Aboveground Carbon, Dry Weight (Regional Biomass Method) of Dead Trees (>= 5 inch) by Forest Type and Forest Land Status, 2007-2016: Western Cascades

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
	<i>thousand metric tons C</i>													
Softwoods:														
Douglas-fir	13,590	638	94	44	13,684	639	3,803	593	--	--	3,803	593	17,487	863
Fir / spruce / mountain hemlock	4,772	395	245	70	5,017	401	4,993	576	490	193	5,482	588	10,499	707
Western Hemlock / Sitka spruce	2,375	291	--	--	2,375	291	981	302	--	--	981	302	3,356	417
Lodgepole pine	485	110	34	31	519	115	604	191	68	42	672	195	1,191	226
Pinyon / juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ponderosa pine	432	170	--	--	432	170	24	20	144	133	168	134	600	216
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western larch	45	45	--	--	45	45	--	--	--	--	--	--	45	45
Western white pine	6	4	--	--	6	4	--	--	--	--	--	--	6	4
Other western softwoods	1	1			1	1	--	--	--	--	--	--	1	1
Total	21,706	777	374	88	22,080	779	10,404	813	702	230	11,106	818	33,185	1,105
Hardwoods:														
Alder / maple	140	41			140	41	35	24			36	24	176	48
Aspen / birch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Elm / ash / cottonwood	11	6	--	--	11	6	21	21	--	--	21	21	32	22
Tanoak / laurel	28	20	--	--	28	20	--	--	--	--	--	--	28	20
Western oak	20	11	5	4	25	12	--	--	--	--	--	--	25	12
Woodland hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Exotic hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	16	8	40	38	56	39			--	--			56	39
Total	214	48	45	38	260	61	57	32			57	32	317	69
Nonstocked	581	186	3	3	584	186	1,116	447	--	--	1,116	447	1,700	484
All forest types	22,502	796	422	96	22,924	799	11,577	902	702	230	12,279	889	35,203	1,171

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D16: Aboveground Carbon, Dry Weight (Regional Biomass Method) of Dead Trees (>= 5 inch) by Forest Type and Forest Land Status, 2007-2016: Willamette Valley

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE		
	<i>thousand metric tons C</i>													
Softwoods:														
Douglas-fir	390	65	--	--	390	65	--	--	--	--	--	--	390	65
Fir / spruce / mountain hemlock	13	13	--	--	13	13	--	--	--	--	--	--	13	13
Western Hemlock / Sitka spruce	52	31	--	--	52	31	--	--	--	--	--	--	52	31
Lodgepole pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pinyon / juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ponderosa pine	10	11	--	--	10	11	--	--	--	--	--	--	10	11
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western larch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western white pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other western softwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	466	73	--	--	466	73	--	--	--	--	--	--	466	73
Hardwoods:														
Alder / maple	102	39	--	--	102	39	--	--	--	--	--	--	102	39
Aspen / birch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Elm / ash / cottonwood	17	9	--	--	17	9	--	--	1	2	1	2	18	9
Tanoak / laurel	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western oak	47	28	19	16	66	33	--	--	--	--	--	--	66	33
Woodland hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Exotic hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	28	24	--	--	28	24	--	--	--	--	--	--	28	24
Total	194	54	19	16	213	57	--	--	1	2	1	2	214	57
Nonstocked	--	--	--	--	--	--	--	--	--	--	--	--	--	--
All forest types	659	91	19	16	678	93	--	--	1	2	1	2	680	93

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D17: Aboveground Carbon, Dry Weight of Live Understory Vegetation, by Forest Type and Forest Land Status, 2007-2016: All Oregon

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total			
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
Softwoods:														
Douglas-fir	12,763.5740	199.0830	83.1636	16.9183	12,846.7376	199.3861	822.1217	58.5379	8.7252	8.1799	830.8469	58.4812	13,677.5845	204.9607
Fir / spruce / mountain hemlock	2,326.3648	78.6959	71.0393	15.2231	2,397.4041	79.8681	812.4123	53.7061	98.7842	25.9974	911.1965	56.2850	3,308.6006	96.8778
Western Hemlock / Sitka spruce	851.5327	63.5436	1.0988	1.0713	852.6315	63.5517	88.2605	18.0310	3.7411	2.9524	92.0016	18.2711	944.6330	65.8839
Lodgepole pine	1,427.8918	58.8751	50.4257	14.7062	1,478.3175	60.2756	228.9509	32.3151	49.8044	20.0682	278.7553	37.5617	1,757.0729	70.4584
Pinyon / juniper	0.5589	0.4484	24.9295	10.5248	25.4884	10.5344	--	--	--	--	--	--	25.4884	10.5344
Ponderosa pine	4,618.2560	105.6171	73.1867	15.9766	4,691.4427	106.1149	146.8347	22.9221	11.3618	9.0772	158.1965	24.6522	4,849.6392	108.5798
Redwood	8.4405	7.9545	--	--	8.4405	7.9545	--	--	--	--	--	--	8.4405	7.9545
Western juniper	346.8724	35.0689	2,853.9381	136.3954	3,200.8104	140.0582	17.9660	10.8677	64.0799	22.3343	82.0460	24.8380	3,282.8564	140.8843
Western larch	201.1608	25.5035	4.5478	3.1635	205.7085	25.6758	76.1083	24.2814	--	--	76.1083	24.2814	281.8168	35.3150
Western white pine	14.8644	4.8076	4.1724	3.2422	19.0368	5.7694	--	--	--	--	--	--	19.0368	5.7694
Other western softwoods	13.0798	4.6968	19.8094	7.3509	32.8892	8.7004	6.5440	5.0832	23.1716	14.4866	29.7155	15.3525	62.6047	17.6464
Total	22,572.5960	193.8474	3,186.3114	140.2726	25,758.9074	224.0634	2,199.1985	67.9487	259.6681	43.2266	2,458.8666	73.2467	28,217.7740	225.6902
Hardwoods:														
Alder / maple	1,148.1044	74.4653	18.7252	7.3843	1,166.8296	74.7732	27.9619	9.6765	0.6134	0.6234	28.5753	9.6966	1,195.4048	75.2918
Aspen / birch	45.0094	18.4919	47.0188	19.7629	92.0282	27.0633	--	--	--	--	--	--	92.0282	27.0633
Elm / ash / cottonwood	111.6299	29.4234	23.3824	11.9944	135.0123	31.6958	2.3792	2.3719	3.4764	4.2499	5.8556	4.8670	140.8679	32.0673
Tanoak / laurel	560.2741	52.2757	66.6666	16.4331	626.9407	54.4747	167.6504	32.7634	20.4082	15.1705	188.0585	34.7789	814.9992	64.5620
Western oak	393.8244	50.3152	566.1879	65.5802	960.0123	81.8578	30.1150	16.9811	28.1875	16.0556	58.3025	23.0215	1,018.3148	84.8296
Woodland hardwoods	34.2497	17.8329	37.0709	15.5430	71.3205	23.6404	--	--	--	--	--	--	71.3205	23.6404
Exotic hardwoods	0.1701	0.1722	--	--	0.1701	0.1722	--	--	--	--	--	--	0.1701	0.1722
Other hardwoods	450.1245	53.2772	93.0508	26.8735	543.1753	59.3160	27.9934	16.6078	0.5975	0.6048	28.5909	16.6188	571.7662	61.5995
Total	2,743.3865	118.9353	852.1025	77.6567	3,595.4890	139.3165	256.0999	39.6235	53.2829	22.5109	309.3828	42.8144	3,904.8718	145.3595
Nonstocked	1,404.8043	90.0616	209.1864	42.1713	1,613.9907	99.2926	206.1614	40.8418	4.9984	3.4387	211.1598	40.9827	1,825.1505	107.3698
All forest types	26,720.7868	181.8770	4,247.6002	161.7993	30,968.3870	211.6884	2,661.4598	72.8779	317.9495	48.3432	2,979.4092	74.7832	33,947.7963	209.6474

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D18: Aboveground Carbon, Dry Weight of Live Understory Vegetation, by Forest Type and Forest Land Status, 2007-2016: Blue Mountains

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
Softwoods:														
Douglas-fir	1,078.5361	64.7042	19.0428	6.9454	1,097.5788	65.0039	180.1592	28.8068	6.5797	7.8239	186.7389	29.7272	1,284.3177	70.9120
Fir / spruce / mountain hemlock	950.9259	46.3331	7.5582	4.0404	958.4840	46.4762	261.8147	31.6187	29.5276	13.7876	291.3423	32.8576	1,249.8263	56.6205
Western Hemlock / Sitka spruce	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lodgepole pine	346.3805	27.0011	--	--	346.3805	27.0011	94.3109	22.7876	--	--	94.3109	22.7876	440.6914	35.2861
Pinyon / juniper	0.5589	0.4484	2.2483	1.1134	2.8071	1.2003	--	--	--	--	--	--	2.8071	1.2003
Ponderosa pine	1,957.7491	70.5710	24.7883	8.2600	1,982.5375	70.8264	99.5330	20.0016	1.6179	1.5470	101.1509	20.0591	2,083.6883	73.3837
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western juniper	152.7742	19.1026	152.8192	23.7045	305.5933	30.0851	17.9660	10.8677	2.3686	2.2012	20.3347	11.0884	325.9280	32.0227
Western larch	199.8671	25.4869	4.5478	3.1635	204.4149	25.6593	76.1083	24.2814	--	--	76.1083	24.2814	280.5232	35.3030
Western white pine	1.2790	1.4989	--	--	1.2790	1.4989	--	--	--	--	--	--	1.2790	1.4989
Other western softwoods	5.3594	3.0595	7.5925	3.7409	12.9519	4.7992	--	--	8.6442	7.6348	8.6442	7.6348	21.5961	9.0179
Total	4,693.4301	96.4468	218.5970	26.7621	4,912.0271	98.2278	729.8921	41.8993	48.7380	17.8000	778.6302	42.6810	5,690.6573	104.5716
Hardwoods:														
Alder / maple	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aspen / birch	0.4332	0.5470	0.6056	0.6118	1.0388	0.8207	--	--	--	--	--	--	1.0388	0.8207
Elm / ash / cottonwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tanoak / laurel	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western oak	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Woodland hardwoods	12.9246	9.6847	7.7038	4.4609	20.6285	10.6627	--	--	--	--	--	--	20.6285	10.6627
Exotic hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	32.2935	12.0699	1.1836	1.2755	33.4771	12.1371	22.8749	15.5716	--	--	22.8749	15.5716	56.3520	19.7430
Total	45.6513	15.4846	9.4930	4.6799	55.1443	16.1763	22.8749	15.5716	--	--	22.8749	15.5716	78.0192	22.4506
Nonstocked	394.4965	42.7475	17.6200	11.3663	412.1165	44.1673	101.9465	26.5720	1.6420	1.7873	103.5885	26.6299	515.7050	51.5035
All forest types	5,133.5780	103.7062	245.7100	29.3639	5,379.2880	105.6370	854.7136	48.8252	50.3800	17.8895	905.0936	49.3166	6,284.3815	113.7268

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D19: Aboveground Carbon, Dry Weight of Live Understory Vegetation, by Forest Type and Forest Land Status, 2007-2016: East Cascades+Modoc

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE		
	<i>thousand metric tons C</i>													
Softwoods:														
Douglas-fir	325.9296	44.7281	--	--	325.9296	44.7281	29.1507	12.1171	--	--	29.1507	12.1171	355.0803	46.2882
Fir / spruce / mountain hemlock	520.6467	42.1350	4.1315	2.5410	524.7782	42.2026	30.5908	11.8070	3.4443	2.3750	34.0350	12.0435	558.8132	43.9595
Western Hemlock / Sitka spruce	5.1401	4.6441	--	--	5.1401	4.6441	--	--	--	--	--	--	5.1401	4.6441
Lodgepole pine	968.2564	50.4413	32.5333	11.8605	1,000.7897	51.4586	46.5530	10.5310	10.8154	7.4547	57.3684	12.8070	1,058.1581	52.7512
Pinyon / juniper	--	--	8.3937	6.4206	8.3937	6.4206	--	--	--	--	--	--	8.3937	6.4206
Ponderosa pine	2,066.4668	71.7912	19.5127	8.5900	2,085.9794	72.0972	23.9320	6.5076	--	--	23.9320	6.5076	2,109.9115	72.1984
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western juniper	113.5664	21.2227	313.6200	46.0614	427.1865	50.1601	--	--	--	--	--	--	427.1865	50.1601
Western larch	0.5238	0.5222	--	--	0.5238	0.5222	--	--	--	--	--	--	0.5238	0.5222
Western white pine	2.7046	1.9437	--	--	2.7046	1.9437	--	--	--	--	--	--	2.7046	1.9437
Other western softwoods	2.8768	2.3248	2.1481	1.9582	5.0250	3.0396	4.3915	4.6989	--	--	4.3915	4.6989	9.4164	5.5963
Total	4,006.1111	93.7688	380.3392	48.7836	4,386.4504	102.9007	134.6180	21.1145	14.2596	7.8239	148.8776	22.2571	4,535.3280	104.4238
Hardwoods:														
Alder / maple	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aspen / birch	30.7423	15.9300	8.9509	4.1489	39.6932	16.4614	--	--	--	--	--	--	39.6932	16.4614
Elm / ash / cottonwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tanoak / laurel	7.9182	5.1385	--	--	7.9182	5.1385	--	--	--	--	--	--	7.9182	5.1385
Western oak	33.8960	14.1769	175.5157	39.2770	209.4117	41.7383	--	--	15.9761	11.6731	15.9761	11.6731	225.3878	43.3399
Woodland hardwoods	21.3250	14.9740	12.7154	10.8448	34.0404	18.4789	--	--	--	--	--	--	34.0404	18.4789
Exotic hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	51.0032	18.8457	17.1989	12.0616	68.2020	22.3628	--	--	--	--	--	--	68.2020	22.3628
Total	144.8847	32.5004	214.3808	42.4454	359.2655	53.6929	--	--	15.9761	11.6731	15.9761	11.6731	375.2415	54.9471
Nonstocked	445.4056	49.7017	14.9099	11.0116	460.3155	50.8591	6.8270	7.9038	--	--	6.8270	7.9038	467.1425	51.4696
All forest types	4,596.4014	105.1172	609.6300	65.3186	5,206.0314	118.9883	141.4450	22.9381	30.2357	14.0526	171.6807	26.6828	5,377.7121	121.0740

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D20: Aboveground Carbon, Dry Weight of Live Understory Vegetation, by Forest Type and Forest Land Status, 2007-2016: Eastern OR Lowlands

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
	<i>thousand metric tons C</i>													
Softwoods:														
Douglas-fir	48.1134	15.4009	--	--	48.1134	15.4009	1.6624	1.8193	--	--	1.6624	1.8193	49.7758	15.5080
Fir / spruce / mountain hemlock	3.6919	3.2851	--	--	3.6919	3.2851	--	--	--	--	--	--	3.6919	3.2851
Western Hemlock / Sitka spruce	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lodgepole pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pinyon / juniper	--	--	14.2876	8.2667	14.2876	8.2667	--	--	--	--	--	--	14.2876	8.2667
Ponderosa pine	316.4760	40.0737	10.4812	6.3010	326.9571	40.5420	1.6663	1.2454	--	--	1.6663	1.2454	328.6234	40.5571
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western juniper	80.5318	20.6146	2,379.9456	127.8282	2,460.4773	129.2939	--	--	61.7113	22.2256	61.7113	22.2256	2,522.1886	129.8873
Western larch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western white pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other western softwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	448.8131	47.5045	2,404.7144	128.1994	2,853.5274	135.6257	3.3287	2.2047	61.7113	22.2256	65.0400	22.3347	2,918.5674	136.1925
Hardwoods:														
Alder / maple	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aspen / birch	13.8339	9.3748	37.4623	19.3129	51.2963	21.4681	--	--	--	--	--	--	51.2963	21.4681
Elm / ash / cottonwood	11.7248	10.7845	--	--	11.7248	10.7845	--	--	--	--	--	--	11.7248	10.7845
Tanoak / laurel	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western oak	2.6349	2.6623	24.3184	14.3417	26.9534	14.5864	--	--	--	--	--	--	26.9534	14.5864
Woodland hardwoods	--	--	16.6517	10.2018	16.6517	10.2018	--	--	--	--	--	--	16.6517	10.2018
Exotic hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	--	--	12.3264	11.3304	12.3264	11.3304	--	--	--	--	--	--	12.3264	11.3304
Total	28.1936	14.5355	90.7588	28.4766	118.9524	31.9709	--	--	--	--	--	--	118.9524	31.9709
Nonstocked	54.6927	20.5333	171.2643	38.9422	225.9570	44.0092	--	--	2.6202	2.8521	2.6202	2.8521	228.5772	44.0992
All forest types	531.6994	53.8021	2,666.7375	135.6161	3,198.4369	144.3600	3.3287	2.2047	64.3315	22.4078	67.6602	22.5160	3,266.0971	144.8632

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D21: Aboveground Carbon, Dry Weight of Live Understory Vegetation, by Forest Type and Forest Land Status, 2007-2016: Klamath Mountains

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
Softwoods:														
Douglas-fir	1,735.7043	95.7794	36.1273	12.0324	1,771.8316	96.4331	96.6795	22.7327	--	--	96.6795	22.7327	1,868.5111	98.9384
Fir / spruce / mountain hemlock	85.3048	17.5777	1.5546	1.5736	86.8594	17.6406	--	--	--	--	--	--	86.8594	17.6406
Western Hemlock / Sitka spruce	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lodgepole pine	1.3874	1.4043	--	--	1.3874	1.4043	--	--	10.5732	12.8530	10.5732	12.8530	11.9605	12.9295
Pinyon / juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ponderosa pine	154.6172	23.7706	18.4045	8.6726	173.0218	25.2481	7.0663	4.9585	--	--	7.0663	4.9585	180.0881	25.7218
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western larch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western white pine	6.3204	3.2698	4.1724	3.2422	10.4929	4.5677	--	--	--	--	--	--	10.4929	4.5677
Other western softwoods	3.0953	2.5518	6.4783	4.7307	9.5735	5.3697	--	--	--	--	--	--	9.5735	5.3697
Total	1,986.4294	99.8131	66.7371	15.8788	2,053.1665	100.7745	103.7459	23.2672	10.5732	12.8530	114.3190	26.3726	2,167.4855	103.9436
Hardwoods:														
Alder / maple	29.6949	9.3037	4.8232	4.2512	34.5181	10.2228	9.1773	5.1963	--	--	9.1773	5.1963	43.6954	11.4614
Aspen / birch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Elm / ash / cottonwood	0.0204	0.0206	--	--	0.0204	0.0206	--	--	--	--	--	--	0.0204	0.0206
Tanoak / laurel	308.2251	35.7232	65.4356	16.3870	373.6608	38.8888	132.7354	31.5620	20.4082	15.1705	153.1436	34.1233	526.8043	51.6699
Western oak	294.4107	43.7397	255.4311	42.7474	549.8418	60.6312	30.1150	16.9811	12.2114	11.0236	42.3265	19.8425	592.1683	63.7895
Woodland hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Exotic hardwoods	0.1701	0.1722	--	--	0.1701	0.1722	--	--	--	--	--	--	0.1701	0.1722
Other hardwoods	277.8283	41.7732	51.8752	18.7238	329.7035	45.5828	--	--	0.5975	0.6048	0.5975	0.6048	330.3010	45.5861
Total	910.3496	69.5135	377.5651	49.4199	1,287.9147	84.0490	172.0278	34.2737	33.2171	18.7625	205.2449	36.5722	1,493.1596	91.5458
Nonstocked	53.9618	19.8453	3.1051	3.1430	57.0669	20.0927	10.1617	9.1732	--	--	10.1617	9.1732	67.2286	22.0876
All forest types	2,950.7408	118.9047	447.4073	52.4886	3,398.1481	128.3077	285.9353	37.3405	43.7903	22.0785	329.7256	38.9740	3,727.8737	133.6330

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D22: Aboveground Carbon, Dry Weight of Live Understory Vegetation, by Forest Type and Forest Land Status, 2007-2016: Oregon Coast Range

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE		
<i>thousand metric tons C</i>														
Softwoods:														
Douglas-fir	4,443.2470	149.2424	8.8629	7.1454	4,452.1099	149.4731	44.7682	16.5754	2.1455	2.3870	46.9137	16.7464	4,499.0236	149.9954
Fir / spruce / mountain hemlock	16.7176	9.3315	--	--	16.7176	9.3315	--	--	--	--	--	--	16.7176	9.3315
Western Hemlock / Sitka spruce	473.8779	53.2977	--	--	473.8779	53.2977	22.9975	10.5206	3.7411	2.9524	26.7386	10.9271	500.6165	54.3139
Lodgepole pine	15.4950	8.8981	6.5541	5.1313	22.0491	10.2716	5.3366	3.5281	17.3009	11.8694	22.6375	12.3757	44.6866	16.0594
Pinyon / juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ponderosa pine	1.1832	1.2229	--	--	1.1832	1.2229	--	--	--	--	--	--	1.1832	1.2229
Redwood	8.4405	7.9545	--	--	8.4405	7.9545	--	--	--	--	--	--	8.4405	7.9545
Western juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western larch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western white pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other western softwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	4,958.9612	153.3658	15.4170	8.7970	4,974.3782	153.6371	73.1024	19.8677	23.1875	12.4433	96.2898	23.1351	5,070.6680	154.4525
Hardwoods:														
Alder / maple	817.8811	63.2445	7.4216	4.3312	825.3027	63.3491	8.0409	5.8182	--	--	8.0409	5.8182	833.3436	63.5357
Aspen / birch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Elm / ash / cottonwood	7.4056	7.2150	9.0535	8.2860	16.4591	10.9870	--	--	0.4517	0.5071	0.4517	0.5071	16.9108	10.9987
Tanoak / laurel	183.2759	34.1805	1.2309	1.2980	184.5068	34.2049	34.9149	16.9667	--	--	34.9149	16.9667	219.4218	38.1805
Western oak	--	--	6.2018	6.2036	6.2018	6.2036	--	--	--	--	--	--	6.2018	6.2036
Woodland hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Exotic hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	26.1816	13.6574	--	--	26.1816	13.6574	--	--	--	--	--	--	26.1816	13.6574
Total	1,034.7442	73.4434	23.9078	11.2954	1,058.6520	74.1671	42.9559	17.9359	0.4517	0.5071	43.4076	17.9363	1,102.0596	76.2370
Nonstocked	220.2402	41.7741	1.5693	2.1893	221.8095	41.8314	--	--	--	--	--	--	221.8095	41.8314
All forest types	6,213.9455	165.1803	40.8942	14.4720	6,254.8397	165.7700	116.0582	27.1793	23.6392	12.4536	139.6974	29.6301	6,394.5371	167.1259

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D23: Aboveground Carbon, Dry Weight of Live Understory Vegetation, by Forest Type and Forest Land Status, 2007-2016: Western Cascades

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
	<i>thousand metric tons C</i>													
Softwoods:														
Douglas-fir	4,186.6423	121.2972	19.1306	6.4927	4,205.7729	121.2250	469.7017	42.4207	--	--	469.7017	42.4207	4,675.4746	127.1507
Fir / spruce / mountain hemlock	710.2599	43.0097	57.7950	14.3707	768.0550	45.1814	514.1148	43.6203	65.8123	21.9122	579.9271	46.4593	1,347.9821	64.1498
Western Hemlock / Sitka spruce	352.6077	33.9609	1.0988	1.0713	353.7064	33.9760	65.2630	14.6435	--	--	65.2630	14.6435	418.9694	36.7436
Lodgepole pine	95.1272	12.7682	11.3384	7.0219	106.4655	14.5271	82.7503	20.1600	11.1150	6.4092	93.8653	21.0804	200.3308	25.4698
Pinyon / juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ponderosa pine	119.6129	15.9238	--	--	119.6129	15.9238	14.6371	7.5414	9.7439	8.9444	24.3810	11.6994	143.9939	19.7523
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western juniper	--	--	7.5533	7.1184	7.5533	7.1184	--	--	--	--	--	--	7.5533	7.1184
Western larch	0.7699	0.7675	--	--	0.7699	0.7675	--	--	--	--	--	--	0.7699	0.7675
Western white pine	4.5603	2.5292	--	--	4.5603	2.5292	--	--	--	--	--	--	4.5603	2.5292
Other western softwoods	1.7482	0.8909	3.5905	3.7186	5.3388	3.8239	2.1525	1.9388	14.5273	12.8309	16.6798	12.9765	22.0186	13.5282
Total	5,471.3284	126.6916	100.5066	19.1006	5,571.8351	127.3992	1,148.6193	52.0644	101.1985	26.9039	1,249.8179	53.9284	6,821.6529	134.5777
Hardwoods:														
Alder / maple	177.5553	32.4096	2.0658	1.1710	179.6210	32.4486	9.6941	5.5545	0.6134	0.6234	10.3075	5.5893	189.9285	32.9156
Aspen / birch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Elm / ash / cottonwood	20.3722	11.0867	--	--	20.3722	11.0867	2.3792	2.3719	--	--	2.3792	2.3719	22.7514	11.3376
Tanoak / laurel	60.8549	17.7894	--	--	60.8549	17.7894	--	--	--	--	--	--	60.8549	17.7894
Western oak	27.5433	14.7530	46.9706	20.5941	74.5139	25.2478	--	--	--	--	--	--	74.5139	25.2478
Woodland hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Exotic hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	48.9004	17.6343	10.4668	9.8641	59.3673	20.2057	5.1185	5.7742	--	--	5.1185	5.7742	64.4858	21.0145
Total	335.2260	44.6399	59.5031	22.8452	394.7291	50.0570	17.1918	8.3558	0.6134	0.6234	17.8052	8.3790	412.5343	50.7350
Nonstocked	184.4711	33.5371	0.7177	0.7345	185.1888	33.5450	87.2261	29.5207	0.7362	0.7482	87.9624	29.5302	273.1511	44.6912
All forest types	5,991.0255	135.9419	160.7275	29.7392	6,151.7530	138.2482	1,253.0373	56.1792	102.5482	26.9213	1,355.5854	56.5587	7,507.3384	145.5700

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D24: Aboveground Carbon, Dry Weight of Live Understory Vegetation, by Forest Type and Forest Land Status, 2007-2016: Willamette Valley

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE		
	<i>thousand metric tons C</i>													
Softwoods:														
Douglas-fir	945.4013	99.3673	--	--	945.4013	99.3673	--	--	--	--	--	--	945.4013	99.3673
Fir / spruce / mountain hemlock	38.8180	17.7412	--	--	38.8180	17.7412	5.8921	5.8780	--	--	5.8921	5.8780	44.7102	18.6848
Western Hemlock / Sitka spruce	19.9070	10.2522	--	--	19.9070	10.2522	--	--	--	--	--	--	19.9070	10.2522
Lodgepole pine	1.2454	1.2134	--	--	1.2454	1.2134	--	--	--	--	--	--	1.2454	1.2134
Pinyon / juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ponderosa pine	2.1508	2.2321	--	--	2.1508	2.2321	--	--	--	--	--	--	2.1508	2.2321
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western larch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western white pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other western softwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	1,007.5227	101.4186	--	--	1,007.5227	101.4186	5.8921	5.8780	--	--	5.8921	5.8780	1,013.4148	101.5551
Hardwoods:														
Alder / maple	122.9732	26.1756	4.4146	4.0404	127.3878	26.4856	1.0496	1.4642	--	--	1.0496	1.4642	128.4374	26.5044
Aspen / birch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Elm / ash / cottonwood	72.1070	24.1878	14.3289	8.6722	86.4359	25.6918	--	--	3.0247	4.2196	3.0247	4.2196	89.4606	26.0360
Tanoak / laurel	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western oak	35.3395	14.4197	57.7502	17.8293	93.0897	22.9225	--	--	--	--	--	--	93.0897	22.9225
Woodland hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Exotic hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	13.9174	10.5313	--	--	13.9174	10.5313	--	--	--	--	--	--	13.9174	10.5313
Total	244.3371	39.5680	76.4938	20.2281	320.8309	44.2836	1.0496	1.4642	3.0247	4.2196	4.0742	4.3732	324.9051	44.4489
Nonstocked	51.5364	18.1717	--	--	51.5364	18.1717	--	--	--	--	--	--	51.5364	18.1717
All forest types	1,303.3962	110.5603	76.4938	20.2281	1,379.8900	112.0123	6.9417	6.0576	3.0247	4.2196	9.9664	7.3264	1,389.8563	112.1787

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D25: Belowground Carbon, Dry Weight of Live Understory Vegetation, by Forest Type and Forest Land Status, 2007-2016: All Oregon

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
	<i>thousand metric tons C</i>													
Softwoods:														
Douglas-fir	1,418.1746	22.1203	9.2404	1.8798	1,427.4150	22.1540	91.3468	6.5042	0.9695	0.9089	92.3163	6.4979	1,519.7313	22.7734
Fir / spruce / mountain hemlock	258.4850	8.7440	7.8933	1.6915	266.3782	8.8742	90.2680	5.9673	10.9760	2.8886	101.2441	6.2539	367.6223	10.7642
Western Hemlock / Sitka spruce	94.6147	7.0604	0.1221	0.1190	94.7368	7.0613	9.8067	2.0034	0.4157	0.3280	10.2224	2.0301	104.9592	7.3204
Lodgepole pine	158.6547	6.5417	5.6029	1.6340	164.2575	6.6973	25.4390	3.5906	5.5338	2.2298	30.9728	4.1735	195.2303	7.8287
Pinyon / juniper	0.0621	0.0498	2.7699	1.1694	2.8320	1.1705	--	--	--	--	--	--	2.8320	1.1705
Ponderosa pine	513.1395	11.7352	8.1319	1.7752	521.2714	11.7905	16.3150	2.5469	1.2624	1.0086	17.5774	2.7391	538.8488	12.0644
Redwood	0.9378	0.8838	--	--	0.9378	0.8838	--	--	--	--	--	--	0.9378	0.8838
Western juniper	38.5414	3.8965	317.1042	15.1550	355.6455	15.5620	1.9962	1.2075	7.1200	2.4816	9.1162	2.7598	364.7618	15.6538
Western larch	22.3512	2.8337	0.5053	0.3515	22.8565	2.8529	8.4565	2.6979	--	--	8.4565	2.6979	31.3130	3.9239
Western white pine	1.6516	0.5342	0.4636	0.3602	2.1152	0.6410	--	--	--	--	--	--	2.1152	0.6410
Other western softwoods	1.4533	0.5219	2.2010	0.8168	3.6544	0.9667	0.7271	0.5648	2.5746	1.6096	3.3017	1.7058	6.9561	1.9607
Total	2,508.0659	21.5386	354.0345	15.5858	2,862.1004	24.8959	244.3554	7.5499	28.8520	4.8029	273.2074	8.1385	3,135.3078	25.0767
Hardwoods:														
Alder / maple	127.5671	8.2739	2.0806	0.8205	129.6477	8.3081	3.1069	1.0752	0.0682	0.0693	3.1750	1.0774	132.8227	8.3658
Aspen / birch	5.0010	2.0547	5.2243	2.1959	10.2254	3.0070	--	--	--	--	--	--	10.2254	3.0070
Elm / ash / cottonwood	12.4033	3.2693	2.5980	1.3327	15.0014	3.5218	0.2644	0.2635	0.3863	0.4722	0.6506	0.5408	15.6520	3.5630
Tanoak / laurel	62.2527	5.8084	7.4074	1.8259	69.6600	6.0527	18.6278	3.6404	2.2676	1.6856	20.8954	3.8643	90.5554	7.1735
Western oak	43.7583	5.5906	62.9098	7.2867	106.6680	9.0953	3.3461	1.8868	3.1319	1.7840	6.4781	2.5579	113.1461	9.4255
Woodland hardwoods	3.8055	1.9814	4.1190	1.7270	7.9245	2.6267	--	--	--	--	--	--	7.9245	2.6267
Exotic hardwoods	0.0189	0.0191	--	--	0.0189	0.0191	--	--	--	--	--	--	0.0189	0.0191
Other hardwoods	50.0138	5.9197	10.3390	2.9859	60.3528	6.5907	3.1104	1.8453	0.0664	0.0672	3.1768	1.8465	63.5296	6.8444
Total	304.8206	13.2150	94.6781	8.6285	399.4987	15.4796	28.4555	4.4026	5.9203	2.5012	34.3759	4.7572	433.8746	16.1511
Nonstocked	156.0891	10.0068	23.2429	4.6857	179.3320	11.0325	22.9068	4.5380	0.5554	0.3821	23.4622	4.5536	202.7941	11.9300
All forest types	2,968.9756	20.2085	471.9555	17.9777	3,440.9311	23.5209	295.7177	8.0975	35.3277	5.3715	331.0454	8.3092	3,771.9765	23.2941

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D26: Belowground Carbon, Dry Weight of Live Understory Vegetation, by Forest Type and Forest Land Status, 2007-2016: Blue Mountains

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
	<i>thousand metric tons C</i>													
Softwoods:														
Douglas-fir	119.8373	7.1894	2.1159	0.7717	121.9532	7.2227	20.0177	3.2007	0.7311	0.8693	20.7488	3.3030	142.7019	7.8791
Fir / spruce / mountain hemlock	105.6584	5.1481	0.8398	0.4489	106.4982	5.1640	29.0905	3.5132	3.2808	1.5320	32.3714	3.6508	138.8696	6.2912
Western Hemlock / Sitka spruce	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lodgepole pine	38.4867	3.0001	--	--	38.4867	3.0001	10.4790	2.5320	--	--	10.4790	2.5320	48.9657	3.9207
Pinyon / juniper	0.0621	0.0498	0.2498	0.1237	0.3119	0.1334	--	--	--	--	--	--	0.3119	0.1334
Ponderosa pine	217.5277	7.8412	2.7543	0.9178	220.2819	7.8696	11.0592	2.2224	0.1798	0.1719	11.2390	2.2288	231.5209	8.1537
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western juniper	16.9749	2.1225	16.9799	2.6338	33.9548	3.3428	1.9962	1.2075	0.2632	0.2446	2.2594	1.2320	36.2142	3.5581
Western larch	22.2074	2.8319	0.5053	0.3515	22.7128	2.8510	8.4565	2.6979	--	--	8.4565	2.6979	31.1692	3.9226
Western white pine	0.1421	0.1665	--	--	0.1421	0.1665	--	--	--	--	--	--	0.1421	0.1665
Other western softwoods	0.5955	0.3399	0.8436	0.4157	1.4391	0.5332	--	--	0.9605	0.8483	0.9605	0.8483	2.3996	1.0020
Total	521.4922	10.7163	24.2886	2.9736	545.7807	10.9142	81.0991	4.6555	5.4153	1.9778	86.5145	4.7423	632.2952	11.6191
Hardwoods:														
Alder / maple	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aspen / birch	0.0481	0.0608	0.0673	0.0680	0.1154	0.0912	--	--	--	--	--	--	0.1154	0.0912
Elm / ash / cottonwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tanoak / laurel	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western oak	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Woodland hardwoods	1.4361	1.0761	0.8560	0.4957	2.2921	1.1847	--	--	--	--	--	--	2.2921	1.1847
Exotic hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	3.5882	1.3411	0.1315	0.1417	3.7197	1.3486	2.5417	1.7302	--	--	2.5417	1.7302	6.2613	2.1937
Total	5.0724	1.7205	1.0548	0.5200	6.1271	1.7974	2.5417	1.7302	--	--	2.5417	1.7302	8.6688	2.4945
Nonstocked	43.8329	4.7497	1.9578	1.2629	45.7906	4.9075	11.3274	2.9524	0.1824	0.1986	11.5098	2.9589	57.3005	5.7226
All forest types	570.3974	11.5229	27.3011	3.2627	597.6985	11.7374	94.9682	5.4250	5.5978	1.9877	100.5659	5.4796	698.2645	12.6363

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D27: Belowground Carbon, Dry Weight of Live Understory Vegetation, by Forest Type and Forest Land Status, 2007-2016: East Cascades+Modoc

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
	<i>thousand metric tons C</i>													
Softwoods:														
Douglas-fir	36.2144	4.9698	--	--	36.2144	4.9698	3.2390	1.3463	--	--	3.2390	1.3463	39.4534	5.1431
Fir / spruce / mountain hemlock	57.8496	4.6817	0.4591	0.2823	58.3087	4.6892	3.3990	1.3119	0.3827	0.2639	3.7817	1.3382	62.0904	4.8844
Western Hemlock / Sitka spruce	0.5711	0.5160	--	--	0.5711	0.5160	--	--	--	--	--	--	0.5711	0.5160
Lodgepole pine	107.5841	5.6046	3.6148	1.3178	111.1989	5.7176	5.1726	1.1701	1.2017	0.8283	6.3743	1.4230	117.5731	5.8612
Pinyon / juniper	--	--	0.9326	0.7134	0.9326	0.7134	--	--	--	--	--	--	0.9326	0.7134
Ponderosa pine	229.6074	7.9768	2.1681	0.9544	231.7755	8.0108	2.6591	0.7231	--	--	2.6591	0.7231	234.4346	8.0220
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western juniper	12.6185	2.3581	34.8467	5.1179	47.4652	5.5733	--	--	--	--	--	--	47.4652	5.5733
Western larch	0.0582	0.0580	--	--	0.0582	0.0580	--	--	--	--	--	--	0.0582	0.0580
Western white pine	0.3005	0.2160	--	--	0.3005	0.2160	--	--	--	--	--	--	0.3005	0.2160
Other western softwoods	0.3197	0.2583	0.2387	0.2176	0.5583	0.3377	0.4879	0.5221	--	--	0.4879	0.5221	1.0463	0.6218
Total	445.1235	10.4188	42.2599	5.4204	487.3834	11.4334	14.9576	2.3461	1.5844	0.8693	16.5420	2.4730	503.9253	11.6026
Hardwoods:														
Alder / maple	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aspen / birch	3.4158	1.7700	0.9945	0.4610	4.4104	1.8290	--	--	--	--	--	--	4.4104	1.8290
Elm / ash / cottonwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tanoak / laurel	0.8798	0.5709	--	--	0.8798	0.5709	--	--	--	--	--	--	0.8798	0.5709
Western oak	3.7662	1.5752	19.5017	4.3641	23.2680	4.6376	--	--	1.7751	1.2970	1.7751	1.2970	25.0431	4.8155
Woodland hardwoods	2.3694	1.6638	1.4128	1.2050	3.7823	2.0532	--	--	--	--	--	--	3.7823	2.0532
Exotic hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	5.6670	2.0940	1.9110	1.3402	7.5780	2.4848	--	--	--	--	--	--	7.5780	2.4848
Total	16.0983	3.6112	23.8201	4.7162	39.9184	5.9659	--	--	1.7751	1.2970	1.7751	1.2970	41.6935	6.1052
Nonstocked	49.4894	5.5224	1.6567	1.2235	51.1461	5.6510	0.7586	0.8782	--	--	0.7586	0.8782	51.9046	5.7188
All forest types	510.7112	11.6797	67.7367	7.2576	578.4478	13.2209	15.7161	2.5487	3.3595	1.5614	19.0756	2.9648	597.5235	13.4527

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D28: Belowground Carbon, Dry Weight of Live Understory Vegetation, by Forest Type and Forest Land Status, 2007-2016: Eastern OR Lowlands

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
Softwoods:														
Douglas-fir	5.3459	1.7112	--	--	5.3459	1.7112	0.1847	0.2021	--	--	0.1847	0.2021	5.5306	1.7231
Fir / spruce / mountain hemlock	0.4102	0.3650	--	--	0.4102	0.3650	--	--	--	--	--	--	0.4102	0.3650
Western Hemlock / Sitka spruce	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lodgepole pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pinyon / juniper	--	--	1.5875	0.9185	1.5875	0.9185	--	--	--	--	--	--	1.5875	0.9185
Ponderosa pine	35.1640	4.4526	1.1646	0.7001	36.3286	4.5047	0.1851	0.1384	--	--	0.1851	0.1384	36.5137	4.5063
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western juniper	8.9480	2.2905	264.4383	14.2031	273.3863	14.3660	--	--	6.8568	2.4695	6.8568	2.4695	280.2431	14.4319
Western larch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western white pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other western softwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	49.8681	5.2783	267.1904	14.2444	317.0585	15.0695	0.3699	0.2450	6.8568	2.4695	7.2267	2.4816	324.2852	15.1325
Hardwoods:														
Alder / maple	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aspen / birch	1.5371	1.0416	4.1625	2.1459	5.6996	2.3853	--	--	--	--	--	--	5.6996	2.3853
Elm / ash / cottonwood	1.3028	1.1983	--	--	1.3028	1.1983	--	--	--	--	--	--	1.3028	1.1983
Tanoak / laurel	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western oak	0.2928	0.2958	2.7020	1.5935	2.9948	1.6207	--	--	--	--	--	--	2.9948	1.6207
Woodland hardwoods	--	--	1.8502	1.1335	1.8502	1.1335	--	--	--	--	--	--	1.8502	1.1335
Exotic hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	--	--	1.3696	1.2589	1.3696	1.2589	--	--	--	--	--	--	1.3696	1.2589
Total	3.1326	1.6151	10.0843	3.1641	13.2169	3.5523	--	--	--	--	--	--	13.2169	3.5523
Nonstocked	6.0770	2.2815	19.0293	4.3269	25.1063	4.8899	--	--	0.2911	0.3169	0.2911	0.3169	25.3974	4.8999
All forest types	59.0777	5.9780	296.3041	15.0685	355.3818	16.0400	0.3699	0.2450	7.1479	2.4898	7.5178	2.5018	362.8996	16.0959

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D29: Belowground Carbon, Dry Weight of Live Understory Vegetation, by Forest Type and Forest Land Status, 2007-2016: Klamath Mountains

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
	<i>thousand metric tons C</i>													
Softwoods:														
Douglas-fir	192.8560	10.6421	4.0141	1.3369	196.8701	10.7148	10.7422	2.5258	--	--	10.7422	2.5258	207.6123	10.9932
Fir / spruce / mountain hemlock	9.4783	1.9531	0.1727	0.1748	9.6510	1.9601	--	--	--	--	--	--	9.6510	1.9601
Western Hemlock / Sitka spruce	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lodgepole pine	0.1542	0.1560	--	--	0.1542	0.1560	--	--	1.1748	1.4281	1.1748	1.4281	1.3289	1.4366
Pinyon / juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ponderosa pine	17.1797	2.6412	2.0449	0.9636	19.2246	2.8053	0.7851	0.5509	--	--	0.7851	0.5509	20.0098	2.8580
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western larch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western white pine	0.7023	0.3633	0.4636	0.3602	1.1659	0.5075	--	--	--	--	--	--	1.1659	0.5075
Other western softwoods	0.3439	0.2835	0.7198	0.5256	1.0637	0.5966	--	--	--	--	--	--	1.0637	0.5966
Total	220.7143	11.0903	7.4152	1.7643	228.1296	11.1972	11.5273	2.5852	1.1748	1.4281	12.7021	2.9303	240.8317	11.5493
Hardwoods:														
Alder / maple	3.2994	1.0337	0.5359	0.4724	3.8353	1.1359	1.0197	0.5774	--	--	1.0197	0.5774	4.8550	1.2735
Aspen / birch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Elm / ash / cottonwood	0.0023	0.0023	--	--	0.0023	0.0023	--	--	--	--	--	--	0.0023	0.0023
Tanoak / laurel	34.2472	3.9692	7.2706	1.8208	41.5178	4.3210	14.7484	3.5069	2.2676	1.6856	17.0160	3.7915	58.5338	5.7411
Western oak	32.7123	4.8600	28.3812	4.7497	61.0935	6.7368	3.3461	1.8868	1.3568	1.2248	4.7029	2.2047	65.7965	7.0877
Woodland hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Exotic hardwoods	0.0189	0.0191	--	--	0.0189	0.0191	--	--	--	--	--	--	0.0189	0.0191
Other hardwoods	30.8698	4.6415	5.7639	2.0804	36.6337	5.0648	--	--	0.0664	0.0672	0.0664	0.0672	36.7001	5.0651
Total	101.1499	7.7237	41.9517	5.4911	143.1016	9.3388	19.1142	3.8082	3.6908	2.0847	22.8050	4.0636	165.9066	10.1717
Nonstocked	5.9957	2.2050	0.3450	0.3492	6.3408	2.2325	1.1291	1.0192	--	--	1.1291	1.0192	7.4698	2.4542
All forest types	327.8600	13.2116	49.7119	5.8321	377.5719	14.2564	31.7706	4.1489	4.8656	2.4532	36.6362	4.3304	414.2081	14.8481

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D30: Belowground Carbon, Dry Weight of Live Understory Vegetation, by Forest Type and Forest Land Status, 2007-2016: Oregon Coast Range

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
	<i>thousand metric tons C</i>													
Softwoods:														
Douglas-fir	493.6940	16.5825	0.9848	0.7939	494.6788	16.6081	4.9742	1.8417	0.2384	0.2652	5.2126	1.8607	499.8914	16.6662
Fir / spruce / mountain hemlock	1.8575	1.0368	--	--	1.8575	1.0368	--	--	--	--	--	--	1.8575	1.0368
Western Hemlock / Sitka spruce	52.6531	5.9220	--	--	52.6531	5.9220	2.5553	1.1690	0.4157	0.3280	2.9710	1.2141	55.6240	6.0349
Lodgepole pine	1.7217	0.9887	0.7282	0.5701	2.4499	1.1413	0.5930	0.3920	1.9223	1.3188	2.5153	1.3751	4.9652	1.7844
Pinyon / juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ponderosa pine	0.1315	0.1359	--	--	0.1315	0.1359	--	--	--	--	--	--	0.1315	0.1359
Redwood	0.9378	0.8838	--	--	0.9378	0.8838	--	--	--	--	--	--	0.9378	0.8838
Western juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western larch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western white pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other western softwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	550.9956	17.0406	1.7130	0.9774	552.7085	17.0708	8.1225	2.2075	2.5764	1.3826	10.6989	2.5706	563.4074	17.1614
Hardwoods:														
Alder / maple	90.8756	7.0272	0.8246	0.4812	91.7003	7.0388	0.8934	0.6465	--	--	0.8934	0.6465	92.5937	7.0595
Aspen / birch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Elm / ash / cottonwood	0.8228	0.8017	1.0059	0.9207	1.8288	1.2208	--	--	0.0502	0.0563	0.0502	0.0563	1.8790	1.2221
Tanoak / laurel	20.3640	3.7978	0.1368	0.1442	20.5008	3.8005	3.8794	1.8852	--	--	3.8794	1.8852	24.3802	4.2423
Western oak	--	--	0.6891	0.6893	0.6891	0.6893	--	--	--	--	--	--	0.6891	0.6893
Woodland hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Exotic hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	2.9091	1.5175	--	--	2.9091	1.5175	--	--	--	--	--	--	2.9091	1.5175
Total	114.9715	8.1604	2.6564	1.2551	117.6280	8.2408	4.7729	1.9929	0.0502	0.0563	4.8231	1.9929	122.4510	8.4708
Nonstocked	24.4711	4.6416	0.1744	0.2433	24.6454	4.6479	--	--	--	--	--	--	24.6454	4.6479
All forest types	690.4382	18.3534	4.5438	1.6080	694.9820	18.4189	12.8954	3.0199	2.6266	1.3837	15.5219	3.2922	710.5039	18.5695

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D31: Belowground Carbon, Dry Weight of Live Understory Vegetation, by Forest Type and Forest Land Status, 2007-2016: Western Cascades

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
	<i>thousand metric tons C</i>													
Softwoods:														
Douglas-fir	465.1824	13.4775	2.1256	0.7214	467.3080	13.4694	52.1891	4.7134	--	--	52.1891	4.7134	519.4971	14.1279
Fir / spruce / mountain hemlock	78.9178	4.7789	6.4217	1.5967	85.3394	5.0202	57.1239	4.8467	7.3125	2.4347	64.4363	5.1621	149.7758	7.1278
Western Hemlock / Sitka spruce	39.1786	3.7734	0.1221	0.1190	39.3007	3.7751	7.2514	1.6271	--	--	7.2514	1.6271	46.5522	4.0826
Lodgepole pine	10.5697	1.4187	1.2598	0.7802	11.8295	1.6141	9.1945	2.2400	1.2350	0.7121	10.4295	2.3423	22.2590	2.8300
Pinyon / juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ponderosa pine	13.2903	1.7693	--	--	13.2903	1.7693	1.6263	0.8379	1.0826	0.9938	2.7090	1.2999	15.9993	2.1947
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western juniper	--	--	0.8393	0.7909	0.8393	0.7909	--	--	--	--	--	--	0.8393	0.7909
Western larch	0.0855	0.0853	--	--	0.0855	0.0853	--	--	--	--	--	--	0.0855	0.0853
Western white pine	0.5067	0.2810	--	--	0.5067	0.2810	--	--	--	--	--	--	0.5067	0.2810
Other western softwoods	0.1942	0.0990	0.3989	0.4132	0.5932	0.4249	0.2392	0.2154	1.6141	1.4257	1.8533	1.4418	2.4465	1.5031
Total	607.9253	14.0768	11.1674	2.1223	619.0927	14.1555	127.6243	5.7849	11.2443	2.9893	138.8686	5.9920	757.9613	14.9531
Hardwoods:														
Alder / maple	19.7284	3.6011	0.2295	0.1301	19.9579	3.6054	1.0771	0.6172	0.0682	0.0693	1.1453	0.6210	21.1032	3.6573
Aspen / birch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Elm / ash / cottonwood	2.2636	1.2319	--	--	2.2636	1.2319	0.2644	0.2635	--	--	0.2644	0.2635	2.5279	1.2597
Tanoak / laurel	6.7616	1.9766	--	--	6.7616	1.9766	--	--	--	--	--	--	6.7616	1.9766
Western oak	3.0604	1.6392	5.2190	2.2882	8.2793	2.8053	--	--	--	--	--	--	8.2793	2.8053
Woodland hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Exotic hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	5.4334	1.9594	1.1630	1.0960	6.5964	2.2451	0.5687	0.6416	--	--	0.5687	0.6416	7.1651	2.3350
Total	37.2473	4.9600	6.6115	2.5384	43.8588	5.5619	1.9102	0.9284	0.0682	0.0693	1.9784	0.9310	45.8371	5.6372
Nonstocked	20.4967	3.7263	0.0797	0.0816	20.5765	3.7272	9.6918	3.2801	0.0818	0.0831	9.7736	3.2811	30.3501	4.9657
All forest types	665.6694	15.1046	17.8586	3.3044	683.5280	15.3609	139.2263	6.2421	11.3942	2.9913	150.6206	6.2843	834.1485	16.1744

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D32: Belowground Carbon, Dry Weight of Live Understory Vegetation, by Forest Type and Forest Land Status, 2007-2016: Willamette Valley

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
Softwoods:														
Douglas-fir	105.0446	11.0408	--	--	105.0446	11.0408	--	--	--	--	--	--	105.0446	11.0408
Fir / spruce / mountain hemlock	4.3131	1.9712	--	--	4.3131	1.9712	0.6547	0.6531	--	--	0.6547	0.6531	4.9678	2.0761
Western Hemlock / Sitka spruce	2.2119	1.1391	--	--	2.2119	1.1391	--	--	--	--	--	--	2.2119	1.1391
Lodgepole pine	0.1384	0.1348	--	--	0.1384	0.1348	--	--	--	--	--	--	0.1384	0.1348
Pinyon / juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ponderosa pine	0.2390	0.2480	--	--	0.2390	0.2480	--	--	--	--	--	--	0.2390	0.2480
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western larch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western white pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other western softwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	111.9469	11.2687	--	--	111.9469	11.2687	0.6547	0.6531	--	--	0.6547	0.6531	112.6016	11.2839
Hardwoods:														
Alder / maple	13.6637	2.9084	0.4905	0.4489	14.1542	2.9428	0.1166	0.1627	--	--	0.1166	0.1627	14.2708	2.9449
Aspen / birch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Elm / ash / cottonwood	8.0119	2.6875	1.5921	0.9636	9.6040	2.8546	--	--	0.3361	0.4688	0.3361	0.4688	9.9401	2.8929
Tanoak / laurel	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western oak	3.9266	1.6022	6.4167	1.9810	10.3433	2.5469	--	--	--	--	--	--	10.3433	2.5469
Woodland hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Exotic hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	1.5464	1.1701	--	--	1.5464	1.1701	--	--	--	--	--	--	1.5464	1.1701
Total	27.1486	4.3964	8.4993	2.2476	35.6479	4.9204	0.1166	0.1627	0.3361	0.4688	0.4527	0.4859	36.1006	4.9388
Nonstocked	5.7263	2.0191	--	--	5.7263	2.0191	--	--	--	--	--	--	5.7263	2.0191
All forest types	144.8218	12.2845	8.4993	2.2476	153.3211	12.4458	0.7713	0.6731	0.3361	0.4688	1.1074	0.8140	154.4284	12.4643

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D33: Belowground Carbon, Dry Weight of Live Trees (>= 1 inch) by Forest Type and Forest Land Status, 2007-2016: All Oregon

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
	<i>thousand metric tons C</i>													
Softwoods:														
Douglas-fir	114,364	2,052	344	85	114,708	2,050	12,420	1,085	28	30	12,449	1,083	127,157	2,264
Fir / spruce / mountain hemlock	18,449	736	326	73	18,774	739	8,550	679	704	237	9,254	698	28,029	1,001
Western Hemlock / Sitka spruce	10,538	808			10,539	808	1,851	395	6	6	1,857	395	12,396	894
Lodgepole pine	3,854	180	91	31	3,944	183	1,065	171	129	53	1,194	178	5,138	253
Pinyon / juniper	1		2	1	3	1	--	--	--	--	--	--	3	1
Ponderosa pine	17,995	489	110	33	18,105	489	1,146	198	10	7	1,157	198	19,262	525
Redwood	10	9	--	--	10	9	--	--	--	--	--	--	10	9
Western juniper	485	55	1,234	79	1,720	95	32	22	23	9	55	24	1,774	98
Western larch	772	112	33	23	805	114	431	160	--	--	431	160	1,237	197
Western white pine	57	30	3	2	60	30	--	--	--	--	--	--	60	30
Other western softwoods	31	13	14	7	45	14	34	29	11	9	44	31	90	34
Total	166,555	2,018	2,158	146	168,714	2,015	25,530	1,125	911	243	26,441	1,114	195,155	2,150
Hardwoods:														
Alder / maple	7,301	569	82	37	7,383	570	208	96	2	2	210	96	7,592	577
Aspen / birch	69	35	27	10	96	36	--	--	--	--	--	--	96	36
Elm / ash / cottonwood	373	124	46	33	419	128	22	22	33	46	55	51	474	138
Tanoak / laurel	3,333	414	83	32	3,417	415	557	167	12	12	569	166	3,986	447
Western oak	1,616	266	1,221	234	2,837	353	85	85	53	32	138	91	2,975	364
Woodland hardwoods	22	14	23	13	45	19	--	--	--	--	--	--	45	19
Exotic hardwoods			--	--			--	--	--	--	--	--		
Other hardwoods	1,916	309	260	117	2,176	328	24	17	1	1	25	17	2,201	329
Total	14,632	802	1,741	268	16,373	838	896	212	101	57	997	218	17,370	863
Nonstocked	213	38	2	1	215	38	88	43	--	--	88	43	303	57
All forest types	181,400	1,957	3,902	305	185,302	1,954	26,514	1,125	1,012	249	27,526	1,113	212,828	2,068

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D34: Belowground Carbon, Dry Weight of Live Trees (>= 1 inch) by Forest Type and Forest Land Status, 2007-2016: Blue Mountains

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
	<i>thousand metric tons C</i>													
Softwoods:														
Douglas-fir	3,686	242	32	14	3,718	242	805	148	25	30	830	150	4,548	283
Fir / spruce / mountain hemlock	5,611	281	14	9	5,625	281	1,774	254	62	32	1,836	255	7,461	376
Western Hemlock / Sitka spruce	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lodgepole pine	954	83	--	--	954	83	367	106	--	--	367	106	1,321	134
Pinyon / juniper	1		--	--	1		--	--	--	--	--	--	1	
Ponderosa pine	7,063	271	26	14	7,089	271	741	158	4	4	745	158	7,833	312
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western juniper	220	31	121	22	341	38	32	22	3	3	35	22	376	44
Western larch	742	108	33	23	775	110	431	160	--	--	431	160	1,206	194
Western white pine	2	2	--	--	2	2	--	--	--	--	--	--	2	2
Other western softwoods	8	5	11	6	19	8	--	--	11	9	11	9	29	12
Total	18,286	392	236	40	18,523	391	4,149	277	105	45	4,255	278	22,777	461
Hardwoods:														
Alder / maple	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aspen / birch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Elm / ash / cottonwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tanoak / laurel	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western oak	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Woodland hardwoods	13	11	6	4	18	12	--	--	--	--	--	--	18	12
Exotic hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	30	14	--	--	30	14	12	9	--	--	12	9	42	17
Total	43	18	6	4	48	19	12	9	--	--	12	9	61	21
Nonstocked	60	11	1		61	11	22	11	--	--	22	11	83	16
All forest types	18,389	392	243	40	18,632	391	4,184	277	105	45	4,289	278	22,921	461

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D35: Belowground Carbon, Dry Weight of Live Trees (>= 1 inch) by Forest Type and Forest Land Status, 2007-2016: East Cascades+Modoc

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
	<i>thousand metric tons C</i>													
Softwoods:														
Douglas-fir	1,656	267	--	--	1,656	267	242	96	--	--	242	96	1,898	283
Fir / spruce / mountain hemlock	3,402	351	17	11	3,419	351	323	129	29	23	353	131	3,772	380
Western Hemlock / Sitka spruce	139	129	--	--	139	129	--	--	--	--	--	--	139	129
Lodgepole pine	2,374	142	51	16	2,425	143	190	49	35	22	225	53	2,650	152
Pinyon / juniper	--	--	1	1	1	1	--	--	--	--	--	--	1	1
Ponderosa pine	7,916	284	28	16	7,945	284	182	66	--	--	182	66	8,127	290
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western juniper	171	36	217	42	388	54	--	--	--	--	--	--	388	54
Western larch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western white pine	24	24	--	--	24	24	--	--	--	--	--	--	24	24
Other western softwoods	9	6	3	3	12	7	27	29	--	--	27	29	39	30
Total	15,691	520	318	49	16,009	520	964	181	64	32	1,028	183	17,038	549
Hardwoods:														
Alder / maple	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aspen / birch	21	10	13	6	35	12	--	--	--	--	--	--	35	12
Elm / ash / cottonwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tanoak / laurel	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western oak	71	40	231	62	302	73	--	--	41	30	41	30	343	79
Woodland hardwoods	10	8	4	4	14	9	--	--	--	--	--	--	14	9
Exotic hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	18	7	7	6	25	9	--	--	--	--	--	--	25	9
Total	120	42	255	63	376	76	--	--	41	30	41	30	417	82
Nonstocked	53	9	--	--	53	9	24	27	--	--	24	27	77	29
All forest types	15,865	521	573	79	16,438	524	988	184	105	44	1,093	188	17,531	554

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D36: Belowground Carbon, Dry Weight of Live Trees (>= 1 inch) by Forest Type and Forest Land Status, 2007-2016: Eastern OR Lowlands

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
	<i>thousand metric tons C</i>													
Softwoods:														
Douglas-fir	153	47	--	--	153	47	2	2	--	--	2	2	155	47
Fir / spruce / mountain hemlock	4	4	--	--	4	4	--	--	--	--	--	--	4	4
Western Hemlock / Sitka spruce	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lodgepole pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pinyon / juniper	--	--	2	1	2	1	--	--	--	--	--	--	2	1
Ponderosa pine	811	119	4	3	816	119	8	8	--	--	8	8	824	119
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western juniper	93	29	896	64	989	69	--	--	20	9	20	9	1,008	70
Western larch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western white pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other western softwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	1,062	131	902	64	1,964	144	10	8	20	9	30	12	1,993	144
Hardwoods:														
Alder / maple	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aspen / birch	48	33	14	8	61	34	--	--	--	--	--	--	61	34
Elm / ash / cottonwood	3	3	--	--	3	3	--	--	--	--	--	--	3	3
Tanoak / laurel	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western oak	1	1	58	35	60	35	--	--	--	--	--	--	60	35
Woodland hardwoods	--	--	13	11	13	11	--	--	--	--	--	--	13	11
Exotic hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	--	--	28	25	28	25	--	--	--	--	--	--	28	25
Total	51	33	113	45	165	56	--	--	--	--	--	--	165	56
Nonstocked	6	3	2	1	8	3	--	--	--	--	--	--	8	3
All forest types	1,120	137	1,017	78	2,136	156	10	8	20	9	30	12	2,166	156

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D37: Belowground Carbon, Dry Weight of Live Trees (>= 1 inch) by Forest Type and Forest Land Status, 2007-2016: Klamath Mountains

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
	<i>thousand metric tons C</i>													
Softwoods:														
Douglas-fir	15,459	963	99	41	15,558	963	1,677	431	--	--	1,677	431	17,235	1,052
Fir / spruce / mountain hemlock	731	139	4	4	735	139	--	--	--	--	--	--	735	139
Western Hemlock / Sitka spruce	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lodgepole pine	5	5	--	--	5	5	--	--	2	2	2	2	7	5
Pinyon / juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ponderosa pine	1,312	252	51	25	1,363	253	108	78	--	--	108	78	1,471	265
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western larch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western white pine	27	18	3	2	30	18	--	--	--	--	--	--	30	18
Other western softwoods	1	1	--	--	1	1	--	--	--	--	--	--	1	1
Total	17,535	992	157	48	17,692	993	1,785	438	2	2	1,787	438	19,479	1,079
Hardwoods:														
Alder / maple	210	82	13	12	222	83	63	40	--	--	63	40	285	93
Aspen / birch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Elm / ash / cottonwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tanoak / laurel	2,113	336	77	31	2,190	337	350	140	12	12	362	140	2,552	365
Western oak	1,227	225	377	75	1,604	237	85	85	12	11	97	86	1,701	252
Woodland hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Exotic hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	1,709	302	223	114	1,932	321	--	--	1	1	1	1	1,933	321
Total	5,259	502	690	140	5,949	517	498	169	25	16	523	169	6,472	543
Nonstocked	18	11	--	--	18	11	--	--	--	--	--	--	18	11
All forest types	22,812	1,072	847	149	23,659	1,075	2,283	452	27	16	2,310	450	25,969	1,156

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D38: Belowground Carbon, Dry Weight of Live Trees (>= 1 inch) by Forest Type and Forest Land Status, 2007-2016: Oregon Coast Range

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
	<i>thousand metric tons C</i>													
Softwoods:														
Douglas-fir	42,250	1,695	27	23	42,277	1,695	1,086	464	3	3	1,089	464	43,366	1,751
Fir / spruce / mountain hemlock	245	143	--	--	245	143	--	--	--	--	--	--	245	143
Western Hemlock / Sitka spruce	4,965	591	--	--	4,965	591	502	240	6	6	508	240	5,473	638
Lodgepole pine	52	27	20	24	72	36	33	30	17	9	50	32	122	48
Pinyon / juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ponderosa pine	2	2	--	--	2	2	--	--	--	--	--	--	2	2
Redwood	10	9	--	--	10	9	--	--	--	--	--	--	10	9
Western juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western larch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western white pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other western softwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	47,522	1,737	48	33	47,570	1,737	1,622	523	25	11	1,647	523	49,217	1,798
Hardwoods:														
Alder / maple	5,615	520	37	27	5,652	521	65	54	--	--	65	54	5,717	522
Aspen / birch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Elm / ash / cottonwood	1	1	34	31	35	31	--	--	--	--	--	--	35	31
Tanoak / laurel	1,167	246	6	6	1,173	246	207	102	--	--	207	102	1,380	267
Western oak	--	--	55	55	55	55	--	--	--	--	--	--	55	55
Woodland hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Exotic hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	32	22	--	--	32	22	--	--	--	--	--	--	32	22
Total	6,814	574	132	69	6,947	577	273	116	--	--	273	116	7,220	588
Nonstocked	53	32	--	--	53	32	--	--	--	--	--	--	53	32
All forest types	54,390	1,763	180	77	54,570	1,764	1,894	536	25	11	1,920	536	56,489	1,823

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D39: Belowground Carbon, Dry Weight of Live Trees (>= 1 inch) by Forest Type and Forest Land Status, 2007-2016: Western Cascades

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
	<i>thousand metric tons C</i>													
Softwoods:														
Douglas-fir	45,492	1,346	186	70	45,678	1,344	8,608	875	--	--	8,608	875	54,286	1,576
Fir / spruce / mountain hemlock	8,316	549	291	71	8,606	553	6,384	630	613	233	6,996	652	15,602	842
Western Hemlock / Sitka spruce	5,156	520			5,156	520	1,349	313	--	--	1,349	313	6,506	600
Lodgepole pine	465	72	19	10	484	73	475	122	75	47	550	130	1,034	149
Pinyon / juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ponderosa pine	863	144	--	--	863	144	108	58	7	6	114	58	977	155
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western juniper	--	--	2	1	2	1	--	--	--	--	--	--	2	1
Western larch	30	30	--	--	30	30	--	--	--	--	--	--	30	30
Western white pine	4	5	--	--	4	5	--	--	--	--	--	--	4	5
Other western softwoods	13	10			13	10	7	6			7	6	19	11
Total	60,339	1,422	498	100	60,836	1,421	16,930	934	695	236	17,625	926	78,461	1,616
Hardwoods:														
Alder / maple	761	166	9	7	770	166	76	67	2	2	78	67	848	179
Aspen / birch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Elm / ash / cottonwood	77	36	--	--	77	36	22	22	--	--	22	22	99	42
Tanoak / laurel	54	24	--	--	54	24	--	--	--	--	--	--	54	24
Western oak	71	55	58	28	129	62	--	--	--	--	--	--	129	62
Woodland hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Exotic hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	103	56	1	1	104	56	12	14	--	--	12	14	116	58
Total	1,066	188	68	29	1,134	191	111	72	2	2	112	72	1,246	204
Nonstocked	21	9	--	--	21	9	42	32	--	--	42	32	63	33
All forest types	61,425	1,431	566	104	61,991	1,429	17,083	936	696	236	17,779	928	79,770	1,623

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D40: Belowground Carbon, Dry Weight of Live Trees (>= 1 inch) by Forest Type and Forest Land Status, 2007-2016: Willamette Valley

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
	<i>thousand metric tons C</i>													
Softwoods:														
Douglas-fir	5,668	673	--	--	5,668	673	--	--	--	--	--	--	5,668	673
Fir / spruce / mountain hemlock	140	136	--	--	140	136	70	70	--	--	70	70	210	153
Western Hemlock / Sitka spruce	278	163	--	--	278	163	--	--	--	--	--	--	278	163
Lodgepole pine	5	5	--	--	5	5	--	--	--	--	--	--	5	5
Pinyon / juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ponderosa pine	29	30	--	--	29	30	--	--	--	--	--	--	29	30
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western larch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western white pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other western softwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	6,120	705	--	--	6,120	705	70	70	--	--	70	70	6,190	708
Hardwoods:														
Alder / maple	716	170	24	22	739	171	3	4	--	--	3	4	742	171
Aspen / birch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Elm / ash / cottonwood	293	119	11	10	304	119	--	--	33	46	33	46	337	128
Tanoak / laurel	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western oak	245	126	442	202	687	238	--	--	--	--	--	--	687	238
Woodland hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Exotic hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	24	17	--	--	24	17	--	--	--	--	--	--	24	17
Total	1,278	242	477	203	1,755	313	3	4	33	46	36	46	1,791	315
Nonstocked	2	1	--	--	2	1	--	--	--	--	--	--	2	1
All forest types	7,399	745	477	203	7,876	768	73	70	33	46	106	83	7,982	771

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D41: Belowground Carbon, Dry Weight of Dead Trees (>= 5 inch) by Forest Type and Forest Land Status, 2007-2016: All Oregon

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
	<i>thousand metric tons C</i>													
Softwoods:														
Douglas-fir	8,289	268	65	17	8,354	268	1,384	174	5	5	1,389	174	9,743	316
Fir / spruce / mountain hemlock	2,637	123	76	21	2,714	124	1,837	171	163	55	2,000	174	4,713	213
Western Hemlock / Sitka spruce	1,174	116	--	--	1,174	116	354	93	--	--	354	93	1,528	148
Lodgepole pine	559	50	12	7	572	50	297	60	22	11	319	60	891	79
Pinyon / juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ponderosa pine	1,232	77	10	3	1,242	77	104	28	37	33	141	43	1,383	88
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western juniper	33	7	51	10	85	12	14	10	1	1	15	11	100	16
Western larch	105	23	8	6	113	24	136	58	--	--	136	58	250	62
Western white pine	20	10	1	1	20	10	--	--	--	--	--	--	20	10
Other western softwoods	21	11	17	9	39	14	7	8			7	8	46	16
Total	14,072	309	241	31	14,313	309	4,133	242	228	64	4,361	243	18,673	382
Hardwoods:														
Alder / maple	472	61	4	4	476	61	13	6			13	6	489	61
Aspen / birch	3	2	3	1	6	2	--	--	--	--	--	--	6	2
Elm / ash / cottonwood	8	3			8	3	5	5		1	6	6	14	6
Tanoak / laurel	431	72	82	41	513	83	108	31	20	15	128	34	640	89
Western oak	161	31	93	25	254	39	58	37	40	34	98	50	352	64
Woodland hardwoods	9	7	2	1	11	7	--	--	--	--	--	--	11	7
Exotic hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	199	46	33	16	232	48	11	9	--	--	11	9	242	49
Total	1,282	108	216	50	1,499	119	195	49	61	38	256	58	1,754	132
Nonstocked	605	95	23	7	628	96	527	150	2	2	528	150	1,156	178
All forest types	15,959	330	479	60	16,439	334	4,855	276	290	74	5,145	273	21,584	419

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D42: Belowground Carbon, Dry Weight of Dead Trees (>= 5 inch) by Forest Type and Forest Land Status, 2007-2016: Blue Mountains

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
	<i>thousand metric tons C</i>													
Softwoods:														
Douglas-fir	351	35	8	5	360	36	145	41	4	5	149	42	509	55
Fir / spruce / mountain hemlock	882	56	13	9	895	56	442	80	27	17	469	81	1,364	98
Western Hemlock / Sitka spruce	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lodgepole pine	166	25	--	--	166	25	96	29	--	--	96	29	262	38
Pinyon / juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ponderosa pine	483	36	2	1	485	36	76	26	1	1	77	26	562	44
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western juniper	24	6	4	1	28	6	14	10	--	--	14	10	42	12
Western larch	93	19	8	6	101	20	136	58	--	--	136	58	238	61
Western white pine	1	2	--	--	1	2	--	--	--	--	--	--	1	2
Other western softwoods	5	4	8	7	13	8	--	--					13	8
Total	2,005	73	44	14	2,049	74	909	103	33	18	942	104	2,991	126
Hardwoods:														
Alder / maple	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aspen / birch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Elm / ash / cottonwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tanoak / laurel	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western oak	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Woodland hardwoods	7	7	1	1	8	7	--	--	--	--	--	--	8	7
Exotic hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	7	4	--	--	7	4	11	9	--	--	11	9	18	9
Total	14	8	1	1	15	8	11	9	--	--	11	9	26	12
Nonstocked	166	37	--	--	166	37	186	80	2	2	188	80	354	88
All forest types	2,185	81	45	14	2,230	82	1,106	127	34	18	1,140	128	3,370	151

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D43: Belowground Carbon, Dry Weight of Dead Trees (>= 5 inch) by Forest Type and Forest Land Status, 2007-2016: East Cascades+Modoc

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
	<i>thousand metric tons C</i>													
Softwoods:														
Douglas-fir	118	36	--	--	118	36	17	8	--	--	17	8	134	37
Fir / spruce / mountain hemlock	425	43			426	43	99	47	2	2	101	47	527	65
Western Hemlock / Sitka spruce	22	22	--	--	22	22	--	--	--	--	--	--	22	22
Lodgepole pine	271	34	4	2	275	34	45	18	4	3	49	18	324	38
Pinyon / juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ponderosa pine	474	40	3	2	477	40	15	8	--	--	15	8	492	41
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western juniper	8	3	7	4	16	5	--	--	--	--	--	--	16	5
Western larch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western white pine	7	7	--	--	7	7	--	--	--	--	--	--	7	7
Other western softwoods	5	5	7	5	12	7	7	8	--	--	7	8	19	11
Total	1,330	76	21	7	1,351	77	183	51	6	3	189	51	1,541	92
Hardwoods:														
Alder / maple	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aspen / birch			1	1	2	1	--	--	--	--	--	--	2	1
Elm / ash / cottonwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tanoak / laurel	12	8	--	--	12	8	--	--	--	--	--	--	12	8
Western oak	1	1	5	2	6	2	--	--	2	2	2	2	9	3
Woodland hardwoods	2	2	1	1	3	2	--	--	--	--	--	--	3	2
Exotic hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	3	3	--	--	3	3	--	--	--	--	--	--	3	3
Total	18	9	7	2	26	9	--	--	2	2	2	2	28	9
Nonstocked	222	59	2	2	224	59	23	27	--	--	23	27	247	65
All forest types	1,571	96	30	8	1,601	96	206	58	8	4	215	58	1,816	112

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D44: Belowground Carbon, Dry Weight of Dead Trees (>= 5 inch) by Forest Type and Forest Land Status, 2007-2016: Eastern OR Lowlands

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
	<i>thousand metric tons C</i>													
Softwoods:														
Douglas-fir	20	10	--	--	20	10	--	--	--	--	--	--	20	10
Fir / spruce / mountain hemlock	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western Hemlock / Sitka spruce	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lodgepole pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pinyon / juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ponderosa pine	43	21	1	1	44	21	1	1	--	--	1	1	45	21
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western juniper	1	1	40	9	41	9	--	--	1	1	1	1	42	9
Western larch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western white pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other western softwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	64	23	41	9	105	24	1	1	1	1	2	1	107	24
Hardwoods:														
Alder / maple	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aspen / birch	3	2	1	1	4	2	--	--	--	--	--	--	4	2
Elm / ash / cottonwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tanoak / laurel	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western oak	--	--	8	6	8	6	--	--	--	--	--	--	8	6
Woodland hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Exotic hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	3	2	10	6	13	6	--	--	--	--	--	--	13	6
Nonstocked	4	2	18	6	22	7	--	--	--	--	--	--	22	7
All forest types	70	23	69	12	140	26	1	1	1	1	2	1	142	26

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D45: Belowground Carbon, Dry Weight of Dead Trees (>= 5 inch) by Forest Type and Forest Land Status, 2007-2016: Klamath Mountains

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
	<i>thousand metric tons C</i>													
Softwoods:														
Douglas-fir	1,305	125	28	11	1,333	126	85	28	--	--	85	28	1,418	129
Fir / spruce / mountain hemlock	120	27	--	--	120	27	--	--	--	--	--	--	120	27
Western Hemlock / Sitka spruce	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lodgepole pine	1	1	--	--	1	1	--	--	2	2	2	2	3	3
Pinyon / juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ponderosa pine	116	28	4	2	121	28	6	4	--	--	6	4	126	28
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western larch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western white pine	9	6	1	1	10	6	--	--	--	--	--	--	10	6
Other western softwoods	11	9	2	2	14	9	--	--	--	--	--	--	14	9
Total	1,563	131	35	12	1,598	131	90	28	2	2	92	28	1,690	134
Hardwoods:														
Alder / maple	13	8	--	--	13	8	3	1	--	--	3	1	16	8
Aspen / birch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Elm / ash / cottonwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tanoak / laurel	347	69	80	41	427	80	101	31	20	15	121	34	548	87
Western oak	137	29	63	22	200	36	58	37	38	34	96	50	296	62
Woodland hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Exotic hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	172	45	22	12	194	46	--	--	--	--	--	--	194	46
Total	669	87	166	48	835	99	162	47	58	38	220	57	1,055	114
Nonstocked	65	48	2	2	67	48	12	11	--	--	12	11	79	49
All forest types	2,297	160	203	50	2,500	167	264	59	60	38	324	66	2,824	179

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D46: Belowground Carbon, Dry Weight of Dead Trees (>= 5 inch) by Forest Type and Forest Land Status, 2007-2016: Oregon Coast Range

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
	<i>thousand metric tons C</i>													
Softwoods:														
Douglas-fir	2,568	174	3	3	2,571	174	94	51			94	51	2,664	181
Fir / spruce / mountain hemlock	1	1	--	--	1	1	--	--	--	--	--	--	1	1
Western Hemlock / Sitka spruce	464	78	--	--	464	78	59	31	--	--	59	31	523	83
Lodgepole pine	5	5	1	1	7	6							7	6
Pinyon / juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ponderosa pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western larch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western white pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other western softwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	3,039	187	4	3	3,043	187	153	59			153	59	3,196	195
Hardwoods:														
Alder / maple	385	58	4	4	389	58	2	2	--	--	2	2	391	58
Aspen / birch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Elm / ash / cottonwood	--	--					--	--	--	--	--	--		
Tanoak / laurel	65	18	2	2	67	18	6	4	--	--	6	4	73	18
Western oak	--	--	7	7	7	7	--	--	--	--	--	--	7	7
Woodland hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Exotic hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	4	4	--	--	4	4	--	--	--	--	--	--	4	4
Total	454	61	13	8	467	61	9	4	--	--	9	4	476	61
Nonstocked	6	3	--	--	6	3	--	--	--	--	--	--	6	3
All forest types	3,500	193	17	9	3,516	193	161	60			162	60	3,678	201

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D47: Belowground Carbon, Dry Weight of Dead Trees (>= 5 inch) by Forest Type and Forest Land Status, 2007-2016: Western Cascades

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
	<i>thousand metric tons C</i>													
Softwoods:														
Douglas-fir	3,803	171	25	11	3,828	171	1,044	160	--	--	1,044	160	4,873	232
Fir / spruce / mountain hemlock	1,204	98	63	19	1,267	100	1,296	149	134	53	1,430	153	2,697	181
Western Hemlock / Sitka spruce	673	84	--	--	673	84	295	88	--	--	295	88	968	121
Lodgepole pine	117	27	7	7	124	27	155	49	16	10	172	50	296	57
Pinyon / juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ponderosa pine	111	43	--	--	111	43	6	5	36	33	42	33	153	54
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western larch	12	12	--	--	12	12	--	--	--	--	--	--	12	12
Western white pine	2	1	--	--	2	1	--	--	--	--	--	--	2	1
Other western softwoods	1	1			1	1	--	--	--	--	--	--	1	1
Total	5,923	206	96	23	6,018	206	2,797	216	185	61	2,983	218	9,001	293
Hardwoods:														
Alder / maple	45	12			45	12	8	6			8	6	53	14
Aspen / birch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Elm / ash / cottonwood	3	2	--	--	3	2	5	5	--	--	5	5	9	6
Tanoak / laurel	7	5	--	--	7	5	--	--	--	--	--	--	7	5
Western oak	7	4	2	2	9	4	--	--	--	--	--	--	9	4
Woodland hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Exotic hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	4	2	10	10	14	10			--	--			15	10
Total	67	14	12	10	79	17	14	8			14	8	93	19
Nonstocked	142	44	1	1	142	44	305	124	--	--	305	124	448	131
All forest types	6,131	210	108	25	6,240	211	3,116	243	185	61	3,302	240	9,541	312

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D48: Belowground Carbon, Dry Weight of Dead Trees (>= 5 inch) by Forest Type and Forest Land Status, 2007-2016: Willamette Valley

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
	<i>thousand metric tons C</i>													
Softwoods:														
Douglas-fir	125	22	--	--	125	22	--	--	--	--	--	--	125	22
Fir / spruce / mountain hemlock	4	4	--	--	4	4	--	--	--	--	--	--	4	4
Western Hemlock / Sitka spruce	15	8	--	--	15	8	--	--	--	--	--	--	15	8
Lodgepole pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pinyon / juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ponderosa pine	4	5	--	--	4	5	--	--	--	--	--	--	4	5
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western larch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western white pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other western softwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	148	24	--	--	148	24	--	--	--	--	--	--	148	24
Hardwoods:														
Alder / maple	30	11	--	--	30	11	--	--	--	--	--	--	30	11
Aspen / birch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Elm / ash / cottonwood	4	2	--	--	4	2	--	--		1		1	5	2
Tanoak / laurel	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western oak	15	9	7	6	23	11	--	--	--	--	--	--	23	11
Woodland hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Exotic hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	8	7	--	--	8	7	--	--	--	--	--	--	8	7
Total	58	16	7	6	65	17	--	--		1		1	65	17
Nonstocked	--	--	--	--	--	--	--	--	--	--	--	--	--	--
All forest types	205	29	7	6	213	29	--	--		1		1	213	29

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D49: Soil Organic Carbon by Forest Type Group and Forest Land Status, 2007-2016: All Oregon

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total			
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
Softwoods:														
Douglas-fir	562,076.97	8,124.00	3,603.18	703.02	565,680.15	8,132.68	40,987.87	2,923.93	369.79	344.73	41,357.67	2,915.68	607,037.82	8,465.00
Fir / spruce / mountain hemlock	133,223.89	4,286.39	3,895.25	813.73	137,119.13	4,346.19	49,779.57	3,278.86	5,451.97	1,379.25	55,231.53	3,358.78	192,350.66	5,437.36
Western Hemlock / Sitka spruce	52,670.64	3,807.14	38.97	38.00	52,709.62	3,807.29	6,024.01	1,198.18	217.23	182.67	6,241.24	1,212.02	58,950.86	3,977.46
Lodgepole pine	73,867.79	2,968.27	2,542.83	737.75	76,410.62	3,040.13	13,316.39	1,755.93	2,476.86	851.37	15,793.25	1,928.25	92,203.87	3,564.52
Pinyon / juniper	29.31	23.52	1,224.06	515.04	1,253.37	515.58	--	--	--	--	--	--	1,253.37	515.58
Ponderosa pine	242,429.93	5,330.07	3,221.36	729.94	245,651.28	5,348.30	9,233.05	1,463.66	556.92	444.62	9,789.97	1,529.61	255,441.25	5,540.62
Redwood	367.24	346.09	--	--	367.24	346.09	--	--	--	--	--	--	367.24	346.09
Western juniper	16,008.62	1,602.75	102,272.28	4,837.94	118,280.90	5,058.61	889.13	539.00	2,277.53	787.54	3,166.66	954.33	121,447.56	5,100.35
Western larch	7,451.17	913.18	182.23	125.97	7,633.40	920.86	2,934.47	935.71	--	--	2,934.47	935.71	10,567.87	1,311.88
Western white pine	742.56	252.64	182.61	141.85	925.16	288.35	--	--	--	--	--	--	925.16	288.35
Other western softwoods	603.88	203.20	810.63	283.88	1,414.52	347.78	404.95	328.75	933.05	563.10	1,338.00	652.05	2,752.52	739.00
Total	1,089,472.00	8,221.03	117,973.40	5,083.29	1,207,445.40	9,017.68	123,569.43	3,730.72	12,283.36	1,938.95	135,852.79	3,770.18	1,343,298.19	9,081.50
Hardwoods:														
Alder / maple	61,058.42	3,885.86	970.55	390.03	62,028.97	3,902.29	1,543.29	556.71	34.78	35.34	1,578.06	557.83	63,607.03	3,934.31
Aspen / birch	1,457.80	588.91	1,601.54	651.70	3,059.34	878.32	--	--	--	--	--	--	3,059.34	878.32
Elm / ash / cottonwood	4,420.89	1,131.79	794.28	419.57	5,215.17	1,202.59	105.52	105.20	192.83	251.06	298.35	272.21	5,513.52	1,233.02
Tanoak / laurel	25,567.98	2,342.54	2,446.60	596.13	28,014.58	2,406.08	7,317.79	1,370.31	783.43	579.33	8,101.22	1,435.71	36,115.80	2,799.19
Western oak	15,968.02	2,003.58	20,159.25	2,285.21	36,127.27	3,006.89	1,110.92	611.58	1,139.43	647.38	2,250.35	878.90	38,377.62	3,123.38
Woodland hardwoods	1,118.78	583.03	1,265.07	526.91	2,383.85	785.35	--	--	--	--	--	--	2,383.85	785.35
Exotic hardwoods	7.33	7.42	--	--	7.33	7.42	--	--	--	--	--	--	7.33	7.42
Other hardwoods	19,030.01	2,255.96	3,584.19	1,031.98	22,614.20	2,465.28	965.84	561.51	30.39	30.76	996.23	562.35	23,610.43	2,528.56
Total	128,629.23	5,419.75	30,821.48	2,747.01	159,450.71	5,969.05	11,043.37	1,626.68	2,180.85	905.50	13,224.22	1,755.65	172,674.93	6,202.31
Nonstocked	45,295.66	2,925.38	6,827.34	1,379.54	52,123.00	3,229.50	7,012.72	1,397.92	164.43	113.36	7,177.15	1,402.39	59,300.15	3,519.24
All forest types	1,263,396.90	7,189.43	155,622.22	5,801.76	1,419,019.11	7,853.80	141,625.52	3,658.39	14,628.65	2,125.95	156,254.16	3,567.85	1,575,273.28	7,546.54

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D50: Soil Organic Carbon by Forest Type Group and Forest Land Status, 2007-2016: Blue Mountains

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total			
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
Softwoods:														
Douglas-fir	43,315.84	2,568.45	751.26	272.75	44,067.11	2,580.03	7,411.51	1,176.47	276.19	328.42	7,687.70	1,216.09	51,754.80	2,828.39
Fir / spruce / mountain hemlock	54,577.18	2,541.65	375.88	194.79	54,953.07	2,547.11	16,070.80	1,928.36	1,706.15	791.17	17,776.95	1,996.59	72,730.02	3,216.71
Western Hemlock / Sitka spruce	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lodgepole pine	18,865.77	1,443.12	--	--	18,865.77	1,443.12	5,223.88	1,148.35	--	--	5,223.88	1,148.35	24,089.65	1,841.44
Pinyon / juniper	29.31	23.52	121.09	59.91	150.40	64.36	--	--	--	--	--	--	150.40	64.36
Ponderosa pine	105,568.70	3,634.17	964.70	305.74	106,533.41	3,638.55	6,053.64	1,210.22	79.73	76.24	6,133.37	1,212.49	112,666.78	3,820.99
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western juniper	7,286.95	915.58	6,240.10	970.76	13,527.05	1,320.85	889.13	539.00	111.74	103.84	1,000.86	548.91	14,527.91	1,428.54
Western larch	7,328.06	906.70	182.23	125.97	7,510.29	914.43	2,934.47	935.71	--	--	2,934.47	935.71	10,444.76	1,307.37
Western white pine	59.39	69.60	--	--	59.39	69.60	--	--	--	--	--	--	59.39	69.60
Other western softwoods	266.82	152.21	388.77	186.76	655.59	239.29	--	--	476.31	420.69	476.31	420.69	1,131.89	483.98
Total	237,298.02	4,496.33	9,024.04	1,094.65	246,322.06	4,546.29	38,583.43	2,015.59	2,650.11	963.01	41,233.54	2,065.79	287,555.60	4,854.03
Hardwoods:														
Alder / maple	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aspen / birch	13.86	17.51	17.81	17.99	31.67	25.10	--	--	--	--	--	--	31.67	25.10
Elm / ash / cottonwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tanoak / laurel	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western oak	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Woodland hardwoods	466.36	362.50	251.88	142.76	718.24	389.60	--	--	--	--	--	--	718.24	389.60
Exotic hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	1,083.36	411.48	35.83	38.62	1,119.19	413.29	744.91	501.92	--	--	744.91	501.92	1,864.10	650.18
Total	1,563.58	548.66	305.53	148.98	1,869.11	568.53	744.91	501.92	--	--	744.91	501.92	2,614.01	758.28
Nonstocked	13,024.67	1,393.95	592.96	386.60	13,617.63	1,444.37	3,396.40	893.74	53.41	58.13	3,449.80	895.56	17,067.43	1,697.12
All forest types	251,886.26	4,631.60	9,922.53	1,167.60	261,808.80	4,686.10	42,724.73	2,155.63	2,703.52	964.76	45,428.25	2,193.86	307,237.05	5,020.41

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D51: Soil Organic Carbon by Forest Type Group and Forest Land Status, 2007-2016: East Cascades+Modoc

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
Softwoods:														
Douglas-fir	12,957.49	1,778.11	--	--	12,957.49	1,778.11	1,233.73	524.06	--	--	1,233.73	524.06	14,191.23	1,851.50
Fir / spruce / mountain hemlock	29,841.36	2,307.79	241.97	150.84	30,083.33	2,312.15	1,926.32	736.28	216.15	148.90	2,142.47	751.19	32,225.80	2,439.42
Western Hemlock / Sitka spruce	358.89	326.84	--	--	358.89	326.84	--	--	--	--	--	--	358.89	326.84
Lodgepole pine	47,809.14	2,417.38	1,561.17	530.70	49,370.31	2,458.96	2,674.51	625.52	631.61	428.81	3,306.12	752.24	52,676.43	2,556.37
Pinyon / juniper	--	--	406.32	307.80	406.32	307.80	--	--	--	--	--	--	406.32	307.80
Ponderosa pine	102,021.43	3,366.65	808.39	399.91	102,829.83	3,380.32	1,297.29	374.12	--	--	1,297.29	374.12	104,127.12	3,389.79
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western juniper	5,142.72	954.99	11,767.26	1,697.11	16,909.99	1,919.95	--	--	--	--	--	--	16,909.99	1,919.95
Western larch	14.86	14.82	--	--	14.86	14.82	--	--	--	--	--	--	14.86	14.82
Western white pine	132.93	104.95	--	--	132.93	104.95	--	--	--	--	--	--	132.93	104.95
Other western softwoods	129.73	94.75	104.56	98.24	234.29	136.49	288.00	311.42	--	--	288.00	311.42	522.29	340.02
Total	198,408.55	4,330.77	14,889.68	1,853.92	213,298.23	4,580.85	7,419.86	1,173.60	847.77	453.93	8,267.62	1,240.25	221,565.85	4,695.80
Hardwoods:														
Alder / maple	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aspen / birch	926.79	476.60	341.93	158.03	1,268.72	502.12	--	--	--	--	--	--	1,268.72	502.12
Elm / ash / cottonwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tanoak / laurel	230.69	149.90	--	--	230.69	149.90	--	--	--	--	--	--	230.69	149.90
Western oak	1,153.96	504.51	5,676.56	1,259.43	6,830.51	1,356.26	--	--	665.99	486.24	665.99	486.24	7,496.50	1,440.79
Woodland hardwoods	652.42	456.63	427.75	354.92	1,080.17	578.04	--	--	--	--	--	--	1,080.17	578.04
Exotic hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	1,626.82	606.05	593.67	411.09	2,220.50	731.88	--	--	--	--	--	--	2,220.50	731.88
Total	4,590.68	1,037.02	7,039.90	1,373.10	11,630.58	1,732.11	--	--	665.99	486.24	665.99	486.24	12,296.57	1,799.07
Nonstocked	13,546.03	1,508.73	459.78	342.25	14,005.81	1,545.64	248.80	288.04	--	--	248.80	288.04	14,254.61	1,572.25
All forest types	216,545.26	4,502.56	22,389.36	2,322.62	238,934.62	4,861.57	7,668.66	1,225.12	1,513.75	665.20	9,182.41	1,377.77	248,117.03	5,000.75

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D52: Soil Organic Carbon by Forest Type Group and Forest Land Status, 2007-2016: Eastern OR Lowlands

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
Softwoods:														
Douglas-fir	1,912.30	610.15	--	--	1,912.30	610.15	60.35	66.05	--	--	60.35	66.05	1,972.65	613.71
Fir / spruce / mountain hemlock	182.16	162.09	--	--	182.16	162.09	--	--	--	--	--	--	182.16	162.09
Western Hemlock / Sitka spruce	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lodgepole pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pinyon / juniper	--	--	696.65	408.68	696.65	408.68	--	--	--	--	--	--	696.65	408.68
Ponderosa pine	16,042.20	2,016.87	408.63	249.36	16,450.83	2,031.50	97.91	76.44	--	--	97.91	76.44	16,548.74	2,032.78
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western juniper	3,578.95	918.62	84,098.78	4,491.35	87,677.73	4,574.78	--	--	2,165.80	780.67	2,165.80	780.67	89,843.53	4,595.49
Western larch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western white pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other western softwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	21,715.61	2,292.66	85,204.06	4,514.56	106,919.67	5,004.25	158.26	101.02	2,165.80	780.67	2,324.06	787.18	109,243.73	5,023.44
Hardwoods:														
Alder / maple	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aspen / birch	517.15	345.48	1,241.80	632.00	1,758.95	720.27	--	--	--	--	--	--	1,758.95	720.27
Elm / ash / cottonwood	393.04	364.23	--	--	393.04	364.23	--	--	--	--	--	--	393.04	364.23
Tanoak / laurel	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western oak	82.19	83.05	869.13	509.32	951.32	516.04	--	--	--	--	--	--	951.32	516.04
Woodland hardwoods	--	--	585.44	362.34	585.44	362.34	--	--	--	--	--	--	585.44	362.34
Exotic hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	--	--	360.97	316.49	360.97	316.49	--	--	--	--	--	--	360.97	316.49
Total	992.38	508.84	3,057.35	943.44	4,049.72	1,071.88	--	--	--	--	--	--	4,049.72	1,071.88
Nonstocked	1,807.40	682.80	5,579.02	1,272.94	7,386.43	1,444.01	--	--	86.84	94.52	86.84	94.52	7,473.26	1,447.02
All forest types	24,515.39	2,449.56	93,840.43	4,737.40	118,355.82	5,252.64	158.26	101.02	2,252.63	786.37	2,410.90	792.83	120,766.72	5,269.90

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D53: Soil Organic Carbon by Forest Type Group and Forest Land Status, 2007-2016: Klamath Mountains

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
Softwoods:														
Douglas-fir	76,201.76	4,071.98	1,570.93	505.34	77,772.69	4,097.99	5,456.15	1,287.52	--	--	5,456.15	1,287.52	83,228.84	4,287.56
Fir / spruce / mountain hemlock	4,665.63	838.50	86.63	87.69	4,752.26	842.66	--	--	--	--	--	--	4,752.26	842.66
Western Hemlock / Sitka spruce	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lodgepole pine	110.76	112.11	--	--	110.76	112.11	--	--	324.23	394.14	324.23	394.14	434.99	409.78
Pinyon / juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ponderosa pine	10,969.73	1,565.37	1,039.63	470.32	12,009.36	1,632.26	746.68	519.12	--	--	746.68	519.12	12,756.04	1,711.01
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western larch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western white pine	397.34	198.74	182.61	141.85	579.94	242.53	--	--	--	--	--	--	579.94	242.53
Other western softwoods	113.42	82.84	217.18	159.07	330.60	179.02	--	--	--	--	--	--	330.60	179.02
Total	92,458.63	4,401.49	3,096.98	723.43	95,555.61	4,444.34	6,202.83	1,388.23	324.23	394.14	6,527.06	1,432.18	102,082.67	4,650.38
Hardwoods:														
Alder / maple	1,462.34	450.29	216.79	194.36	1,679.13	490.26	493.50	281.72	--	--	493.50	281.72	2,172.64	564.99
Aspen / birch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Elm / ash / cottonwood	0.65	0.66	--	--	0.65	0.66	--	--	--	--	--	--	0.65	0.66
Tanoak / laurel	14,699.55	1,703.81	2,376.09	591.75	17,075.64	1,790.62	5,489.65	1,269.76	783.43	579.33	6,273.08	1,359.15	23,348.72	2,245.93
Western oak	12,312.45	1,780.91	9,304.64	1,525.31	21,617.09	2,323.81	1,110.92	611.58	473.44	427.39	1,584.37	732.15	23,201.45	2,436.00
Woodland hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Exotic hardwoods	7.33	7.42	--	--	7.33	7.42	--	--	--	--	--	--	7.33	7.42
Other hardwoods	12,784.34	1,896.71	2,282.66	842.85	15,067.01	2,065.81	--	--	30.39	30.76	30.39	30.76	15,097.40	2,065.99
Total	41,266.67	3,068.67	14,180.19	1,842.48	55,446.86	3,531.84	7,094.08	1,370.90	1,287.26	720.57	8,381.34	1,453.70	63,828.20	3,813.58
Nonstocked	1,751.58	643.75	117.17	118.60	1,868.75	654.59	358.59	323.71	--	--	358.59	323.71	2,227.34	730.25
All forest types	135,476.88	5,163.95	17,394.34	1,999.17	152,871.22	5,456.45	13,655.50	1,732.07	1,611.49	801.88	15,266.99	1,735.14	168,138.21	5,690.45

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D54: Soil Organic Carbon by Forest Type Group and Forest Land Status, 2007-2016: Oregon Coast Range

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
Softwoods:														
Douglas-fir	208,291.73	6,819.79	333.97	247.40	208,625.70	6,825.24	2,434.36	895.35	93.60	104.81	2,527.96	901.46	211,153.66	6,859.56
Fir / spruce / mountain hemlock	1,040.41	586.21	--	--	1,040.41	586.21	--	--	--	--	--	--	1,040.41	586.21
Western Hemlock / Sitka spruce	29,978.52	3,232.32	--	--	29,978.52	3,232.32	1,614.05	728.18	217.23	182.67	1,831.28	750.74	31,809.80	3,311.90
Lodgepole pine	1,213.54	666.99	406.05	368.74	1,619.59	762.13	528.61	427.02	731.05	403.84	1,259.67	586.92	2,879.26	959.69
Pinyon / juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ponderosa pine	58.67	60.64	--	--	58.67	60.64	--	--	--	--	--	--	58.67	60.64
Redwood	367.24	346.09	--	--	367.24	346.09	--	--	--	--	--	--	367.24	346.09
Western juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western larch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western white pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other western softwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	240,950.12	7,229.46	740.01	444.04	241,690.13	7,242.38	4,577.02	1,225.98	1,041.89	453.95	5,618.91	1,296.88	247,309.05	7,295.17
Hardwoods:														
Alder / maple	46,018.54	3,491.78	421.00	256.81	46,439.55	3,498.49	433.20	319.00	--	--	433.20	319.00	46,872.75	3,506.69
Aspen / birch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Elm / ash / cottonwood	196.10	191.06	365.06	334.11	561.16	384.88	--	--	13.18	14.80	13.18	14.80	574.34	385.17
Tanoak / laurel	8,743.62	1,562.53	70.51	74.35	8,814.13	1,564.27	1,828.14	829.74	--	--	1,828.14	829.74	10,642.27	1,770.61
Western oak	--	--	359.39	359.49	359.39	359.49	--	--	--	--	--	--	359.39	359.49
Woodland hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Exotic hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	1,040.18	523.25	--	--	1,040.18	523.25	--	--	--	--	--	--	1,040.18	523.25
Total	55,998.45	3,854.43	1,215.96	558.88	57,214.40	3,888.24	2,261.34	888.89	13.18	14.80	2,274.52	888.85	59,488.92	3,982.87
Nonstocked	7,938.45	1,521.93	53.95	75.26	7,992.40	1,523.79	--	--	--	--	--	--	7,992.40	1,523.79
All forest types	304,887.02	7,755.94	2,009.92	717.43	306,896.94	7,785.36	6,838.36	1,535.48	1,055.07	454.19	7,893.44	1,592.00	314,790.37	7,857.53

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D55: Soil Organic Carbon by Forest Type Group and Forest Land Status, 2007-2016: Western Cascades

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
Softwoods:														
Douglas-fir	185,642.98	5,023.64	947.02	321.35	186,590.00	5,019.62	24,391.77	2,188.30	--	--	24,391.77	2,188.30	210,981.77	5,392.92
Fir / spruce / mountain hemlock	41,539.30	2,474.30	3,190.76	770.63	44,730.06	2,582.10	31,496.92	2,681.16	3,529.66	1,119.93	35,026.59	2,765.20	79,756.65	3,742.63
Western Hemlock / Sitka spruce	21,306.40	1,990.59	38.97	38.00	21,345.37	1,990.89	4,409.96	951.51	--	--	4,409.96	951.51	25,755.33	2,186.23
Lodgepole pine	5,792.10	753.88	575.61	356.09	6,367.71	831.51	4,889.38	1,100.22	789.97	471.71	5,679.35	1,191.78	12,047.06	1,446.38
Pinyon / juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ponderosa pine	7,550.48	1,031.99	--	--	7,550.48	1,031.99	1,037.53	512.24	477.19	438.04	1,514.72	673.99	9,065.20	1,232.19
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western juniper	--	--	166.13	156.57	166.13	156.57	--	--	--	--	--	--	166.13	156.57
Western larch	108.25	107.92	--	--	108.25	107.92	--	--	--	--	--	--	108.25	107.92
Western white pine	152.90	92.03	--	--	152.90	92.03	--	--	--	--	--	--	152.90	92.03
Other western softwoods	93.92	47.99	100.12	103.69	194.04	114.26	116.95	105.34	456.74	403.41	573.69	416.93	767.73	432.30
Total	262,186.32	5,579.44	5,018.62	928.50	267,204.94	5,616.13	66,342.51	3,037.50	5,253.56	1,321.43	71,596.08	3,036.18	338,801.02	6,124.90
Hardwoods:														
Alder / maple	7,948.48	1,424.01	102.59	63.44	8,051.08	1,426.95	569.39	353.62	34.78	35.34	604.17	355.38	8,655.24	1,469.97
Aspen / birch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Elm / ash / cottonwood	804.02	397.95	--	--	804.02	397.95	105.52	105.20	--	--	105.52	105.20	909.54	411.62
Tanoak / laurel	1,894.12	491.25	--	--	1,894.12	491.25	--	--	--	--	--	--	1,894.12	491.25
Western oak	1,036.36	545.81	1,458.57	618.75	2,494.92	821.44	--	--	--	--	--	--	2,494.92	821.44
Woodland hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Exotic hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	2,017.50	766.45	311.05	293.14	2,328.55	820.59	220.93	251.73	--	--	220.93	251.73	2,549.48	858.34
Total	13,700.47	1,810.19	1,872.21	687.04	15,572.68	1,934.25	895.85	446.64	34.78	35.34	930.63	448.03	16,503.31	1,984.44
Nonstocked	5,723.43	1,031.32	24.45	25.02	5,747.88	1,031.62	3,008.94	1,015.62	24.19	24.58	3,033.12	1,015.92	8,781.01	1,447.87
All forest types	281,610.23	5,855.76	6,915.28	1,153.74	288,525.51	5,920.87	70,247.30	3,066.16	5,312.53	1,322.12	75,559.82	3,016.59	364,085.33	6,376.71

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D56: Soil Organic Carbon by Forest Type Group and Forest Land Status, 2007-2016: Willamette Valley

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
Softwoods:														
Douglas-fir	33,754.87	3,003.84	--	--	33,754.87	3,003.84	--	--	--	--	--	--	33,754.87	3,003.84
Fir / spruce / mountain hemlock	1,377.84	625.93	--	--	1,377.84	625.93	285.52	284.84	--	--	285.52	284.84	1,663.36	687.27
Western Hemlock / Sitka spruce	1,026.83	526.24	--	--	1,026.83	526.24	--	--	--	--	--	--	1,026.83	526.24
Lodgepole pine	76.49	74.52	--	--	76.49	74.52	--	--	--	--	--	--	76.49	74.52
Pinyon / juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ponderosa pine	218.71	226.98	--	--	218.71	226.98	--	--	--	--	--	--	218.71	226.98
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western larch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western white pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other western softwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	36,454.75	3,123.72	--	--	36,454.75	3,123.72	285.52	284.84	--	--	285.52	284.84	36,740.27	3,134.61
Hardwoods:														
Alder / maple	5,629.05	1,184.66	230.16	210.65	5,859.21	1,203.25	47.19	65.84	--	--	47.19	65.84	5,906.40	1,203.94
Aspen / birch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Elm / ash / cottonwood	3,027.08	982.91	429.22	253.79	3,456.30	1,015.07	--	--	179.65	250.62	179.65	250.62	3,635.95	1,045.55
Tanoak / laurel	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western oak	1,383.06	556.96	2,490.97	778.93	3,874.03	957.32	--	--	--	--	--	--	3,874.03	957.32
Woodland hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Exotic hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	477.81	346.00	--	--	477.81	346.00	--	--	--	--	--	--	477.81	346.00
Total	10,517.00	1,657.51	3,150.35	845.75	13,667.36	1,846.88	47.19	65.84	179.65	250.62	226.84	254.84	13,894.20	1,860.94
Nonstocked	1,504.10	534.30	--	--	1,504.10	534.30	--	--	--	--	--	--	1,504.10	534.30
All forest types	48,475.85	3,578.35	3,150.35	845.75	51,626.20	3,656.75	332.71	292.35	179.65	250.62	512.36	382.20	52,138.57	3,671.47

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D57: Aboveground Carbon Mass of Down Dead Wood, by Forest Type and Forest Land Status, 2007-2016: All Oregon

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total			
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
Softwoods:														
Douglas-fir	69,204.41	1,536.50	288.76	85.58	69,493.17	1,536.71	5,443.84	541.46	36.12	40.72	5,479.97	539.64	74,973.14	1,614.19
Fir / spruce / mountain hemlock	17,109.98	659.26	489.47	136.14	17,599.44	671.18	6,140.65	522.87	401.51	156.86	6,542.15	535.42	24,141.60	850.38
Western Hemlock / Sitka spruce	9,343.42	834.87	23.84	23.24	9,367.26	835.16	1,796.90	419.28	1.15	1.12	1,798.06	419.28	11,165.32	929.11
Lodgepole pine	7,393.84	351.50	218.20	68.22	7,612.04	357.25	1,673.54	270.03	153.81	71.43	1,827.35	277.59	9,439.39	449.84
Pinyon / juniper	0.00	0.00	11.37	5.27	11.37	5.27	--	--	--	--	--	--	11.37	5.27
Ponderosa pine	14,002.74	439.30	188.76	63.39	14,191.50	442.67	696.25	159.25	39.95	33.65	736.20	162.76	14,927.70	470.21
Redwood	38.34	36.13	--	--	38.34	36.13	--	--	--	--	--	--	38.34	36.13
Western juniper	540.12	84.92	1,005.25	104.44	1,545.37	133.88	16.57	14.42	3.40	2.12	19.97	14.57	1,565.34	134.66
Western larch	1,056.59	145.31	24.91	21.37	1,081.50	146.68	377.89	138.06	--	--	377.89	138.06	1,459.39	201.30
Western white pine	80.29	37.83	1.50	1.27	81.80	37.85	--	--	--	--	--	--	81.80	37.85
Other western softwoods	92.23	49.59	36.86	17.94	129.09	52.70	18.28	15.58	3.95	2.38	22.23	15.77	151.32	55.01
Total	118,861.96	1,735.55	2,288.91	222.02	121,150.88	1,738.57	16,163.93	778.49	639.90	178.29	16,803.83	780.60	137,954.70	1,850.00
Hardwoods:														
Alder / maple	6,085.61	607.94	70.69	29.83	6,156.29	608.43	94.83	35.60	4.27	4.34	99.10	35.87	6,255.39	609.17
Aspen / birch	85.16	36.40	56.28	31.67	141.43	48.25	--	--	--	--	--	--	141.43	48.25
Elm / ash / cottonwood	182.78	61.23	4.36	2.33	187.14	61.27	28.72	28.63	14.14	19.72	42.86	34.77	230.00	70.44
Tanoak / laurel	2,574.34	398.37	77.09	20.85	2,651.43	398.74	577.78	143.47	15.07	11.24	592.85	143.37	3,244.28	423.48
Western oak	970.54	186.67	625.92	137.87	1,596.45	230.83	87.48	60.13	31.58	25.05	119.06	63.93	1,715.51	239.48
Woodland hardwoods	52.14	26.57	38.16	19.28	90.30	32.81	--	--	--	--	--	--	90.30	32.81
Exotic hardwoods	0.47	0.47	--	--	0.47	0.47	--	--	--	--	--	--	0.47	0.47
Other hardwoods	1,269.16	195.45	84.96	30.21	1,354.12	197.39	135.73	153.45	1.74	1.76	137.47	153.46	1,491.59	250.02
Total	11,220.19	771.86	957.44	150.27	12,177.63	784.01	924.54	218.21	66.80	34.13	991.33	218.28	13,168.97	813.06
Nonstocked	4,186.29	456.03	180.31	65.83	4,366.60	460.72	1,328.03	358.64	9.79	9.58	1,337.83	358.77	5,704.43	583.91
All forest types	134,268.44	1,794.83	3,426.67	275.01	137,695.11	1,797.21	18,416.50	849.29	716.49	181.71	19,132.99	845.47	156,828.10	1,925.14

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D58: Aboveground Carbon Mass of Down Dead Wood, by Forest Type and Forest Land Status, 2007-2016: Blue Mountains

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total			
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
Softwoods:														
Douglas-fir	3,378.99	234.37	39.37	17.80	3,418.36	234.93	546.67	101.91	34.20	40.66	580.86	108.99	3,999.22	256.92
Fir / spruce / mountain hemlock	7,140.25	361.39	35.19	20.03	7,175.44	361.63	2,075.03	307.94	57.43	25.57	2,132.46	307.83	9,307.90	472.26
Western Hemlock / Sitka spruce	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lodgepole pine	2,280.08	204.84	--	--	2,280.08	204.84	825.58	221.43	--	--	825.58	221.43	3,105.66	301.02
Pinyon / juniper	0.00	0.00	2.31	2.03	2.31	2.03	--	--	--	--	--	--	2.31	2.03
Ponderosa pine	6,251.17	297.92	44.12	18.41	6,295.29	298.23	485.71	148.20	3.48	3.33	489.19	148.23	6,784.48	332.14
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western juniper	225.63	50.29	79.62	18.39	305.25	53.38	16.57	14.42	0.10	0.09	16.67	14.42	321.92	55.30
Western larch	1,015.46	139.84	24.91	21.37	1,040.38	141.26	377.89	138.06	--	--	377.89	138.06	1,418.27	197.38
Western white pine	19.79	23.19	--	--	19.79	23.19	--	--	--	--	--	--	19.79	23.19
Other western softwoods	39.89	39.86	19.07	13.93	58.96	42.21	--	--	1.89	1.66	1.89	1.66	60.85	42.24
Total	20,351.27	491.30	244.59	45.78	20,595.86	490.64	4,327.46	354.64	97.09	48.18	4,424.54	355.22	25,020.40	592.89
Hardwoods:														
Alder / maple	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aspen / birch	0.31	0.39	--	--	0.31	0.39	--	--	--	--	--	--	0.31	0.39
Elm / ash / cottonwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tanoak / laurel	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western oak	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Woodland hardwoods	27.19	19.14	4.35	3.33	31.53	19.43	--	--	--	--	--	--	31.53	19.43
Exotic hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	91.04	51.95	0.01	0.01	91.04	51.95	132.14	153.39	--	--	132.14	153.39	223.18	161.95
Total	118.53	55.36	4.36	3.33	122.88	55.46	132.14	153.39	--	--	132.14	153.39	255.02	163.11
Nonstocked	767.66	108.02	7.69	5.24	775.35	108.13	724.40	272.00	0.38	0.41	724.78	272.00	1,500.13	292.65
All forest types	21,237.46	500.75	256.64	46.17	21,494.09	499.98	5,184.00	462.29	97.46	48.18	5,281.46	462.69	26,775.56	668.86

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D59: Aboveground Carbon Mass of Down Dead Wood, by Forest Type and Forest Land Status, 2007-2016: East Cascades+Modoc

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total			
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
Softwoods:														
Douglas-fir	1,356.06	240.34	--	--	1,356.06	240.34	144.02	58.77	--	--	144.02	58.77	1,500.08	247.16
Fir / spruce / mountain hemlock	3,185.81	280.72	18.93	12.91	3,204.74	280.96	300.97	132.53	7.84	5.41	308.81	132.64	3,513.54	312.10
Western Hemlock / Sitka spruce	157.74	153.01	--	--	157.74	153.01	--	--	--	--	--	--	157.74	153.01
Lodgepole pine	4,447.90	270.04	155.55	51.76	4,603.45	274.31	326.70	82.29	46.84	36.53	373.54	89.35	4,976.99	286.92
Pinyon / juniper	--	--	5.37	4.11	5.37	4.11	--	--	--	--	--	--	5.37	4.11
Ponderosa pine	5,921.30	274.60	68.00	38.22	5,989.30	276.74	103.98	38.55	--	--	103.98	38.55	6,093.28	278.48
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western juniper	167.08	41.74	267.16	72.59	434.24	83.25	--	--	--	--	--	--	434.24	83.25
Western larch	1.50	1.50	--	--	1.50	1.50	--	--	--	--	--	--	1.50	1.50
Western white pine	1.49	1.38	--	--	1.49	1.38	--	--	--	--	--	--	1.49	1.38
Other western softwoods	24.39	24.10	7.15	6.99	31.54	25.10	1.03	1.14	--	--	1.03	1.14	32.57	25.12
Total	15,263.27	512.29	522.15	99.42	15,785.42	517.68	876.70	170.63	54.68	36.93	931.38	173.73	16,716.80	541.84
Hardwoods:														
Alder / maple	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aspen / birch	50.59	27.46	9.89	5.34	60.47	27.98	--	--	--	--	--	--	60.47	27.98
Elm / ash / cottonwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tanoak / laurel	41.00	30.65	--	--	41.00	30.65	--	--	--	--	--	--	41.00	30.65
Western oak	53.05	32.17	72.77	26.37	125.82	41.59	--	--	4.03	2.96	4.03	2.96	129.85	41.70
Woodland hardwoods	24.95	18.43	19.35	17.27	44.30	25.25	--	--	--	--	--	--	44.30	25.25
Exotic hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	65.75	28.01	2.91	2.90	68.66	28.16	--	--	--	--	--	--	68.66	28.16
Total	235.34	62.01	104.91	31.90	340.25	69.71	--	--	4.03	2.96	4.03	2.96	344.28	69.77
Nonstocked	911.99	154.05	10.48	8.60	922.47	154.27	31.67	36.67	--	--	31.67	36.67	954.14	158.57
All forest types	16,410.61	529.41	637.54	104.40	17,048.14	534.55	908.37	174.73	58.71	37.05	967.08	177.78	18,015.22	558.91

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D60: Aboveground Carbon Mass of Down Dead Wood, by Forest Type and Forest Land Status, 2007-2016: Eastern OR Lowlands

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total			
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
	<i>thousand metric tons C</i>													
Softwoods:														
Douglas-fir	218.49	71.18	--	--	218.49	71.18	0.90	0.98	--	--	0.90	0.98	219.39	71.18
Fir / spruce / mountain hemlock	11.19	9.96	--	--	11.19	9.96	--	--	--	--	--	--	11.19	9.96
Western Hemlock / Sitka spruce	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lodgepole pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pinyon / juniper	--	--	3.70	2.60	3.70	2.60	--	--	--	--	--	--	3.70	2.60
Ponderosa pine	515.96	90.18	0.15	0.12	516.11	90.18	11.45	11.73	--	--	11.45	11.73	527.56	90.94
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western juniper	147.41	54.39	658.46	73.14	805.87	90.88	--	--	3.31	2.12	3.31	2.12	809.17	90.90
Western larch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western white pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other western softwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	893.04	126.88	662.31	73.19	1,555.35	145.82	12.35	11.77	3.31	2.12	15.66	11.96	1,571.01	146.30
Hardwoods:														
Alder / maple	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aspen / birch	34.27	23.89	46.39	31.22	80.65	39.31	--	--	--	--	--	--	80.65	39.31
Elm / ash / cottonwood	10.02	9.99	--	--	10.02	9.99	--	--	--	--	--	--	10.02	9.99
Tanoak / laurel	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western oak	0.18	0.18	7.24	7.36	7.42	7.36	--	--	--	--	--	--	7.42	7.36
Woodland hardwoods	--	--	14.46	7.91	14.46	7.91	--	--	--	--	--	--	14.46	7.91
Exotic hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	--	--	2.73	1.96	2.73	1.96	--	--	--	--	--	--	2.73	1.96
Total	44.47	25.89	70.82	33.09	115.29	42.02	--	--	--	--	--	--	115.29	42.02
Nonstocked	80.43	47.44	161.26	65.05	241.69	80.51	--	--	--	--	--	--	241.69	80.51
All forest types	1,017.94	140.00	894.40	102.41	1,912.34	171.59	12.35	11.77	3.31	2.12	15.66	11.96	1,927.99	171.99

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D61: Aboveground Carbon Mass of Down Dead Wood, by Forest Type and Forest Land Status, 2007-2016: Klamath Mountains

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total			
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
Softwoods:														
Douglas-fir	7,484.38	553.74	43.69	14.58	7,528.08	553.85	490.30	141.79	--	--	490.30	141.79	8,018.37	571.31
Fir / spruce / mountain hemlock	575.69	118.25	7.18	7.27	582.87	118.46	--	--	--	--	--	--	582.87	118.46
Western Hemlock / Sitka spruce	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lodgepole pine	3.50	3.54	--	--	3.50	3.54	--	--	10.65	12.94	10.65	12.94	14.14	13.42
Pinyon / juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ponderosa pine	550.58	109.45	76.49	47.44	627.06	119.23	29.36	19.87	--	--	29.36	19.87	656.43	120.83
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western larch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western white pine	17.24	12.51	1.50	1.27	18.74	12.56	--	--	--	--	--	--	18.74	12.56
Other western softwoods	22.78	16.68	10.50	8.89	33.28	18.82	--	--	--	--	--	--	33.28	18.82
Total	8,654.17	573.86	139.36	50.88	8,793.53	575.82	519.66	143.18	10.65	12.94	530.31	143.68	9,323.83	592.64
Hardwoods:														
Alder / maple	141.03	59.11	0.13	0.13	141.17	59.11	53.63	29.35	--	--	53.63	29.35	194.80	65.81
Aspen / birch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Elm / ash / cottonwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tanoak / laurel	1,474.66	276.25	75.21	20.77	1,549.87	276.82	434.93	131.09	15.07	11.24	450.00	131.19	1,999.87	306.20
Western oak	756.60	176.15	330.17	101.25	1,086.77	202.71	87.48	60.13	27.55	24.87	115.03	63.86	1,201.80	212.53
Woodland hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Exotic hardwoods	0.47	0.47	--	--	0.47	0.47	--	--	--	--	--	--	0.47	0.47
Other hardwoods	865.86	169.07	74.53	29.67	940.39	171.31	--	--	1.74	1.76	1.74	1.76	942.13	171.31
Total	3,238.62	369.52	480.05	107.44	3,718.66	383.78	576.04	141.24	44.36	27.35	620.40	140.69	4,339.06	408.29
Nonstocked	134.08	92.81	0.02	0.02	134.10	92.81	21.04	19.00	--	--	21.04	19.00	155.15	94.73
All forest types	12,026.87	676.23	619.43	120.51	12,646.29	685.91	1,116.74	184.62	55.01	29.99	1,171.75	182.48	13,818.04	707.84

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D62: Aboveground Carbon Mass of Down Dead Wood, by Forest Type and Forest Land Status, 2007-2016: Oregon Coast Range

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total			
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
Softwoods:														
Douglas-fir	25,781.39	1,196.22	12.36	13.00	25,793.74	1,196.18	356.85	164.17	1.93	2.21	358.78	164.19	26,152.52	1,204.74
Fir / spruce / mountain hemlock	112.35	75.16	--	--	112.35	75.16	--	--	--	--	--	--	112.35	75.16
Western Hemlock / Sitka spruce	4,622.80	646.92	--	--	4,622.80	646.92	124.55	59.11	1.15	1.12	125.70	59.12	4,748.50	648.85
Lodgepole pine	23.23	14.54	11.17	12.49	34.40	19.17	0.93	0.90	9.06	5.91	9.99	5.98	44.39	20.07
Pinyon / juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ponderosa pine	0.31	0.32	--	--	0.31	0.32	--	--	--	--	--	--	0.31	0.32
Redwood	38.34	36.13	--	--	38.34	36.13	--	--	--	--	--	--	38.34	36.13
Western juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western larch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western white pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other western softwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	30,578.42	1,320.26	23.53	18.03	30,601.95	1,320.24	482.33	174.48	12.14	6.32	494.47	174.57	31,096.42	1,327.10
Hardwoods:														
Alder / maple	4,754.54	535.06	60.04	29.13	4,814.58	535.58	18.66	14.87	--	--	18.66	14.87	4,833.24	535.50
Aspen / birch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Elm / ash / cottonwood	0.77	0.75	1.30	1.19	2.07	1.41	--	--	--	--	--	--	2.07	1.41
Tanoak / laurel	919.60	283.26	1.88	1.98	921.48	283.27	142.85	73.77	--	--	142.85	73.77	1,064.33	292.70
Western oak	--	--	40.73	40.74	40.73	40.74	--	--	--	--	--	--	40.73	40.74
Woodland hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Exotic hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	61.06	31.10	--	--	61.06	31.10	--	--	--	--	--	--	61.06	31.10
Total	5,735.97	606.31	103.95	50.14	5,839.92	608.07	161.51	75.24	--	--	161.51	75.24	6,001.43	612.44
Nonstocked	1,558.92	368.91	0.68	0.95	1,559.60	368.92	--	--	--	--	--	--	1,559.60	368.92
All forest types	37,873.31	1,435.99	128.16	53.23	38,001.47	1,436.43	643.85	190.07	12.14	6.32	655.99	190.16	38,657.46	1,443.19

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D63: Aboveground Carbon Mass of Down Dead Wood, by Forest Type and Forest Land Status, 2007-2016: Western Cascades

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total			
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
Softwoods:														
Douglas-fir	28,887.89	1,002.31	193.33	81.39	29,081.22	1,002.88	3,905.11	486.69	--	--	3,905.11	486.69	32,986.33	1,105.14
Fir / spruce / mountain hemlock	5,958.73	458.34	428.17	133.86	6,386.90	476.33	3,716.35	419.57	336.24	154.67	4,052.59	436.64	10,439.49	639.52
Western Hemlock / Sitka spruce	4,399.06	498.42	23.84	23.24	4,422.90	498.90	1,672.35	415.09	--	--	1,672.35	415.09	6,095.26	642.05
Lodgepole pine	639.13	100.07	51.48	42.66	690.61	108.73	520.32	131.90	87.27	59.71	607.58	144.39	1,298.19	180.25
Pinyon / juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ponderosa pine	756.82	129.45	--	--	756.82	129.45	65.74	37.13	36.48	33.48	102.22	49.99	859.03	138.69
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western juniper	--	--	0.00	0.00	0.00	0.00	--	--	--	--	--	--	0.00	0.00
Western larch	39.63	39.50	--	--	39.63	39.50	--	--	--	--	--	--	39.63	39.50
Western white pine	41.78	27.11	--	--	41.78	27.11	--	--	--	--	--	--	41.78	27.11
Other western softwoods	5.17	3.37	0.14	0.15	5.31	3.37	17.26	15.54	2.06	1.82	19.32	15.65	24.63	16.01
Total	40,728.21	1,144.10	696.97	171.36	41,425.17	1,151.30	9,897.13	701.16	462.04	167.45	10,359.17	709.15	51,784.34	1,313.91
Hardwoods:														
Alder / maple	896.44	281.66	8.99	6.27	905.43	281.75	22.42	13.70	4.27	4.34	26.69	14.37	932.12	282.11
Aspen / birch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Elm / ash / cottonwood	36.34	19.12	--	--	36.34	19.12	28.72	28.63	--	--	28.72	28.63	65.06	34.43
Tanoak / laurel	139.09	47.28	--	--	139.09	47.28	--	--	--	--	--	--	139.09	47.28
Western oak	77.50	40.09	46.12	26.71	123.62	48.08	--	--	--	--	--	--	123.62	48.08
Woodland hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Exotic hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	150.91	64.66	4.78	4.50	155.69	64.81	3.59	4.27	--	--	3.59	4.27	159.28	64.95
Total	1,300.28	295.88	59.89	27.80	1,360.17	297.13	54.73	32.02	4.27	4.34	59.00	32.32	1,419.16	298.86
Nonstocked	653.54	158.83	0.18	0.19	653.72	158.83	550.92	240.64	9.42	9.57	560.33	240.83	1,214.05	288.48
All forest types	42,682.02	1,183.37	757.04	173.59	43,439.06	1,190.35	10,502.78	732.40	475.72	167.78	10,978.50	736.07	54,417.56	1,361.48

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D64: Aboveground Carbon Mass of Down Dead Wood, by Forest Type and Forest Land Status, 2007-2016: Willamette Valley

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
	<i>thousand metric tons C</i>													
Softwoods:														
Douglas-fir	2,097.21	255.04	--	--	2,097.21	255.04	--	--	--	--	--	--	2,097.21	255.04
Fir / spruce / mountain hemlock	125.95	74.76	--	--	125.95	74.76	48.30	48.18	--	--	48.30	48.18	174.25	88.93
Western Hemlock / Sitka spruce	163.82	120.83	--	--	163.82	120.83	--	--	--	--	--	--	163.82	120.83
Lodgepole pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pinyon / juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ponderosa pine	6.61	6.86	--	--	6.61	6.86	--	--	--	--	--	--	6.61	6.86
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western larch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western white pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other western softwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	2,393.59	292.92	--	--	2,393.59	292.92	48.30	48.18	--	--	48.30	48.18	2,441.89	296.56
Hardwoods:														
Alder / maple	293.59	91.66	1.53	1.40	295.12	91.67	0.11	0.16	--	--	0.11	0.16	295.23	91.66
Aspen / birch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Elm / ash / cottonwood	135.65	57.38	3.06	2.00	138.71	57.42	--	--	14.14	19.72	14.14	19.72	152.85	60.71
Tanoak / laurel	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western oak	83.21	35.75	128.89	75.47	212.09	83.51	--	--	--	--	--	--	212.09	83.51
Woodland hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Exotic hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	34.54	33.29	--	--	34.54	33.29	--	--	--	--	--	--	34.54	33.29
Total	546.99	118.23	133.47	75.51	680.46	139.79	0.11	0.16	14.14	19.72	14.25	19.71	694.71	140.80
Nonstocked	79.67	54.35	--	--	79.67	54.35	--	--	--	--	--	--	79.67	54.35
All forest types	3,020.25	319.53	133.47	75.51	3,153.72	327.58	48.41	48.18	14.14	19.72	62.55	52.06	3,216.27	331.25

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D65: Forest Floor by Forest Type Group and Forest Land Status, 2007-2016: All Oregon

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total			
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
Softwoods:														
Douglas-fir	40,070.35	573.09	249.68	50.25	40,320.02	573.60	3,426.02	242.16	28.49	28.04	3,454.51	241.29	43,774.53	607.86
Fir / spruce / mountain hemlock	12,426.77	395.98	336.15	67.11	12,762.92	400.09	4,931.80	325.65	494.11	126.96	5,425.91	332.17	18,188.83	513.39
Western Hemlock / Sitka spruce	5,241.58	369.99	2.12	2.07	5,243.70	370.00	822.17	176.68	32.05	27.61	854.22	178.82	6,097.92	408.66
Lodgepole pine	6,033.44	251.73	188.29	53.65	6,221.73	256.06	1,213.80	163.61	214.11	74.35	1,427.91	177.91	7,649.64	308.29
Pinyon / juniper	1.69	1.36	45.56	18.30	47.25	18.35	--	--	--	--	--	--	47.25	18.35
Ponderosa pine	21,737.57	461.55	219.10	52.33	21,956.67	462.41	884.05	136.44	38.85	30.04	922.89	139.70	22,879.56	480.50
Redwood	26.63	25.09	--	--	26.63	25.09	--	--	--	--	--	--	26.63	25.09
Western juniper	890.04	88.71	3,543.21	176.74	4,433.25	195.49	49.08	30.95	86.72	30.95	135.80	43.77	4,569.05	198.91
Western larch	719.88	86.96	19.93	13.75	739.81	87.94	323.45	103.82	--	--	323.45	103.82	1,063.26	135.95
Western white pine	62.08	22.64	12.91	10.23	74.99	24.78	--	--	--	--	--	--	74.99	24.78
Other western softwoods	39.18	13.08	55.04	19.60	94.22	23.48	41.30	34.01	68.80	41.52	110.10	53.67	204.33	58.58
Total	87,249.21	651.05	4,671.98	210.74	91,921.19	653.89	11,691.67	366.23	963.13	160.15	12,654.80	361.04	104,575.99	675.25
Hardwoods:														
Alder / maple	3,338.14	213.12	64.45	27.97	3,402.59	214.77	90.74	33.06	2.03	2.06	92.77	33.12	3,495.36	216.93
Aspen / birch	94.90	36.99	75.66	28.52	170.55	46.70	--	--	--	--	--	--	170.55	46.70
Elm / ash / cottonwood	225.54	56.83	48.53	27.14	274.07	62.66	8.77	8.74	10.62	13.38	19.39	15.98	293.46	64.67
Tanoak / laurel	1,310.25	123.73	121.91	31.86	1,432.17	127.29	369.18	70.82	36.53	27.10	405.71	73.20	1,837.88	146.74
Western oak	812.40	102.29	956.87	108.60	1,769.27	147.62	57.57	32.03	56.62	32.39	114.18	44.90	1,883.46	153.90
Woodland hardwoods	69.93	36.84	71.30	31.12	141.23	48.19	--	--	--	--	--	--	141.23	48.19
Exotic hardwoods	0.43	0.43	--	--	0.43	0.43	--	--	--	--	--	--	0.43	0.43
Other hardwoods	1,280.82	153.49	221.56	67.12	1,502.39	166.52	67.06	39.20	2.76	2.79	69.82	39.30	1,572.21	171.09
Total	7,132.41	306.12	1,560.29	142.14	8,692.70	331.73	593.31	90.10	108.56	44.44	701.87	95.32	9,394.58	344.21
Nonstocked	2,598.31	180.74	230.87	47.18	2,829.18	186.57	384.44	81.55	7.50	4.93	391.94	81.69	3,221.11	203.61
All forest types	96,979.93	567.63	6,463.15	253.73	103,443.07	554.83	12,669.42	354.71	1,079.19	165.58	13,748.60	342.23	117,191.68	548.35

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D66: Forest Floor by Forest Type Group and Forest Land Status, 2007-2016: Blue Mountains

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total			
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
	<i>thousand metric tons C</i>													
Softwoods:														
Douglas-fir	3,499.24	205.09	49.15	18.06	3,548.38	205.70	610.83	98.54	23.02	27.38	633.85	101.89	4,182.23	227.57
Fir / spruce / mountain hemlock	4,817.66	221.98	26.51	13.72	4,844.17	222.23	1,505.28	183.09	129.36	59.56	1,634.63	186.13	6,478.81	288.05
Western Hemlock / Sitka spruce	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lodgepole pine	1,374.32	106.58	--	--	1,374.32	106.58	408.72	92.88	--	--	408.72	92.88	1,783.04	141.13
Pinyon / juniper	1.69	1.36	5.67	2.83	7.36	3.14	--	--	--	--	--	--	7.36	3.14
Ponderosa pine	9,297.77	310.52	63.68	21.06	9,361.45	310.68	571.70	113.86	6.93	6.63	578.64	114.04	9,940.08	329.38
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western juniper	435.32	55.48	325.54	49.85	760.86	73.96	49.08	30.95	6.30	5.86	55.39	31.50	816.24	80.29
Western larch	707.31	86.21	19.93	13.75	727.24	87.19	323.45	103.82	--	--	323.45	103.82	1,050.69	135.47
Western white pine	4.30	5.04	--	--	4.30	5.04	--	--	--	--	--	--	4.30	5.04
Other western softwoods	17.82	10.40	27.24	13.62	45.06	17.03	--	--	34.75	30.69	34.75	30.69	79.81	35.10
Total	20,155.43	369.07	517.72	62.05	20,673.14	369.17	3,469.06	182.04	200.36	72.91	3,669.42	183.61	24,342.57	399.20
Hardwoods:														
Alder / maple	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aspen / birch	0.75	0.94	1.13	1.14	1.88	1.48	--	--	--	--	--	--	1.88	1.48
Elm / ash / cottonwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tanoak / laurel	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western oak	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Woodland hardwoods	29.17	23.09	14.22	8.13	43.39	24.48	--	--	--	--	--	--	43.39	24.48
Exotic hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	64.62	24.17	1.93	2.08	66.54	24.26	47.11	31.74	--	--	47.11	31.74	113.66	39.95
Total	94.53	33.44	17.28	8.47	111.81	34.50	47.11	31.74	--	--	47.11	31.74	158.92	46.87
Nonstocked	593.97	68.68	19.61	11.99	613.58	69.66	155.91	41.93	2.26	2.46	158.18	42.00	771.75	81.23
All forest types	20,843.93	371.83	554.60	63.65	21,398.53	371.99	3,672.08	184.83	202.63	72.96	3,874.71	185.95	25,273.24	401.91

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D67: Forest Floor by Forest Type Group and Forest Land Status, 2007-2016: East Cascades+Modoc

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
	<i>thousand metric tons C</i>													
Softwoods:														
Douglas-fir	1,185.00	161.23	--	--	1,185.00	161.23	118.20	50.67	--	--	118.20	50.67	1,303.20	168.78
Fir / spruce / mountain hemlock	3,013.64	225.59	23.98	14.88	3,037.62	226.03	202.98	78.73	22.32	15.67	225.30	80.28	3,262.92	240.39
Western Hemlock / Sitka spruce	55.49	50.73	--	--	55.49	50.73	--	--	--	--	--	--	55.49	50.73
Lodgepole pine	4,020.03	212.84	107.60	33.30	4,127.63	214.37	254.57	61.13	62.06	42.57	316.63	73.90	4,444.26	225.45
Pinyon / juniper	--	--	16.46	11.65	16.46	11.65	--	--	--	--	--	--	16.46	11.65
Ponderosa pine	9,604.52	299.41	58.28	31.73	9,662.80	300.32	151.45	43.11	--	--	151.45	43.11	9,814.26	301.90
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western juniper	257.08	46.71	472.47	69.46	729.56	82.07	--	--	--	--	--	--	729.56	82.07
Western larch	1.13	1.13	--	--	1.13	1.13	--	--	--	--	--	--	1.13	1.13
Western white pine	15.68	13.11	--	--	15.68	13.11	--	--	--	--	--	--	15.68	13.11
Other western softwoods	8.03	5.16	8.00	7.66	16.04	9.24	29.51	32.31	--	--	29.51	32.31	45.54	33.60
Total	18,160.62	388.84	686.80	85.60	18,847.42	390.63	756.71	121.12	84.38	45.36	841.09	127.37	19,688.51	404.90
Hardwoods:														
Alder / maple	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aspen / birch	56.41	27.86	22.25	10.44	78.66	29.76	--	--	--	--	--	--	78.66	29.76
Elm / ash / cottonwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tanoak / laurel	13.21	8.62	--	--	13.21	8.62	--	--	--	--	--	--	13.21	8.62
Western oak	60.33	26.58	283.20	62.72	343.52	68.09	--	--	30.86	22.55	30.86	22.55	374.38	71.73
Woodland hardwoods	40.76	28.70	26.20	21.61	66.95	35.90	--	--	--	--	--	--	66.95	35.90
Exotic hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	89.32	32.47	32.02	22.15	121.33	39.27	--	--	--	--	--	--	121.33	39.27
Total	260.03	58.48	363.66	70.23	623.69	91.94	--	--	30.86	22.55	30.86	22.55	654.55	94.66
Nonstocked	743.85	84.40	21.52	16.90	765.37	86.01	22.99	26.61	--	--	22.99	26.61	788.35	90.04
All forest types	19,164.50	391.31	1,071.98	111.60	20,236.47	395.70	779.69	125.28	115.24	50.66	894.93	133.25	21,131.40	411.27

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D68: Forest Floor by Forest Type Group and Forest Land Status, 2007-2016: Eastern OR Lowlands

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total			
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
Softwoods:														
Douglas-fir	152.62	47.77	--	--	152.62	47.77	3.77	4.12	--	--	3.77	4.12	156.39	47.95
Fir / spruce / mountain hemlock	14.12	12.56	--	--	14.12	12.56	--	--	--	--	--	--	14.12	12.56
Western Hemlock / Sitka spruce	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lodgepole pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pinyon / juniper	--	--	23.43	13.82	23.43	13.82	--	--	--	--	--	--	23.43	13.82
Ponderosa pine	1,342.16	172.31	24.66	15.79	1,366.81	173.00	9.79	8.25	--	--	9.79	8.25	1,376.60	173.18
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western juniper	197.63	51.82	2,738.82	157.25	2,936.46	164.98	--	--	80.42	30.40	80.42	30.40	3,016.88	166.41
Western larch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western white pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other western softwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	1,706.53	185.83	2,786.91	158.56	4,493.44	240.64	13.55	9.22	80.42	30.40	93.97	31.76	4,587.41	241.74
Hardwoods:														
Alder / maple	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aspen / birch	37.74	24.31	52.27	26.52	90.01	35.97	--	--	--	--	--	--	90.01	35.97
Elm / ash / cottonwood	15.98	14.76	--	--	15.98	14.76	--	--	--	--	--	--	15.98	14.76
Tanoak / laurel	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western oak	4.07	4.11	43.77	25.22	47.84	25.56	--	--	--	--	--	--	47.84	25.56
Woodland hardwoods	--	--	30.89	20.87	30.89	20.87	--	--	--	--	--	--	30.89	20.87
Exotic hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	--	--	21.37	18.04	21.37	18.04	--	--	--	--	--	--	21.37	18.04
Total	57.79	28.73	148.30	45.83	206.09	54.09	--	--	--	--	--	--	206.09	54.09
Nonstocked	75.91	29.61	177.01	41.36	252.92	50.85	--	--	3.64	3.96	3.64	3.96	256.56	51.00
All forest types	1,840.23	191.23	3,112.22	168.49	4,952.45	249.72	13.55	9.22	84.06	30.65	97.61	32.01	5,050.06	250.76

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D69: Forest Floor by Forest Type Group and Forest Land Status, 2007-2016: Klamath Mountains

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
	<i>thousand metric tons C</i>													
Softwoods:														
Douglas-fir	5,869.78	321.81	103.15	35.19	5,972.93	323.43	361.36	85.38	--	--	361.36	85.38	6,334.29	334.06
Fir / spruce / mountain hemlock	413.77	74.54	7.73	7.82	421.50	74.91	--	--	--	--	--	--	421.50	74.91
Western Hemlock / Sitka spruce	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lodgepole pine	7.35	7.44	--	--	7.35	7.44	--	--	15.84	19.26	15.84	19.26	23.19	20.64
Pinyon / juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ponderosa pine	825.94	118.13	72.48	32.54	898.42	122.40	55.42	37.97	--	--	55.42	37.97	953.84	127.98
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western larch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western white pine	31.63	16.39	12.91	10.23	44.54	19.23	--	--	--	--	--	--	44.54	19.23
Other western softwoods	6.88	5.04	12.73	9.31	19.61	10.57	--	--	--	--	--	--	19.61	10.57
Total	7,155.35	347.24	209.00	50.23	7,364.35	349.89	416.78	93.44	15.84	19.26	432.62	94.92	7,796.97	361.09
Hardwoods:														
Alder / maple	96.65	30.07	14.58	13.26	111.23	32.86	28.68	18.12	--	--	28.68	18.12	139.91	37.51
Aspen / birch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Elm / ash / cottonwood	0.03	0.03	--	--	0.03	0.03	--	--	--	--	--	--	0.03	0.03
Tanoak / laurel	749.51	91.44	117.67	31.56	867.18	96.20	269.96	63.88	36.53	27.10	306.50	67.55	1,173.67	117.46
Western oak	626.70	90.51	425.81	69.32	1,052.51	112.96	57.57	32.03	25.76	23.25	83.33	38.82	1,135.83	119.42
Woodland hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Exotic hardwoods	0.43	0.43	--	--	0.43	0.43	--	--	--	--	--	--	0.43	0.43
Other hardwoods	847.90	125.61	149.81	58.75	997.71	137.95	--	--	2.76	2.79	2.76	2.79	1,000.46	137.97
Total	2,321.22	178.17	707.86	96.69	3,029.08	200.09	356.21	70.43	65.05	35.82	421.26	74.26	3,450.34	213.09
Nonstocked	110.11	41.29	6.43	6.51	116.54	41.80	20.90	18.86	--	--	20.90	18.86	137.44	45.86
All forest types	9,586.68	377.58	923.29	110.57	10,509.98	388.63	793.89	104.90	80.89	39.70	874.78	104.01	11,384.75	399.77

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D70: Forest Floor by Forest Type Group and Forest Land Status, 2007-2016: Oregon Coast Range

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total			
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
Softwoods:														
Douglas-fir	12,538.99	419.73	22.17	17.24	12,561.16	420.17	144.37	53.01	5.46	6.07	149.83	53.36	12,710.99	422.01
Fir / spruce / mountain hemlock	95.63	54.02	--	--	95.63	54.02	--	--	--	--	--	--	95.63	54.02
Western Hemlock / Sitka spruce	2,731.18	296.60	--	--	2,731.18	296.60	283.10	129.26	32.05	27.61	315.14	132.18	3,046.32	324.28
Lodgepole pine	90.88	49.99	36.57	33.65	127.46	60.26	36.40	29.16	53.01	27.64	89.41	40.10	216.87	72.21
Pinyon / juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ponderosa pine	3.42	3.54	--	--	3.42	3.54	--	--	--	--	--	--	3.42	3.54
Redwood	26.63	25.09	--	--	26.63	25.09	--	--	--	--	--	--	26.63	25.09
Western juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western larch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western white pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other western softwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	15,486.74	490.18	58.74	37.81	15,545.48	491.58	463.87	142.17	90.52	39.46	554.39	146.70	16,099.87	507.29
Hardwoods:														
Alder / maple	2,434.28	186.62	26.31	18.55	2,460.59	187.37	24.44	16.77	--	--	24.44	16.77	2,485.03	187.85
Aspen / birch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Elm / ash / cottonwood	12.97	12.64	25.94	23.74	38.91	26.90	--	--	1.07	1.20	1.07	1.20	39.98	26.92
Tanoak / laurel	434.23	79.10	4.24	4.48	438.48	79.23	99.22	45.38	--	--	99.22	45.38	537.69	91.30
Western oak	--	--	22.24	22.25	22.24	22.25	--	--	--	--	--	--	22.24	22.25
Woodland hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Exotic hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	89.21	44.32	--	--	89.21	44.32	--	--	--	--	--	--	89.21	44.32
Total	2,970.70	207.58	78.74	37.72	3,049.44	210.51	123.65	48.37	1.07	1.20	124.72	48.37	3,174.16	215.75
Nonstocked	548.02	106.25	4.81	6.71	552.83	106.47	--	--	--	--	--	--	552.83	106.47
All forest types	19,005.46	510.91	142.29	53.82	19,147.75	513.43	587.52	150.76	91.59	39.48	679.11	155.01	19,826.86	528.40

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D71: Forest Floor by Forest Type Group and Forest Land Status, 2007-2016: Western Cascades

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
	<i>thousand metric tons C</i>													
Softwoods:														
Douglas-fir	14,954.56	389.75	75.21	25.76	15,029.77	389.37	2,187.50	195.92	--	--	2,187.50	195.92	17,217.28	428.13
Fir / spruce / mountain hemlock	3,969.46	234.05	277.93	63.51	4,247.39	241.55	3,196.09	270.74	342.43	111.03	3,538.52	278.73	7,785.91	363.68
Western Hemlock / Sitka spruce	2,310.13	208.50	2.12	2.07	2,312.26	208.51	539.07	120.44	--	--	539.07	120.44	2,851.33	238.01
Lodgepole pine	535.49	71.98	44.11	25.25	579.60	76.08	514.11	117.22	83.20	50.81	597.31	127.15	1,176.91	147.60
Pinyon / juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ponderosa pine	648.11	90.69	--	--	648.11	90.69	95.68	47.78	31.92	29.30	127.60	56.04	775.71	106.58
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western juniper	--	--	6.37	6.01	6.37	6.01	--	--	--	--	--	--	6.37	6.01
Western larch	11.44	11.40	--	--	11.44	11.40	--	--	--	--	--	--	11.44	11.40
Western white pine	10.46	6.83	--	--	10.46	6.83	--	--	--	--	--	--	10.46	6.83
Other western softwoods	6.46	3.35	7.06	7.31	13.52	8.04	11.79	10.62	34.06	30.08	45.85	31.90	59.37	32.90
Total	22,446.10	461.71	412.81	73.68	22,858.91	464.07	6,544.25	302.13	491.61	126.04	7,035.85	299.52	29,894.76	523.59
Hardwoods:														
Alder / maple	510.97	90.43	6.48	4.21	517.45	90.64	34.44	21.58	2.03	2.06	36.47	21.68	553.92	93.16
Aspen / birch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Elm / ash / cottonwood	49.50	24.91	--	--	49.50	24.91	8.77	8.74	--	--	8.77	8.74	58.27	26.39
Tanoak / laurel	113.30	30.83	--	--	113.30	30.83	--	--	--	--	--	--	113.30	30.83
Western oak	54.01	29.90	62.74	25.69	116.75	39.23	--	--	--	--	--	--	116.75	39.23
Woodland hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Exotic hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	148.56	58.09	16.44	15.49	165.00	60.12	19.95	23.01	--	--	19.95	23.01	184.95	64.37
Total	876.34	117.77	85.66	30.27	962.00	121.54	63.15	32.73	2.03	2.06	65.18	32.80	1,027.19	125.83
Nonstocked	403.03	77.02	1.50	1.53	404.52	77.04	184.64	63.08	1.60	1.62	186.24	63.10	590.76	99.58
All forest types	23,725.46	476.25	499.97	79.58	24,225.44	479.00	6,792.04	300.45	495.23	126.07	7,287.27	294.98	31,512.71	532.68

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table D72: Forest Floor by Forest Type Group and Forest Land Status, 2007-2016: Willamette Valley

Forest type group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total			
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
Softwoods:														
Douglas-fir	1,870.16	168.94	--	--	1,870.16	168.94	--	--	--	--	--	--	1,870.16	168.94
Fir / spruce / mountain hemlock	102.48	46.31	--	--	102.48	46.31	27.46	27.39	--	--	27.46	27.39	129.94	53.77
Western Hemlock / Sitka spruce	144.77	75.64	--	--	144.77	75.64	--	--	--	--	--	--	144.77	75.64
Lodgepole pine	5.37	5.23	--	--	5.37	5.23	--	--	--	--	--	--	5.37	5.23
Pinyon / juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ponderosa pine	15.66	16.25	--	--	15.66	16.25	--	--	--	--	--	--	15.66	16.25
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western larch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western white pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other western softwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	2,138.44	191.04	--	--	2,138.44	191.04	27.46	27.39	--	--	27.46	27.39	2,165.90	192.81
Hardwoods:														
Alder / maple	296.24	62.44	17.08	15.63	313.32	64.37	3.18	4.44	--	--	3.18	4.44	316.50	64.43
Aspen / birch	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Elm / ash / cottonwood	147.06	47.67	22.59	13.15	169.65	49.45	--	--	9.55	13.32	9.55	13.32	179.20	51.21
Tanoak / laurel	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western oak	67.29	27.02	119.12	37.56	186.42	46.26	--	--	--	--	--	--	186.42	46.26
Woodland hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Exotic hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	41.22	30.26	--	--	41.22	30.26	--	--	--	--	--	--	41.22	30.26
Total	551.81	87.69	158.79	42.75	710.60	96.80	3.18	4.44	9.55	13.32	12.73	13.76	723.34	97.54
Nonstocked	123.42	43.47	--	--	123.42	43.47	--	--	--	--	--	--	123.42	43.47
All forest types	2,813.67	216.12	158.79	42.75	2,972.46	219.27	30.64	27.75	9.55	13.32	40.19	30.65	3,012.65	221.07

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Appendix 2: 2007-2016 Oregon FIA forest carbon inventory tables

Table A1: Area of Sampled Land by Land Status and Owner Group, 2007-2016: All Oregon

Land status	Ownership group									
	National forest		Other federal		State and local govt.		Private		Total	
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand acres</i>										
Unreserved forest land:										
Timberland	11,079	53	2,260	57	961	42	9,373	112	23,674	130
Other unreserved forest land	527	29	1,180	73	122	26	1,303	83	3,132	117
Total, unreserved	11,606	49	3,440	85	1,084	48	10,676	118	26,805	147
Reserved forest land:										
Reserved productive forest land	2,272	52	248	37	54	18	--	--	2,573	66
Other reserved forest land	195	33	71	21	10	7	--	--	276	40
Total, reserved forest land	2,466	46	319	42	64	19	--	--	2,850	65
Total, forest land	14,073	48	3,759	78	1,148	48	10,676	118	29,655	141
Nonforest and other area:										
Nonforest land	1,524	43	13,228	103	1,089	65	15,750	133	31,590	146
Noncensus water	30	8	41	16	48	15	117	24	238	33
Census water	--	--	--	--	1,522	47	--	--	1,522	47
Total, nonforest and other area	1,554	43	13,269	103	2,659	77	15,867	133	33,350	140
Total, all sampled area	15,627	26	17,028	84	3,807	87	26,543	103	63,005	26

Table A2: Area of Sampled Land by Land Status and Owner Group, 2007-2016: Blue Mountains

Land status	Ownership group									
	National forest		Other federal		State and local govt.		Private		Total	
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand acres</i>										
Unreserved forest land:										
Timberland	3,591	34	75	21	47	17	1,161	79	4,875	90
Other unreserved forest land	149	16	7	7	--	--	35	15	192	23
Total, unreserved	3,741	33	83	22	47	17	1,197	80	5,067	91
Reserved forest land:										
Reserved productive forest land	807	40	--	--	--	--	--	--	807	40
Other reserved forest land	49	17	--	--	--	--	--	--	49	17
Total, reserved forest land	855	41	--	--	--	--	--	--	855	41
Total, forest land	4,596	47	83	22	47	17	1,197	80	5,922	97
Nonforest and other area:										
Nonforest land	886	35	93	24	32	13	1,363	88	2,375	98
Noncensus water	1	1	--	--	8	6	--	--	9	6
Census water	--	--	--	--	7	6	--	--	7	6
Total, nonforest and other area	888	35	93	24	47	16	1,363	88	2,391	99
Total, all sampled area	5,483	42	176	33	94	24	2,560	120	8,313	133

Table A3: Area of Sampled Land by Land Status and Owner Group, 2007-2016: East Cascades+Modoc

Land status	Ownership group									
	National forest		Other federal		State and local govt.		Private		Total	
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
	<i>thousand acres</i>									
Unreserved forest land:										
Timberland	2,826	35	126	27	90	22	1,522	80	4,565	93
Other unreserved forest land	100	13	88	23	19	10	252	38	459	48
Total, unreserved	2,926	34	215	34	109	25	1,773	86	5,024	100
Reserved forest land:										
Reserved productive forest land	132	21	26	13	--	--	--	--	158	24
Other reserved forest land	18	10	13	9	--	--	--	--	31	14
Total, reserved forest land	150	22	39	16	--	--	--	--	189	28
Total, forest land	3,077	38	254	38	109	25	1,773	86	5,213	103
Nonforest and other area:										
Nonforest land	253	16	168	32	67	19	1,035	77	1,523	87
Noncensus water	2	1	6	6	6	6	25	12	39	15
Census water	--	--	--	--	122	26	--	--	122	26
Total, nonforest and other area	255	16	174	33	195	33	1,060	78	1,684	92
Total, all sampled area	3,331	37	428	49	305	42	2,833	114	6,897	135

Table A4: Area of Sampled Land by Land Status and Owner Group, 2007-2016: Eastern OR Lowlands

Land status	Ownership group									
	National forest		Other federal		State and local govt.		Private		Total	
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand acres</i>										
Unreserved forest land:										
Timberland	111	14	63	19	4	5	303	41	482	48
Other unreserved forest land	110	13	1,001	68	94	24	727	64	1,931	97
Total, unreserved	221	19	1,064	70	98	24	1,031	75	2,414	107
Reserved forest land:										
Reserved productive forest land	3	2	--	--	--	--	--	--	3	2
Other reserved forest land	2	2	45	16	--	--	--	--	47	16
Total, reserved forest land	5	3	45	16	--	--	--	--	50	16
Total, forest land	226	19	1,109	70	98	24	1,031	75	2,464	107
Nonforest and other area:										
Nonforest land	150	14	12,816	104	684	52	10,169	162	23,819	180
Noncensus water			31	14	11	8	18	11	60	19
Census water	--	--	--	--	295	41	--	--	295	41
Total, nonforest and other area	150	14	12,846	104	990	65	10,188	162	24,174	181
Total, all sampled area	375	21	13,956	94	1,089	67	11,218	169	26,638	181

Table A5: Area of Sampled Land by Land Status and Owner Group, 2007-2016: Klamath Mountains

Land status	Ownership group									
	National forest		Other federal		State and local govt.		Private		Total	
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand acres</i>										
Unreserved forest land:										
Timberland	735	27	720	57	74	21	974	72	2,503	97
Other unreserved forest land	94	13	72	21			156	29	322	38
Total, unreserved	829	26	791	60	74	21	1,130	78	2,825	103
Reserved forest land:										
Reserved productive forest land	195	26	32	13	--	--	--	--	228	29
Other reserved forest land	28	14	--	--	--	--	--	--	28	14
Total, reserved forest land	223	26	32	13	--	--	--	--	255	29
Total, forest land	1,052	36	824	60	74	21	1,130	78	3,080	107
Nonforest and other area:										
Nonforest land	20	5	53	14	51	16	466	50	590	55
Noncensus water	5	2	1	1	1	1	12	6	19	7
Census water	--	--	--	--	15	8	--	--	15	8
Total, nonforest and other area	25	5	54	14	67	18	478	51	625	57
Total, all sampled area	1,077	37	878	63	141	28	1,609	96	3,705	124

Table A6: Area of Sampled Land by Land Status and Owner Group, 2007-2016: Oregon Coast Range

Land status	Ownership group									
	National forest		Other federal		State and local govt.		Private		Total	
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand acres</i>										
Unreserved forest land:										
Timberland	716	20	772	55	667	37	2,935	111	5,089	129
Other unreserved forest land	6	3	11	9	--	--	18	9	36	13
Total, unreserved	722	20	783	56	667	37	2,953	111	5,126	130
Reserved forest land:										
Reserved productive forest land	63	18	8	7	41	16	--	--	111	25
Other reserved forest land	10	4			7	6	--	--	17	7
Total, reserved forest land	73	19	9	7	47	17	--	--	129	26
Total, forest land	795	26	792	56	714	38	2,953	111	5,254	131
Nonforest and other area:										
Nonforest land	27	8	46	14	84	19	479	49	636	55
Noncensus water			4	4	19	9	27	9	50	14
Census water	--	--	--	--	915	51	--	--	915	51
Total, nonforest and other area	28	8	49	15	1,018	55	506	50	1,601	74
Total, all sampled area	822	27	841	59	1,733	66	3,459	123	6,855	151

Table A7: Area of Sampled Land by Land Status and Owner Group, 2007-2016: Western Cascades

Land status	Ownership group									
	National forest		Other federal		State and local govt.		Private		Total	
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
	<i>thousand acres</i>									
Unreserved forest land:										
Timberland	3,099	41	422	46	45	16	1,621	89	5,187	109
Other unreserved forest land	68	11	--	--	--	--	62	19	130	22
Total, unreserved	3,167	41	422	46	45	16	1,683	90	5,317	111
Reserved forest land:										
Reserved productive forest land	1,072	45	181	31	6	6	--	--	1,259	55
Other reserved forest land	89	23	13	9	--	--	--	--	102	25
Total, reserved forest land	1,161	43	194	32	6	6	--	--	1,361	54
Total, forest land	4,328	52	616	54	51	18	1,683	90	6,678	119
Nonforest and other area:										
Nonforest land	188	23	39	12	19	10	114	19	358	33
Noncensus water	22	8	--	--	3	2	17	9	42	12
Census water	--	--	--	--	100	23	--	--	100	23
Total, nonforest and other area	209	24	39	12	122	25	131	21	501	42
Total, all sampled area	4,537	53	654	56	173	31	1,813	95	7,178	126

Table A8: Area of Sampled Land by Land Status and Owner Group, 2007-2016: Willamette Valley

Land status	Ownership group									
	National forest		Other federal		State and local govt.		Private		Total	
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand acres</i>										
Unreserved forest land:										
Timberland	--	--	82	22	33	14	857	67	972	72
Other unreserved forest land	--	--	--	--	9	5	52	15	61	16
Total, unreserved	--	--	82	22	42	14	909	68	1,033	73
Reserved forest land:										
Reserved productive forest land	--	--	--	--	7	6	--	--	7	6
Other reserved forest land	--	--	--	--	3	4	--	--	3	4
Total, reserved forest land	--	--	--	--	10	8	--	--	10	8
Total, forest land	--	--	82	22	53	16	909	68	1,043	73
Nonforest and other area:										
Nonforest land	--	--	14	9	152	29	2,124	106	2,289	109
Noncensus water	--	--	--	--	--	--	19	9	19	9
Census water	--	--	--	--	68	20	--	--	68	20
Total, nonforest and other area	--	--	14	9	219	35	2,142	106	2,376	111
Total, all sampled area	--	--	96	24	272	40	3,051	128	3,419	136

Table A9: Area of forest land by Owner Group and Forest Land Status, 2007-2016: All Oregon

Owner class	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total			
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand acres</i>														
USDA Forest Service:														
National Forest	11,079	53	512	29	11,591	49	2,272	52	195	33	2,466	46	14,058	48
National Grasslands	--	--	15	5	15	5	--	--	--	--	--	--	15	5
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	11,079	53	527	29	11,606	49	2,272	52	195	33	2,466	46	14,073	48
Other federal government:														
Bureau of Land Management	2,254	57	1,180	73	3,434	84	80	21	51	18	131	28	3,565	82
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	148	29	13	9	161	30	161	30
U.S. Fish and Wildlife Service	--	--	--	--	--	--	11	8	7	6	18	10	18	10
Other federal	6	6	--	--	6	6	9	7	--	--	9	7	15	9
Total	2,260	57	1,180	73	3,440	85	248	37	71	21	319	42	3,759	78
State and local government:														
Local	145	29	42	15	186	33	17	10	--	--	17	10	203	34
State	817	36	80	21	897	41	37	15	10	7	48	16	945	41
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	961	42	122	26	1,084	48	54	18	10	7	64	19	1,148	48
Private:														
Corporate	6,306	129	278	40	6,585	133	--	--	--	--	--	--	6,585	133
Noncorporate private:														
Total, noncorporate private	3,067	114	1,025	74	4,091	131	--	--	--	--	--	--	4,091	131
All private	9,373	112	1,303	83	10,676	118	--	--	--	--	--	--	10,676	118
All owners	23,674	130	3,132	117	26,805	147	2,573	66	276	40	2,850	65	29,655	141

Note: Totals may be off because of rounding; data subject to sampling error; SE = standard error; -- = less than 500 acre were estimated.

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table A10: Area of forest land by Owner Group and Forest Land Status, 2007-2016: Blue Mountains

Owner class	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand acres</i>														
USDA Forest Service:														
National Forest	3,591	34	149	16	3,741	33	807	40	49	17	855	41	4,596	47
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	3,591	34	149	16	3,741	33	807	40	49	17	855	41	4,596	47
Other federal government:														
Bureau of Land Management	75	21	7	7	83	22	--	--	--	--	--	--	83	22
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
U.S. Fish and Wildlife Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other federal	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	75	21	7	7	83	22	--	--	--	--	--	--	83	22
State and local government:														
Local	23	12	--	--	23	12	--	--	--	--	--	--	23	12
State	24	12	--	--	24	12	--	--	--	--	--	--	24	12
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	47	17	--	--	47	17	--	--	--	--	--	--	47	17
Private:														
Corporate	583	58	13	9	596	59	--	--	--	--	--	--	596	59
Noncorporate private:														
Total, noncorporate private	578	57	22	11	601	58	--	--	--	--	--	--	601	58
All private	1,161	79	35	15	1,197	80	--	--	--	--	--	--	1,197	80
All owners	4,875	90	192	23	5,067	91	807	40	49	17	855	41	5,922	97

Note: Totals may be off because of rounding; data subject to sampling error; SE = standard error; -- = less than 500 acre were estimated.

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table A11: Area of forest land by Owner Group and Forest Land Status, 2007-2016: East Cascades+Modoc

Owner class	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand acres</i>														
USDA Forest Service:														
National Forest	2,826	35	100	13	2,926	34	132	21	18	10	150	22	3,077	38
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	2,826	35	100	13	2,926	34	132	21	18	10	150	22	3,077	38
Other federal government:														
Bureau of Land Management	126	27	88	23	215	34	17	11	13	9	30	14	244	37
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
U.S. Fish and Wildlife Service	--	--	--	--	--	--	9	8	--	--	9	8	9	8
Other federal	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	126	27	88	23	215	34	26	13	13	9	39	16	254	38
State and local government:														
Local	18	10	15	9	34	14	--	--	--	--	--	--	34	14
State	72	20	4	5	76	21	--	--	--	--	--	--	76	21
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	90	22	19	10	109	25	--	--	--	--	--	--	109	25
Private:														
Corporate	1,073	70	46	16	1,119	71	--	--	--	--	--	--	1,119	71
Noncorporate private:														
Total, noncorporate private	449	50	206	35	654	61	--	--	--	--	--	--	654	61
All private	1,522	80	252	38	1,773	86	--	--	--	--	--	--	1,773	86
All owners	4,565	93	459	48	5,024	100	158	24	31	14	189	28	5,213	103

Note: Totals may be off because of rounding; data subject to sampling error; SE = standard error; -- = less than 500 acre were estimated.

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table A12: Area of forest land by Owner Group and Forest Land Status, 2007-2016: Eastern OR Lowlands

Owner class	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand acres</i>														
USDA Forest Service:														
National Forest	111	14	95	12	206	18	3	2	2	2	5	3	211	18
National Grasslands	--	--	15	5	15	5	--	--	--	--	--	--	15	5
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	111	14	110	13	221	19	3	2	2	2	5	3	226	19
Other federal government:														
Bureau of Land Management	63	19	1,001	68	1,064	70	--	--	39	15	39	15	1,103	70
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
U.S. Fish and Wildlife Service	--	--	--	--	--	--	--	--	7	6	7	6	7	6
Other federal	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	63	19	1,001	68	1,064	70	--	--	45	16	45	16	1,109	70
State and local government:														
Local			21	12	22	12	--	--	--	--	--	--	22	12
State	4	5	73	21	77	21	--	--	--	--	--	--	77	21
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	4	5	94	24	98	24	--	--	--	--	--	--	98	24
Private:														
Corporate	85	23	136	28	221	36	--	--	--	--	--	--	221	36
Noncorporate private:														
Total, noncorporate private	218	35	591	58	810	66	--	--	--	--	--	--	810	66
All private	303	41	727	64	1,031	75	--	--	--	--	--	--	1,031	75
All owners	482	48	1,931	97	2,414	107	3	2	47	16	50	16	2,464	107

Note: Totals may be off because of rounding; data subject to sampling error; SE = standard error; -- = less than 500 acre were estimated.

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table A13: Area of forest land by Owner Group and Forest Land Status, 2007-2016: Klamath Mountains

Owner class	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand acres</i>														
USDA Forest Service:														
National Forest	735	27	94	13	829	26	195	26	28	14	223	26	1,052	36
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	735	27	94	13	829	26	195	26	28	14	223	26	1,052	36
Other federal government:														
Bureau of Land Management	714	57	72	21	785	59	30	13	--	--	30	13	815	60
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
U.S. Fish and Wildlife Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other federal	6	6	--	--	6	6	2	2	--	--	2	2	9	7
Total	720	57	72	21	791	60	32	13	--	--	32	13	824	60
State and local government:														
Local	51	17	--	--	51	17	--	--	--	--	--	--	51	17
State	23	12	--	--	23	12	--	--	--	--	--	--	23	12
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	74	21			74	21	--	--	--	--	--	--	74	21
Private:														
Corporate	570	57	29	12	599	58	--	--	--	--	--	--	599	58
Noncorporate private:														
Total, noncorporate private	404	46	127	26	531	54	--	--	--	--	--	--	531	54
All private	974	72	156	29	1,130	78	--	--	--	--	--	--	1,130	78
All owners	2,503	97	322	38	2,825	103	228	29	28	14	255	29	3,080	107

Note: Totals may be off because of rounding; data subject to sampling error; SE = standard error; -- = less than 500 acre were estimated.

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table A14: Area of forest land by Owner Group and Forest Land Status, 2007-2016: Oregon Coast Range

Owner class	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand acres</i>														
USDA Forest Service:														
National Forest	716	20	6	3	722	20	63	18	10	4	73	19	795	26
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	716	20	6	3	722	20	63	18	10	4	73	19	795	26
Other federal government:														
Bureau of Land Management	772	55	11	9	783	56	--	--	--	--	--	--	783	56
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
U.S. Fish and Wildlife Service	--	--	--	--	--	--	2	2			2	2	2	2
Other federal	--	--	--	--	--	--	6	6	--	--	6	6	6	6
Total	772	55	11	9	783	56	8	7			9	7	792	56
State and local government:														
Local	44	16	--	--	44	16	10	8	--	--	10	8	54	18
State	623	37	--	--	623	37	30	13	7	6	37	14	660	38
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	667	37	--	--	667	37	41	16	7	6	47	17	714	38
Private:														
Corporate	2,334	103	12	8	2,346	103	--	--	--	--	--	--	2,346	103
Noncorporate private:														
Total, noncorporate private	601	57	6	4	607	58	--	--	--	--	--	--	607	58
All private	2,935	111	18	9	2,953	111	--	--	--	--	--	--	2,953	111
All owners	5,089	129	36	13	5,126	130	111	25	17	7	129	26	5,254	131

Note: Totals may be off because of rounding; data subject to sampling error; SE = standard error; -- = less than 500 acre were estimated.

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table A15: Area of forest land by Owner Group and Forest Land Status, 2007-2016: Western Cascades

Owner class	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand acres</i>														
USDA Forest Service:														
National Forest	3,099	41	68	11	3,167	41	1,072	45	89	23	1,161	43	4,328	52
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	3,099	41	68	11	3,167	41	1,072	45	89	23	1,161	43	4,328	52
Other federal government:														
Bureau of Land Management	422	46	--	--	422	46	33	14	--	--	33	14	455	47
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	148	29	13	9	161	30	161	30
U.S. Fish and Wildlife Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other federal	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	422	46	--	--	422	46	181	31	13	9	194	32	616	54
State and local government:														
Local	6	6	--	--	6	6	--	--	--	--	--	--	6	6
State	39	15	--	--	39	15	6	6	--	--	6	6	45	16
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	45	16	--	--	45	16	6	6	--	--	6	6	51	18
Private:														
Corporate	1,288	80	23	11	1,312	81	--	--	--	--	--	--	1,312	81
Noncorporate private:														
Total, noncorporate private	333	44	38	15	371	46	--	--	--	--	--	--	371	46
All private	1,621	89	62	19	1,683	90	--	--	--	--	--	--	1,683	90
All owners	5,187	109	130	22	5,317	111	1,259	55	102	25	1,361	54	6,678	119

Note: Totals may be off because of rounding; data subject to sampling error; SE = standard error; -- = less than 500 acre were estimated.

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table A16: Area of forest land by Owner Group and Forest Land Status, 2007-2016: Willamette Valley

Owner class	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand acres</i>														
USDA Forest Service:														
National Forest	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other federal government:														
Bureau of Land Management	82	22	--	--	82	22	--	--	--	--	--	--	82	22
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
U.S. Fish and Wildlife Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other federal	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	82	22	--	--	82	22	--	--	--	--	--	--	82	22
State and local government:														
Local	1	1	5	4	6	4	6	6	--	--	6	6	13	7
State	32	13	4	4	36	14	1	1	3	4	4	5	40	15
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	33	14	9	5	42	14	7	6	3	4	10	8	53	16
Private:														
Corporate	373	46	19	10	392	47	--	--	--	--	--	--	392	47
Noncorporate private:														
Total, noncorporate private	484	50	33	12	517	51	--	--	--	--	--	--	517	51
All private	857	67	52	15	909	68	--	--	--	--	--	--	909	68
All owners	972	72	61	16	1,033	73	7	6	3	4	10	8	1,043	73

Note: Totals may be off because of rounding; data subject to sampling error; SE = standard error; -- = less than 500 acre were estimated.

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table A17: Area of Forest Land by Forest Type, Owner Group and Forest Land Status, 2007-2016: All Oregon

Forest type group	USDA Forest Service				Other federal				State and local government				Private corporate				Private non-corporate				All owners	
	Timberland		Other forest land		Timberland		Other forest land		Timberland		Other forest land		Timberland		Other forest land		Timberland		Other forest land		Total SE	
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
Softwoods:																						
Douglas-fir	3,487	54	688	46	1,585	56	51	17	565	42	22	12	3,402	111	6	5	1,143	75	7	7	10,956	151
Fir / spruce / mountain hemlock	1,821	51	962	57	82	22	97	24	19	10	6	6	409	49	2	2	171	32	19	11	3,589	101
Western Hemlock / Sitka spruce	284	22	78	17	65	19	6	6	65	18	17	9	307	41	--	--	100	23	--	--	922	61
Lodgepole pine	1,165	41	260	32	47	17	82	22	13	9	11	8	284	40	7	6	68	19	13	9	1,948	75
Pinyon / juniper	1		8	3	--	--	5	5	--	--	--	--	--	--	--	--	--	--	12	9	26	11
Ponderosa pine	3,120	58	217	30	193	31	18	10	83	21	--	--	837	65	14	10	698	61	10	7	5,192	111
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	6	6	--	--	--	--	--	--	6	6
Western juniper	197	18	243	21	23	12	1,042	69	7	7	90	23	43	16	157	30	51	17	647	60	2,499	105
Western larch	129	15	62	19	--	--	--	--	--	--	--	--	7	6	--	--	15	9	--	--	212	26
Western white pine	15	5	3	3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	18	6
Other western softwoods	12	4	41	13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	52	14
Total	10,230	59	2,562	58	1,994	57	1,302	77	752	45	146	29	5,295	128	186	32	2,247	102	708	63	25,421	170
Hardwoods:																						
Alder / maple	121	13	19	7	29	12	6	5	170	28	5	5	398	43	--	--	326	40	13	7	1,090	67
Aspen / birch	5	3	6	3	--	--	16	10	--	--	--	--	8	7	--	--	16	9	6	6	58	17
Elm / ash / cottonwood	4	3	2	2	--	--			--	--	8	6	31	14	11	8	47	16	--	--	104	23
Tanoak / laurel	208	19	167	25	40	15	8	7	--	--	--	--	125	26	--	--	65	19	--	--	613	47
Western oak	51	9	56	14	71	21	77	22	14	9	13	8	80	22	58	17	92	22	233	35	744	61
Woodland hardwoods	3	2	12	5	--	--	10	8	--	--	--	--	7	6	--	--	12	9	2	2	44	15
Exotic hardwoods			--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	62	10	23	11	90	23	15	10	14	8	5	5	77	20	6	6	101	24	34	13	427	46
Total	455	26	284	29	230	35	133	28	198	31	32	12	726	59	74	20	660	57	288	39	3,079	111
Nonstocked	394	26	148	26	37	14	63	19	12	8	9	7	285	39	18	10	160	29	29	13	1,155	68
All forest types	11,079	53	2,994	54	2,260	57	1,498	81	961	42	186	32	6,306	129	278	40	3,067	114	1,025	74	29,655	141

Note: Totals may be off because of rounding; data subject to sampling error; SE = standard error; -- = less than 500 acre were estimated.

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table A18: Area of Forest Land by Forest Type, Owner Group and Forest Land Status, 2007-2016: Blue Mountains

Forest type group	USDA Forest Service				Other federal				State and local government				Private corporate				Private non-corporate				All owners	
	Timberland		Other forest land		Timberland		Other forest land		Timberland		Other forest land		Timberland		Other forest land		Timberland		Other forest land		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
Softwoods:																						
Douglas-fir	560	30	159	24	19	11	--	--	18	10	--	--	120	27	--	--	106	24	--	--	982	54
Fir / spruce / mountain hemlock	823	32	328	36	7	7	--	--	2	2	--	--	142	29	--	--	64	20	--	--	1,366	60
Western Hemlock / Sitka spruce	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lodgepole pine	326	23	101	22	--	--	--	--	--	--	--	--	38	15	--	--	11	8	--	--	477	36
Pinyon / juniper	1		2	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3	1
Ponderosa pine	1,449	41	139	24	27	13	--	--	24	12	--	--	246	38	--	--	315	42	--	--	2,199	75
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western juniper	122	14	109	16	8	7	--	--	--	--	--	--	--	--	13	9	13	9	20	11	285	28
Western larch	127	15	62	19	--	--	--	--	--	--	--	--	7	6	--	--	15	9	--	--	210	26
Western white pine	1	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	1
Other western softwoods	5	3	17	9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	22	9
Total	3,414	35	917	42	62	19	--	--	43	16	--	--	552	57	13	9	523	54	20	11	5,546	94
Hardwoods:																						
Alder / maple	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aspen / birch			--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	
Elm / ash / cottonwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tanoak / laurel	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western oak	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Woodland hardwoods	3	2	3	2	--	--	--	--	--	--	--	--	--	--	--	--	6	6	2	2	13	7
Exotic hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	10	4	14	9	5	5	--	--	--	--	--	--	2	2	--	--	4	4	--	--	35	12
Total	13	5	17	10	5	5	--	--	--	--	--	--	2	2	--	--	10	7	2	2	49	14
Nonstocked	164	16	70	17	9	7	7	7	4	5	--	--	29	12	--	--	45	16	--	--	328	33
All forest types	3,591	34	1,005	44	75	21	7	7	47	17	--	--	583	58	13	9	578	57	22	11	5,922	97

Note: Totals may be off because of rounding; data subject to sampling error; SE = standard error; -- = less than 500 acre were estimated.

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table A19: Area of Forest Land by Forest Type, Owner Group and Forest Land Status, 2007-2016: East Cascades+Modoc

Forest type group	USDA Forest Service				Other federal				State and local government				Private corporate				Private non-corporate				All owners	
	Timberland		Other forest land		Timberland		Other forest land		Timberland		Other forest land		Timberland		Other forest land		Timberland		Other forest land		Total SE	
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
Softwoods:																						
Douglas-fir	75	11	13	5	--	--	11	9	13	9	--	--	65	20	--	--	101	25	--	--	278	36
Fir / spruce / mountain hemlock	334	23	40	13	29	13	6	6	6	6	--	--	178	33	--	--	25	12	--	--	618	47
Western Hemlock / Sitka spruce	1	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	6	6	--	--	7	6
Lodgepole pine	722	31	82	16	42	16	9	8	7	6	--	--	244	37	7	6	44	15	7	7	1,163	57
Pinyon / juniper	--	--	2	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	6	6	9	7
Ponderosa pine	1,443	38	39	9	31	14	--	--	50	17	--	--	481	50	7	7	185	32	--	--	2,235	72
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western juniper	57	10	43	9	7	6	78	21	7	7	5	5	18	11	32	13	16	9	87	23	351	40
Western larch			--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western white pine	3	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3	2
Other western softwoods	3	2	8	6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	10	7
Total	2,637	36	227	25	108	25	104	25	83	22	5	5	986	67	46	16	378	46	100	24	4,674	97
Hardwoods:																						
Alder / maple	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aspen / birch	5	3	6	3	--	--	--	--	--	--	--	--	8	7	--	--	6	6	--	--	25	10
Elm / ash / cottonwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tanoak / laurel	5	3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5	3
Western oak	6	4	8	4	--	--	18	11	8	7	9	7	6	6	--	--	3	3	93	23	152	29
Woodland hardwoods			3	2	--	--	5	6	--	--	--	--	7	6	--	--	6	6	--	--	20	11
Exotic hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	11	5	--	--	--	--	--	--	--	--	5	5	14	8	--	--	5	6	6	6	40	13
Total	27	7	17	5	--	--	23	12	8	7	14	9	35	14	--	--	20	11	99	24	242	35
Nonstocked	163	18	7	5	18	10	--	--	--	--	--	--	52	17	--	--	50	17	7	7	297	33
All forest types	2,826	35	250	26	126	27	127	28	90	22	19	10	1,073	70	46	16	449	50	206	35	5,213	103

Note: Totals may be off because of rounding; data subject to sampling error; SE = standard error; -- = less than 500 acre were estimated.

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table A20: Area of Forest Land by Forest Type, Owner Group and Forest Land Status, 2007-2016: Eastern OR Lowlands

Forest type group	USDA Forest Service				Other federal				State and local government				Private corporate				Private non-corporate				All owners	
	Timberland		Other forest land		Timberland		Other forest land		Timberland		Other forest land		Timberland		Other forest land		Timberland		Other forest land		All owners	
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand acres</i>																						
Softwoods:																						
Douglas-fir	17	6	1	1	--	--	--	--	--	--	--	--	6	6	--	--	13	8	--	--	38	12
Fir / spruce / mountain hemlock	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4	3	--	--	4	3
Western Hemlock / Sitka spruce	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lodgepole pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pinyon / juniper	--	--	3	2	--	--	5	5	--	--	--	--	--	--	--	--	--	--	6	6	14	8
Ponderosa pine	66	10	6	3	50	17	--	--	4	5	--	--	42	15	--	--	154	30	4	4	327	40
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western juniper	18	6	91	11	7	7	963	67	--	--	85	23	24	12	108	25	21	11	540	55	1,859	95
Western larch	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western white pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other western softwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	102	13	102	12	57	18	969	67	4	5	85	23	72	21	108	25	193	33	550	56	2,242	103
Hardwoods:																						
Alder / maple	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aspen / birch	--	--	--	--	--	--	16	10	--	--	--	--	--	--	--	--	10	7	6	6	33	13
Elm / ash / cottonwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	8	7	--	--	8	7
Tanoak / laurel	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western oak	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4	4	2	2	13	9	19	10
Woodland hardwoods	--	--	6	3	--	--	5	6	--	--	--	--	--	--	--	--	--	--	--	--	11	7
Exotic hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--	6	6	--	--	1	1	7	6
Total	--	--	6	3	--	--	21	11	--	--	--	--	--	--	10	7	19	10	20	11	77	20
Nonstocked	10	4	7	4	6	6	56	18	--	--	9	7	13	9	18	10	7	6	21	11	145	28
All forest types	111	14	114	13	63	19	1,046	69	4	5	94	24	85	23	136	28	218	35	591	58	2,464	107

Note: Totals may be off because of rounding; data subject to sampling error; SE = standard error; -- = less than 500 acre were estimated.

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table A21: Area of Forest Land by Forest Type, Owner Group and Forest Land Status, 2007-2016: Klamath Mountains

Forest type group	USDA Forest Service				Other federal				State and local government				Private corporate				Private non-corporate				All owners	
	Timberland		Other forest land		Timberland		Other forest land		Timberland		Other forest land		Timberland		Other forest land		Timberland		Other forest land		Total SE	
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
Softwoods:																						
Douglas-fir	373	23	90	20	456	47	15	8	48	17	--	--	348	44	2	2	196	33	7	7	1,534	80
Fir / spruce / mountain hemlock	60	10	1	1	1	1	--	--	--	--	--	--	15	9	--	--	7	7	--	--	84	15
Western Hemlock / Sitka spruce	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lodgepole pine	2	2	6	7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	7	7
Pinyon / juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ponderosa pine	55	10	14	8	71	19	8	7	5	5	--	--	49	16	7	7	31	12	6	6	246	33
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western larch	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western white pine	8	4	3	3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	11	5
Other western softwoods	2	2	4	3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	6	3
Total	499	25	119	22	527	51	23	11	53	18	--	--	412	48	9	7	233	36	13	9	1,889	88
Hardwoods:																						
Alder / maple	7	3	5	3	--	--	4	4	3	3	--	--	5	4	--	--	12	7	4	4	41	11
Aspen / birch	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Elm / ash / cottonwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tanoak / laurel	148	16	136	24	33	14	8	7	--	--	--	--	57	18	--	--	12	6	--	--	394	38
Western oak	43	8	45	13	71	21	53	18	6	6	--	--	49	17	20	10	64	19	89	21	441	47
Woodland hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Exotic hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	32	7	4	3	84	22	15	10	11	8	--	--	33	14	--	--	73	20	22	11	274	38
Total	230	19	190	25	188	32	81	22	21	11	--	--	145	28	20	10	161	29	115	24	1,150	69
Nonstocked	6	3	8	6	4	3	--	--	--	--	--	--	14	9	--	--	10	7	--	--	42	14
All forest types	735	27	317	29	720	57	104	25	74	21	--	--	570	57	29	12	404	46	127	26	3,080	107

Note: Totals may be off because of rounding; data subject to sampling error; SE = standard error; -- = less than 500 acre were estimated.

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table A22: Area of Forest Land by Forest Type, Owner Group and Forest Land Status, 2007-2016: Oregon Coast Range

Forest type group	USDA Forest Service				Other federal				State and local government				Private corporate				Private non-corporate				All owners	
	Timberland		Other forest land		Timberland		Other forest land		Timberland		Other forest land		Timberland		Other forest land		Timberland		Other forest land		All owners	
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand acres</i>																						
Softwoods:																						
Douglas-fir	524	22	28	12	698	53	--	--	440	38	15	10	1,598	87	5	5	284	39	--	--	3,594	117
Fir / spruce / mountain hemlock	--	--	--	--	8	7	--	--	5	5	--	--	6	6	--	--	--	--	--	--	19	10
Western Hemlock / Sitka spruce	61	10	6	3	31	13	6	6	65	18	17	9	222	36	--	--	59	18	--	--	466	48
Lodgepole pine	2	2	11	4	5	6	5	6	6	6	11	8	--	--	--	--	6	5	--	--	46	15
Pinyon / juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ponderosa pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	1	--	--	1	1
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	6	6	--	--	--	--	--	--	6	6
Western juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western larch	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western white pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other western softwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	587	21	45	13	742	54	11	9	516	39	43	16	1,833	93	5	5	350	43	--	--	4,131	121
Hardwoods:																						
Alder / maple	87	11	3	2	23	11	2	2	145	26	4	5	331	40	--	--	171	29	5	4	772	57
Aspen / birch	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Elm / ash / cottonwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--	7	7	4	4	--	--	12	8
Tanoak / laurel	30	7	31	13	7	6	--	--	--	--	--	--	56	17	--	--	53	18	--	--	178	30
Western oak	--	--	--	--	--	--	7	7	--	--	--	--	--	--	--	--	--	--	--	--	7	7
Woodland hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Exotic hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	4	3	--	--	--	--	--	--	--	--	--	--	5	3	--	--	8	7	--	--	17	8
Total	121	13	34	14	30	12	9	7	145	26	4	5	393	44	7	7	236	35	5	4	984	66
Nonstocked	8	3	--	--	--	--	--	--	6	6	--	--	109	24	--	--	15	8	1	1	138	26
All forest types	716	20	79	19	772	55	20	11	667	37	47	17	2,334	103	12	8	601	57	6	4	5,254	131

Note: Totals may be off because of rounding; data subject to sampling error; SE = standard error; -- = less than 500 acre were estimated.

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table A23: Area of Forest Land by Forest Type, Owner Group and Forest Land Status, 2007-2016: Western Cascades

Forest type group	USDA Forest Service				Other federal				State and local government				Private corporate				Private non-corporate				All owners	
	Timberland		Other forest land		Timberland		Other forest land		Timberland		Other forest land		Timberland		Other forest land		Timberland		Other forest land		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
Softwoods:																						
Douglas-fir	1,937	38	397	34	336	41	24	12	23	12	6	6	967	70	--	--	162	30	--	--	3,853	100
Fir / spruce / mountain hemlock	604	32	592	46	37	15	92	23	6	6	--	--	55	18	2	2	58	19	19	11	1,466	68
Western Hemlock / Sitka spruce	223	20	72	16	27	12	--	--	1		--	--	81	21	--	--	24	11	--	--	428	36
Lodgepole pine	113	14	59	17	--	--	68	19	--	--	--	--	--	--	--	--	7	7	6	6	253	30
Pinyon / juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ponderosa pine	107	14	19	11	14	9	10	7	--	--	--	--	20	10	--	--	8	7	--	--	179	24
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3	3	--	--	--	--	3	3
Western larch	2	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2	2
Western white pine	3	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3	2
Other western softwoods	2	1	13	8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	14	8
Total	2,992	42	1,152	45	415	45	194	32	30	13	6	6	1,123	75	5	4	260	39	25	13	6,201	114
Hardwoods:																						
Alder / maple	27	7	11	6	6	6	--	--	16	10	--	--	50	15	--	--	47	17	--	--	158	27
Aspen / birch	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Elm / ash / cottonwood	4	3	2	2	--	--	--	--	--	--	--	--	10	8	--	--	1	1	--	--	18	8
Tanoak / laurel	26	7	--	--	--	--	--	--	--	--	--	--	11	7	--	--	--	--	--	--	36	10
Western oak	2	2	3	2	--	--	--	--	--	--	--	--	11	8	18	10	7	7	8	7	49	16
Woodland hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Exotic hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	6	3	4	5	--	--	--	--	--	--	--	--	24	12	--	--	5	3	5	5	44	15
Total	64	10	20	8	6	6	--	--	16	10	--	--	106	23	18	10	61	18	13	8	305	37
Nonstocked	43	9	56	19	--	--	--	--	--	--	--	--	60	17	--	--	12	8	--	--	171	28
All forest types	3,099	41	1,229	45	422	46	194	32	45	16	6	6	1,288	80	23	11	333	44	38	15	6,678	119

Note: Totals may be off because of rounding; data subject to sampling error; SE = standard error; -- = less than 500 acre were estimated.

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table A24: Area of Forest Land by Forest Type, Owner Group and Forest Land Status, 2007-2016: Willamette Valley

Forest type group	USDA Forest Service		Other federal		State and local government		Private corporate		Private non-corporate		All owners											
	Timberland	Other forest land	Timberland	Other forest land	Timberland	Other forest land	Timberland	Other forest land	Timberland	Other forest land	Total	SE										
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE										
<i>thousand acres</i>																						
Softwoods:																						
Douglas-fir	--	--	--	--	75	21	--	--	23	11	--	--	299	41	--	--	281	37	--	--	678	60
Fir / spruce / mountain hemlock	--	--	--	--	--	--	--	--	6	6	13	9	--	--	13	8	--	--	--	--	33	13
Western Hemlock / Sitka spruce	--	--	--	--	6	6	--	--	--	--	3	3	--	--	11	8	--	--	--	--	21	11
Lodgepole pine	--	--	--	--	--	--	--	--	--	--	1	1	--	--	--	--	--	--	--	--	1	1
Pinyon / juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ponderosa pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4	4	--	--	--	--	4	4
Redwood	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western juniper	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western larch	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western white pine	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other western softwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	--	--	--	--	82	22	--	--	23	11	6	6	317	42	--	--	309	40	--	--	737	63
Hardwoods:																						
Alder / maple	--	--	--	--	--	--	--	--	6	6	1	1	12	8	--	--	96	22	4	4	120	24
Aspen / birch	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Elm / ash / cottonwood	--	--	--	--	--	--	--	--	--	--	8	6	21	11	3	3	34	14	--	--	67	19
Tanoak / laurel	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Western oak	--	--	--	--	--	--	--	--	--	--	4	4	13	9	15	10	16	8	29	11	78	19
Woodland hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Exotic hardwoods	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other hardwoods	--	--	--	--	--	--	--	--	2	2	--	--	--	--	--	--	7	7	--	--	10	7
Total	--	--	--	--	--	--	--	--	9	7	13	7	47	17	19	10	153	27	33	12	274	37
Nonstocked	--	--	--	--	--	--	--	--	2	2	--	--	9	6	--	--	21	9	--	--	32	11
All forest types	--	--	--	--	82	22	--	--	33	14	19	9	373	46	19	10	484	50	33	12	1,043	73

Note: Totals may be off because of rounding; data subject to sampling error; SE = standard error; -- = less than 500 acre were estimated.

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table B1: Annual Net Change in Carbon Stocks on Forest Land for All Pools by Owner Group, 2007-2016: All Oregon

	Public						Private				Total		Total	
	National forest		Other federal		State and local govt.		Corporate		Non Corporate		Total	SE	Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons CO2 equivalent per year</i>														
Standing Live tree														
Mortality	-16,725	697	-2,753	321	-989	195	-3,221	316	-1,654	210	-4,875	365	-25,341	870
Cut	-3,197	310	-954	259	-3,105	775	-22,908	2,140	-4,618	827	-27,526	2,228	-34,782	2,373
Gross Growth	36,222	425	12,139	472	4,970	333	27,368	1,065	9,498	642	36,866	1,048	90,197	1,220
Net	16,300	866	8,432	619	876	863	1,239	2,395	3,226	908	4,465	2,558	30,074	2,897
Foliage	936	51	493	38	46	51	76	145	142	53	218	154	1,693	174
Roots														
Live	3,325	193	1,889	148	196	202	232	556	676	210	908	594	6,318	672
Dead	-193	142	-16	62	3	36	-92	56	-37	35	-129	66	-335	172
Standing Dead	-393	578	265	235	108	127	-129	189	-31	141	-160	236	-181	679
Dead Woody Debris	-1,357	493	-1,411	316	-179	231	-3,409	486	-460	220	-3,869	530	-6,817	820
Understory Vegetation														
Above Ground	-74	17	-52	10	-5	7	-33	25	-41	13	-74	28	-205	35
Below Ground	-8	2	-6	1	-1	1	-4	3	-5	1	-8	3	-23	4
Total (excluding soils)	18,535	987	9,594	780	1,045	1,116	-2,119	3,098	3,470	1,160	1,351	3,307	30,525	3,706
Forest Floor	442	59	89	36	-1	22	-144	95	174	58	30	111	561	133
Soils	148	146	-211	112	19	54	-90	190	-37	93	-127	212	-172	286
Total (including soils and forest floor)	19,125	1,020	9,473	797	1,063	1,128	-2,353	3,147	3,607	1,194	1,254	3,364	30,914	3,773

Table B2: Annual Net Change in Carbon Stocks on Forest Land for All Pools by Owner Group, 2007-2016: Blue Mountains

	National forest		Public				State and local govt.		Corporate		Private Non Corporate		Total		Total	
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE		
	<i>thousand metric tons CO2 equivalent per year</i>															
Standing Live tree																
Mortality	-3,496	320	-3	4	-41	25	-123	43	-190	62	-313	75	-3,853	329		
Cut	-565	71	-10	10	-94	90	-979	286	-468	149	-1,447	321	-2,115	341		
Gross Growth	8,177	181	66	37	136	62	1,086	173	1,083	159	2,169	230	10,548	301		
Net	4,117	351	53	31	2	77	-17	257	426	167	409	307	4,580	474		
Foliage	213	20	3	2	1	5	-5	16	21	10	16	18	233	28		
Roots																
Live	735	73	13	8	2	17	-28	58	78	36	51	68	801	102		
Dead	-329	63	-9	9	-1	3	-19	11	-7	6	-26	12	-364	65		
Standing Dead	-1,360	262	-36	37	-6	12	-89	47	-18	26	-107	54	-1,510	271		
Dead Woody Debris	-260	243	16	17	23	21	-264	82	-127	57	-391	100	-611	264		
Understory Vegetation																
Above Ground	-39	9	-1			1	-1	7	-17	6	-19	9	-58	13		
Below Ground	-4	1						1	-2	1	-2	1	-6	1		
Total (excluding soils)	3,073	360	40	47	21	107	-423	317	353	211	-69	382	3,064	539		
Forest Floor	152	42	5	3	-5	5	-11	24	27	21	16	32	168	53		
Soils	-64	81	-2	2			10	22	-61	31	-51	37	-117	90		
Total (including soils and forest floor)	3,161	396	43	49	16	111	-424	330	319	219	-105	396	3,115	575		

Table B3: Annual Net Change in Carbon Stocks on Forest Land for All Pools by Owner Group, 2007-2016: East Cascades+Modoc

	Public						Private				Total		Total	
	National forest		Other federal		State and local govt.		Corporate		Non Corporate		Total	SE	Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
	<i>thousand metric tons CO2 equivalent per year</i>													
Standing Live tree														
Mortality	-2,628	255	-133	69	-65	42	-205	72	-415	159	-621	173	-3,446	319
Cut	-923	134	-207	125	-76	60	-858	195	-438	275	-1,296	337	-2,501	387
Gross Growth	5,347	160	512	138	260	81	1,682	177	1,072	181	2,754	240	8,873	327
Net	1,797	278	172	170	119	62	619	230	219	331	837	402	2,925	521
Foliage	104	16	9	10	6	4	38	13	11	20	48	23	167	30
Roots														
Live	362	57	32	35	25	12	119	45	37	72	156	85	576	108
Dead	13	49	-6	10	1	2	-4	8	34	28	31	29	38	58
Standing Dead	68	203	-22	42		6	-12	35	152	119	141	124	187	242
Dead Woody Debris	-1,108	139	-208	120	-108	58	-506	114	-31	84	-536	141	-1,961	238
Understory Vegetation														
Above Ground	-22	6		4	-2	1	-28	9	2	7	-26	11	-50	14
Below Ground	-2	1					-3	1		1	-3	1	-6	2
Total (excluding soils)	1,212	311	-23	228	41	88	223	307	425	408	648	510	1,877	644
Forest Floor	152	23	3	16	14	5	49	25	37	21	86	32	255	43
Soils	80	36	20	11	51	38	-24	48	21	32	-2	57	148	78
Total (including soils and forest floor)	1,443	322		240	105	90	248	319	483	429	731	533	2,280	672

Table B4: Annual Net Change in Carbon Stocks on Forest Land for All Pools by Owner Group, 2007-2016: Eastern OR Lowlands

	Public						Private				Total		Total	
	National forest		Other federal		State and local govt.		Corporate		Non Corporate		Total	SE	Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons CO2 equivalent per year</i>														
Standing Live tree														
Mortality	-11	5	-66	26	-22	17	-11	8	-41	16	-52	18	-151	36
Cut	-14	5	-38	32	-3	3	-10	10	-22	17	-33	20	-88	38
Gross Growth	118	21	209	32	8	4	72	22	244	62	316	66	652	78
Net	94	19	104	42	-16	17	51	25	180	62	231	67	413	84
Foliage	6	1	4	2	-1	1	3	1	10	4	13	4	22	5
Roots														
Live	18	5	4	10	-3	3	11	5	37	13	47	14	66	18
Dead	-3	2	4	4	3	2	1	1	-1	2	1	3	4	6
Standing Dead	-11	10	29	19	19	15	6	5	2	12	8	13	44	29
Dead Woody Debris	-41	18	-37	19	-2	6	4	11	-9	47	-5	49	-85	55
Understory Vegetation														
Above Ground	-5	2	-12	5	1	1	-3	3	-3	2	-6	4	-23	7
Below Ground	-1		-1	1							-1		-3	1
Total (excluding soils)	58	24	94	46	10		72	29	216	83	288	88	439	103
Forest Floor	14	4	4	18	-13	10	15	11	25	9	40	14	46	26
Soils	-28	14	-124	65	-13	12	40	22	-52	49	-12	54	-176	86
Total (including soils and forest floor)	44	27	-26	77	-26	13	127	40	190	111	317	118	309	144

Table B5: Annual Net Change in Carbon Stocks on Forest Land for All Pools by Owner Group, 2007-2016: Klamath Mountains

	National forest		Public				Private				Total		Total	
			Other federal		State and local govt.		Corporate		Non Corporate					
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons CO2 equivalent per year</i>														
Standing Live tree														
Mortality	-1,822	285	-925	236	-25	23	-305	79	-220	56	-524	97	-3,297	383
Cut	-201	85	-37	17	-6	4	-1,880	594	-561	310	-2,440	669	-2,684	675
Gross Growth	2,662	179	2,717	299	130	67	2,427	357	1,150	204	3,578	408	9,086	537
Net	639	301	1,755	326	100	58	243	610	370	311	613	686	3,106	820
Foliage	34	15	93	17	5	3	19	32	14	19	33	37	164	44
Roots														
Live	119	64	370	73	19	13	42	131	83	74	125	151	633	180
Dead	-24	47	17	39	-1	4	9	28	-11	9	-2	29	-10	68
Standing Dead	-141	213	114	156	-3	17	48	98	-31	28	17	102	-12	284
Dead Woody Debris	409	114	-194	145	-44	27	-91	135	-168	91	-260	162	-88	247
Understory Vegetation														
Above Ground	8	5	-15	7	-3	3	-1	8	-5	4	-6	9	-17	13
Below Ground	1	1	-2	1				1	-1		-1	1	-2	1
Total (excluding soils)	1,045	281	2,139	387	72	50	268	753	252	398	519	853	3,774	978
Forest Floor	17	12	28	15	2	2	10	17	35	12	45	21	92	28
Soils	39	64	17	36	-20	17	-90	41	-2	12	-91	43	-56	87
Total (including soils and forest floor)	1,100	288	2,183	392	54	54	188	755	285	397	473	854	3,810	983

Table B6: Annual Net Change in Carbon Stocks on Forest Land for All Pools by Owner Group, 2007-2016: Oregon Coast Range

	Public						Private				Total		Total	
	National forest		Other federal		State and local govt.		Corporate		Non Corporate		Total	SE	Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons CO2 equivalent per year</i>														
Standing Live tree														
Mortality	-1,056	98	-730	164	-755	183	-1,794	281	-363	82	-2,157	290	-4,698	391
Cut	-496	160	-462	209	-2,749	762	-12,425	1,765	-1,384	433	-13,809	1,804	-17,516	1,956
Gross Growth	3,972	174	5,391	552	3,936	339	14,192	989	2,815	447	17,007	1,044	30,307	1,229
Net	2,421	242	4,199	526	433	838	-27	1,878	1,068	489	1,040	1,944	8,093	2,194
Foliage	143	16	250	33	28	50	-2	113	50	27	48	117	470	132
Roots														
Live	546	63	951	125	117	198	8	437	245	110	253	451	1,868	512
Dead	61	35	-37	37	10	35	-44	41	-9	8	-53	41	-20	74
Standing Dead	89	72	56	120	127	120	9	125	4	27	13	128	285	225
Dead Woody Debris	38	118	-647	219	15	206	-1,176	366	12	89	-1,164	376	-1,758	497
Understory Vegetation														
Above Ground	-3	2	-11	3	2	5	-5	17	-9	5	-13	18	-25	19
Below Ground			-1			1	-1	2	-1	1	-1	2	-3	2
Total (excluding soils)	3,294	308	4,761	670	732	1,087	-1,238	2,423	1,359	627	122	2,508	8,908	2,832
Forest Floor	8	9	15	13	3	18	-159	73	37	37	-122	82	-96	86
Soils	2	21	-68	61	4	32	48	146	-7	38	41	150	-22	167
Total (including soils and forest floor)	3,304	310	4,707	674	739	1,098	-1,348	2,467	1,389	657	41	2,558	8,791	2,882

Table B7: Annual Net Change in Carbon Stocks on Forest Land for All Pools by Owner Group, 2007-2016: Western Cascades

	National forest		Public				Private				Total		Total	
	Total	SE	Other federal		State and local govt.		Corporate		Non Corporate		Total	SE	Total	SE
			Total	SE	Total	SE	Total	SE	Total	SE				
	<i>thousand metric tons CO2 equivalent per year</i>													
Standing Live tree														
Mortality	-7,712	528	-819	181	-46	47	-672	117	-201	56	-873	129	-9,450	575
Cut	-999	201	-169	86	-178	162	-5,988	1,177	-644	377	-6,632	1,228	-7,977	1,258
Gross Growth	15,945	376	2,769	367	199	103	6,818	652	1,126	274	7,943	697	26,856	882
Net	7,234	646	1,781	345	-24	143	158	1,257	281	413	439	1,321	9,429	1,518
Foliage	435	39	111	22	-5	7	11	79	9	25	21	83	562	94
Roots														
Live	1,543	146	434	84	-20	25	27	297	58	99	85	312	2,043	356
Dead	89	102	15	27	-10	8	-27	22	-33	14	-61	26	34	109
Standing Dead	962	419	141	108	-35	29	-72	82	-102	50	-175	97	892	444
Dead Woody Debris	-395	372	-314	138	-87	84	-1,136	257	-42	78	-1,178	269	-1,974	482
Understory Vegetation														
Above Ground	-12	12	-11	3	-2	2	9	12	-1	4	8	13	-17	18
Below Ground	-1	1	-1				1	1			1	1	-2	2
Total (excluding soils)	9,854	771	2,155	405	-183	152	-1,029	1,654	170	522	-859	1,732	10,967	1,943
Forest Floor	100	31	32	17	-3	2	-28	43	-10	19	-38	47	91	59
Soils	119	93	-71	54		1	-56	96	6	37	-50	103	-3	149
Total (including soils and forest floor)	10,073	788	2,115	409	-186	153	-1,113	1,678	166	538	-947	1,760	11,055	1,975

Table B8: Annual Net Change in Carbon Stocks on Forest Land for All Pools by Owner Group, 2007-2016: Willamette Valley

	Public						Private				Total		Total	
	National forest		Other federal		State and local govt.		Corporate		Non Corporate		Total	SE	Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons CO2 equivalent per year</i>														
Standing Live tree														
Mortality			-75	40	-37	22	-111	38	-223	61	-334	71	-446	85
Cut			-31	22	--	--	-767	384	-1,102	421	-1,870	566	-1,900	567
Gross Growth			475	184	300	132	1,092	267	2,008	319	3,100	410	3,875	467
Net			368	153	264	116	213	410	683	427	896	591	1,528	620
Foliage			24	10	11	6	13	25	27	25	40	35	76	37
Roots														
Live			85	37	56	26	53	98	137	100	190	140	331	147
Dead			-1	6	2	2	-8	4	-11	9	-18	10	-18	12
Standing Dead			-16	16	7	8	-20	14	-37	26	-57	30	-67	35
Dead Woody Debris			-27	20	24	24	-241	84	-95	116	-336	143	-339	146
Understory Vegetation														
Above Ground			-3	2		1	-3	4	-9	4	-11	6	-15	6
Below Ground									-1		-1	1	-2	1
Total (excluding soils)			429	196	363	158	7	536	696	555	703	771	1,495	809
Forest Floor			2	1		1	-20	15	23	24	3	28	5	28
Soils			17	16	-2	5	-19	32	57	36	38	48	54	51
Total (including soils and forest floor)			448	202	361	159	-32	539	776	556	744	774	1,554	814

Table B9.1: Annual Net Change in Carbon Stocks for Aboveground Pools on Forest Land by Disturbance, Forest Land Status and Owner Group, 2001-2006 to 2011-2016: All Oregon

	USDA Forest Service						Other Public				Private				Total		Total			
	Timberland		Reserved		Low productive, unreserved		Total		Other federal		State and local govt.		Corporate						Non Corporate	
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE		
<i>thousand metric tons CO2 equivalent per year</i>																				
Cut																				
Mortality	-334	44	-3	3	-3	2	-339	44	-58	26	-84	42	-232	69	-96	40	-328	79	-808	103
Cut	-2,635	280	-3	1	-2	1	-2,640	280	-755	244	-2,912	764	-21,160	2,070	-3,812	770	-24,971	2,154	-31,278	2,296
Gross Growth	2,085	157	15	8	6	3	2,105	158	971	250	852	200	5,253	497	1,295	250	6,548	545	10,477	648
Net Live	-884	234	9	6	1	1	-874	234	159	214	-2,144	672	-16,138	1,891	-2,613	657	-18,751	1,964	-21,610	2,084
Standing Dead Change	-298	98	-1	1	-2	2	-301	99	2	16	-39	36	-510	106	-40	16	-550	106	-888	150
Dead Woody Debris Change	-97	92	-5	9	4	3	-97	92	-219	111	34	164	-28	235	13	56	-16	241	-298	325
Total Net	-1,566	322	5	5	3	3	-1,557	322	-7	313	-2,772	886	-21,298	2,459	-3,387	847	-24,685	2,553	-29,021	2,720
Cut and Fire																				
Mortality	-160	61	--	--	--	--	-160	61	--	--	--	--	-75	63	-10	10	-85	63	-245	88
Cut	-318	132	--	--	--	--	-319	132	--	--	--	--	-350	277	-326	260	-675	379	-994	401
Gross Growth	130	34	--	--	--	--	130	34	--	--	--	--	59	38	55	32	114	50	244	60
Net Live	-348	147	--	--	--	--	-349	147	--	--	--	--	-366	247	-281	242	-647	344	-995	374
Standing Dead Change	33	26	--	--	--	--	33	26	--	--	--	--	2	7	3	6	5	9	38	28
Dead Woody Debris Change	-19	37	--	--	--	--	-19	37	--	--	--	--	-62	76	-47	41	-109	86	-128	94
Total Net	-412	175	--	--	--	--	-412	175	--	--	--	--	-511	315	-398	341	-908	463	-1,320	495
Fire																				
Mortality	-2,478	391	-1,833	486	-40	21	-4,351	624	-398	209	-22	17	-41	31	-375	159	-416	162	-5,187	678
Cut			-1	1	--	--	-2	1	--	--	--	--	--	--	--	--	--	--	-2	1
Gross Growth	764	81	422	106	12	6	1,198	134	128	54	1	1	4	3	100	38	104	38	1,431	149
Net Live	-1,714	358	-1,412	433	-28	17	-3,155	562	-270	179	-21	16	-37	28	-274	135	-312	138	-3,757	606
Standing Dead Change	1,133	232	784	250	14	9	1,930	341	111	121	19	15	36	28	142	119	177	123	2,238	383
Dead Woody Debris Change	-299	96	-70	80	-20	15	-390	126	-32	21	1	1	-26	24	24	44	-2	50	-423	138
Total Net	-1,024	210	-864	289	-34	21	-1,922	358	-211	118	-1	2	-27	22	-141	83	-168	86	-2,302	387
Insect and Disease																				
Mortality	-2,893	179	-1,148	211	-37	18	-4,079	275	-333	122	-46	31	-273	75	-135	53	-408	91	-4,865	316
Cut	-55	24	-4	4	--	--	-60	24	-3	3	--	--	-3	2	-10	6	-13	6	-76	25
Gross Growth	5,140	222	1,391	170	31	12	6,562	279	749	159	208	110	1,687	324	699	145	2,385	352	9,905	489
Net Live	2,192	198	239	179	-7	16	2,424	268	413	159	163	83	1,410	265	553	129	1,963	293	4,963	435
Standing Dead Change	185	139	-84	191	7	12	108	237	46	89	16	15	18	44	-65	45	-47	63	123	261
Dead Woody Debris Change	-377	141	-230	161	-9	9	-616	214	24	90	-30	48	-177	76	-102	65	-278	100	-900	257
Total Net	2,566	261	-92	257	-9	9	2,465	367	554	165	196	133	1,629	344	483	134	2,112	367	5,326	560
Other cut and weather																				
Mortality	-359	81	-165	126	--	--	-524	149	-98	57	-80	64	-728	256	-116	36	-844	258	-1,547	310
Cut	-32	13	--	--	--	--	-32	13	-22	16	--	--	-212	107	-221	119	-434	159	-488	160
Gross Growth	681	104	89	38	1	1	771	110	412	168	159	88	1,283	295	678	181	1,962	343	3,304	407
Net Live	289	92	-76	93	1	1	214	131	292	132	79	71	343	285	341	170	684	331	1,269	386
Standing Dead Change	-112	74	-15	11	--	--	-127	75	2	6	19	16	243	118	7	21	249	120	143	143
Dead Woody Debris Change	148	78	12	22	--	--	160	81	-24	45	48	68	-25	106	-88	105	-114	149	70	188
Total Net	362	148	-110	105	2	2	253	182	368	166	163	101	747	323	352	237	1,099	400	1,883	480
Less than 25% disturbed																				
Mortality	-5,656	226	-1,530	178	-86	22	-7,272	283	-1,866	228	-757	185	-1,872	162	-922	120	-2,793	192	-12,689	449
Cut	-142	29	-3	2	--	--	-145	29	-174	69	-193	182	-1,184	559	-249	103	-1,433	568	-1,944	602
Gross Growth	21,379	420	3,892	281	186	29	25,456	481	9,878	497	3,749	380	19,082	1,031	6,671	576	25,753	1,083	64,837	1,317
Net Live	15,581	433	2,359	258	100	24	18,039	495	7,838	528	2,799	416	16,027	1,095	5,500	520	21,527	1,149	50,204	1,405
Standing Dead Change	-971	204	-1,030	308	-36	20	-2,037	370	104	178	93	119	83	86	-77	51	6	100	-1,834	439
Dead Woody Debris Change	-1,215	312	793	263	27	44	-395	410	-1,159	282	-232	144	-3,092	401	-259	162	-3,351	430	-5,137	671
Total Net	17,072	594	2,538	454	98	56	19,708	735	8,890	682	3,459	508	17,340	1,456	6,561	656	23,901	1,535	55,958	1,885
Total																				
Mortality	-11,880	467	-4,679	525	-166	38	-16,725	697	-2,753	321	-989	195	-3,221	316	-1,654	210	-4,875	365	-25,341	870
Cut	-3,183	310	-11	5	-3	2	-3,197	310	-954	259	-3,105	775	-22,908	2,140	-4,618	827	-27,526	2,228	-34,782	2,373
Gross Growth	30,178	392	5,808	261	236	32	36,222	425	12,139	472	4,970	333	27,368	1,065	9,498	642	36,866	1,048	90,197	1,220
Net Live	15,115	674	1,118	550	67	35	16,300	866	8,432	619	876	863	1,239	2,395	3,226	908	4,465	2,558	30,074	2,897
Standing Dead Change	-30	362	-347	450	-16	25	-393	578	265	235	108	127	-129	189	-31	141	-160	236	-181	679
Dead Woody Debris Change	-1,860	375	500	318	3	47	-1,357	493	-1,411	316	-179	231	-3,409	486	-460	220	-3,869	530	-6,817	820
Total Net	16,999	793	1,477	603	59	61	18,535	987	9,594	780	1,045	1,116	-2,119	3,098	3,470	1,160	1,351	3,307	30,525	3,706

Total Net value includes change from roots and understorey vegetation which are not enumerated in this table.

Table B 9.2 Average annual carbon (CO2e) flux in live trees from growth, harvest, mortality, 2001-2006 to 2011-2016: COUNTY

County	Standing Live															All Pools		
	Gross Growth		Harvest		Fire killed		Cut and fire		Insects and disease		Natural/other		Total Mortality		Net Flux		Net Flux	
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
	<i>Thousand Metric Tons CO2 equivalent per year</i>																	
Baker	1,119	98	-127	52	-287	271	-8	9	-131	32	-121	24	-546	274	446	271	460	196
Benton	1,524	321	-840	410	--	--	--	--	--	--	-328	102	-328	102	356	400	344	578
Clackamas	3,817	398	-1,194	469	--	--	--	--	-133	48	-876	144	-1,009	149	1,614	543	2,509	759
Clatsop	2,812	486	-1,966	656	--	--	--	--	-36	33	-561	238	-597	240	249	771	471	1,013
Columbia	2,131	430	-1,161	594	--	--	--	--	-50	31	-226	88	-276	94	693	651	1,007	849
Coos	4,836	587	-2,550	807	--	--	--	--	-42	25	-446	89	-488	92	1,798	877	1,684	1,149
Crook	704	65	-70	21	-15	9	--	--	-27	11	-84	20	-126	24	508	65	287	146
Curry	3,834	486	-1,689	591	-320	117	-44	44	-29	14	-777	112	-1,169	165	975	677	1,464	797
Deschutes	1,854	127	-345	81	-574	217	-23	13	-369	95	-251	47	-1,217	216	291	236	344	240
Douglas	12,102	709	-4,289	967	-1,073	360	--	--	-391	78	-2,052	190	-3,516	405	4,296	1,115	4,602	1,416
Grant	2,952	155	-209	48	-299	95	-5	4	-375	49	-459	51	-1,139	111	1,605	168	1,259	227
Harney	570	53	-177	50	-189	51	-31	29	-42	13	-58	15	-320	61	73	78	56	98
Hood River	968	170	-33	23	--	--	--	--	-126	60	-193	52	-320	77	616	136	679	180
Jackson	4,631	396	-809	298	-70	51	--	--	-322	104	-1,061	161	-1,453	196	2,369	423	2,762	511
Jefferson	618	108	-326	254	-452	200	-10	10	-38	21	-83	32	-583	203	-292	311	-559	417
Josephine	2,672	275	-375	239	-546	255	--	--	-17	10	-646	111	-1,210	276	1,087	383	1,157	421
Klamath	5,508	288	-1,334	240	-370	176	-16	13	-922	153	-883	144	-2,192	265	1,983	348	1,851	463
Lake	1,813	137	-360	102	-172	54	-82	64	-421	91	-329	64	-1,004	136	449	173	9	254
Lane	12,361	711	-3,046	698	-279	156	-1	1	-252	94	-2,068	204	-2,600	267	6,714	911	7,581	1,168
Lincoln	2,921	438	-2,156	749	--	--	--	--	-34	26	-307	61	-340	67	425	765	64	1,061
Linn	4,194	449	-2,514	790	-155	155	-24	19	-79	38	-535	89	-793	184	887	843	131	1,121
Malheur	10	5	--	--	-37	23	--	--	-3	3	--	--	-40	23	-31	20		11
Marion	1,353	266	-949	464	--	--	--	--	-105	45	-176	52	-281	69	123	478	199	645
Morrow	346	68	-61	35	-7	6	--	--	-36	14	-28	10	-72	18	213	68	152	107
Multnomah	646	185	-13	9	--	--	--	--	-134	79	-125	50	-260	93	373	166	619	204
Polk	1,518	326	-1,299	561	--	--	--	--	--	--	-151	51	-151	51	69	531	89	673
Tillamook	3,191	430	-1,890	690	--	--	--	--	-5	5	-625	176	-630	176	671	720	906	909
Umatilla	1,239	161	-217	160	-6	7	--	--	-105	49	-229	49	-340	69	683	202	428	244
Union	1,850	172	-766	240	--	--	--	--	-200	74	-302	63	-502	96	582	212	303	270
Wallowa	1,877	173	-469	157	-76	40	--	--	-225	56	-435	78	-736	101	672	181	333	274
Wasco	1,137	165	-326	155	-211	137	--	--	-117	37	-143	35	-472	146	339	229	498	275
Washington	1,251	284	-2,953	869	--	--	--	--	-41	30	-154	58	-194	65	-1,896	797	-2,309	1,077
Wheeler	318	50	-47	33	-46	24	--	--	-57	27	-44	13	-147	38	124	56	126	82
Yamhill	1,520	362	-222	145	--	--	--	--	--	--	-289	115	-289	115	1,008	342	1,407	437
All counties	90,197	1,220	-34,782	2,373	-5,187	678	-245	88	-4,865	316	-15,044	540	-25,341	870	30,074	2,897	30,914	3,773

Table B 9.3 Average annual carbon (CO₂e) flux in live trees from growth, harvest, mortality, 2001-2006 to 2011-2016: NATIONAL FOREST

	Standing Live														All Pools					
	Gross Growth		Harvest		Fire killed		Cut and fire		Insects and disease		Natural/other		Total Mortality		Net Flux		Net Flux			
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE		
	<i>Thousand Metric Tons CO₂ equivalent per year</i>																			
Region 5																				
Klamath	77	38	--	--	--	--	--	--	--	--	--	--	--	--	--	--	77	38	94	46
Total	77	38	--	--	--	--	--	--	--	--	--	--	--	--	--	--	77	38	94	46
Region 6																				
Deschutes	2,283	88	-354	81	-874	266	-27	15	-452	99	-472	67	-1,825	246	104	265	-173	302		
Fremont	1,626	105	-270	74	-174	54	-19	15	-622	146	-311	61	-1,126	162	230	153	90	184		
Malheur	2,215	98	-157	34	-608	284	-32	29	-317	44	-345	38	-1,303	287	755	296	973	215		
Mt. Hood	3,651	143	-250	87	-22	27	--	--	-551	116	-827	96	-1,400	134	2,001	200	3,162	330		
Ochoco	768	39	-150	43	-107	46	-1	1	-73	29	-114	22	-295	56	322	71	81	155		
Rogue River / Siskiyou	5,197	224	-290	96	-1,095	289	-44	44	-221	52	-1,489	135	-2,848	311	2,059	381	2,865	404		
Sisuslaw	3,139	124	-457	156	--	--	--	--	-124	55	-746	75	-870	88	1,813	217	2,578	278		
Umatilla	2,077	98	-113	27	-70	32	-4	4	-254	44	-386	54	-713	63	1,251	101	550	196		
Umpqua	3,536	136	-153	64	-857	311	-1	1	-269	59	-855	91	-1,983	319	1,400	349	1,770	393		
Wallowa-Whitman	3,225	115	-151	37	-105	42	-8	9	-437	83	-645	86	-1,194	115	1,880	143	1,607	220		
Willamette	6,092	195	-563	173	-437	220	-24	19	-273	92	-1,649	188	-2,384	286	3,145	400	4,148	470		
Winema	2,293	131	-289	65	--	--	--	--	-486	68	-296	58	-782	82	1,222	130	1,316	176		
Columbia River Gorge National Scenic Area	42	31	--	--	--	--	--	--	--	--	-1	1	-1	1	41	31	63	47		
Crooked River National Grassland	1	1	--	--	-2	2	--	--	--	--	--	--	-2	2	-1	1	2	1		
Total	36,145	424	-3,197	310	-4,351	624	-160	61	-4,079	275	-8,136	314	-16,725	697	16,223	865	19,031	1,019		
All National Forests	36,222	425	-3,197	310	-4,351	624	-160	61	-4,079	275	-8,136	314	-16,725	697	16,300	866	19,125	1,020		

Table B10: Annual Net Change Per Acre in Carbon Stock for Aboveground Pools on Forest Land by Disturbance, Forest Land Status and Owner Group, 2001-2006 to 2011-2016: All Oregon

	USDA Forest Service								Other Public				Private				Total			
	Timberland		Reserved		Low productive, unreserved		Total		Other federal		State and local gov.		Corporate		Non Corporate		Total			
	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE		
<i>metric tons CO2 equivalent per year and acre</i>																				
Cut																				
Mortality	-0.0304	0.0040	-0.0012	0.0012	-0.0067	0.0048	-0.0245	0.0032	-0.0157	0.0071	-0.0757	0.0379	-0.0346	0.0102	-0.0282	0.0116	-0.0324	0.0078	-0.0281	0.0036
Cut	-0.2404	0.0256	-0.0011	0.0005	-0.0054	0.0037	-0.1903	0.0202	-0.2047	0.0659	-2.6351	0.6971	-3.1547	0.3036	-1.1200	0.2202	-2.4698	0.2133	-1.0872	0.0799
Gross Growth	0.1902	0.0143	0.0058	0.0030	0.0144	0.0080	0.1518	0.0114	0.2635	0.0677	0.7711	0.1814	0.7833	0.0719	0.3804	0.0713	0.6477	0.0534	0.3642	0.0224
Net Live	-0.0806	0.0213	0.0036	0.0025	0.0023	0.0030	-0.0630	0.0169	0.0431	0.0580	-1.9396	0.6120	-2.4060	0.2793	-0.7678	0.1898	-1.8546	0.1948	-0.7511	0.0725
Standing Dead Change	-0.0272	0.0090	-0.0005	0.0004	-0.0048	0.0060	-0.0217	0.0071	0.0005	0.0044	-0.0352	0.0329	-0.0760	0.0157	-0.0118	0.0045	-0.0544	0.0105	-0.0309	0.0052
Dead Woody Debris Change	-0.0089	0.0084	-0.0018	0.0037	0.0112	0.0070	-0.0070	0.0066	-0.0594	0.0301	0.0303	0.1488	-0.0092	0.0350	0.0037	0.0163	-0.0015	0.0238	-0.0104	0.0113
Total Net	-0.1428	0.0294	0.0022	0.0021	0.0073	0.0085	-0.1123	0.0232	-0.0018	0.0850	-2.5082	0.8060	-3.1753	0.3630	-0.9952	0.2446	-2.4415	0.2532	-1.0087	0.0947
Cut and Fire																				
Mortality	-0.0146	0.0055	--	--	-0.0005	0.0005	-0.0115	0.0044	--	--	--	--	-0.0112	0.0093	-0.0030	0.0030	-0.0084	0.0063	-0.0085	0.0031
Cut	-0.0290	0.0120	--	--	-0.0008	0.0008	-0.0230	0.0095	--	--	--	--	-0.0521	0.0412	-0.0957	0.0763	-0.0668	0.0374	-0.0345	0.0139
Gross Growth	0.0118	0.0031	--	--	0.0012	0.0012	0.0094	0.0024	--	--	--	--	0.0088	0.0057	0.0161	0.0094	0.0113	0.0049	0.0085	0.0021
Net Live	-0.0318	0.0134	--	--	-0.0002	0.0002	-0.0251	0.0106	--	--	--	--	-0.0545	0.0368	-0.0826	0.0709	-0.0640	0.0341	-0.0346	0.0130
Standing Dead Change	0.0030	0.0024	--	--	0.0004	0.0004	0.0024	0.0019	--	--	--	--	0.0003	0.0010	0.0009	0.0019	0.0005	0.0009	0.0013	0.0010
Dead Woody Debris Change	-0.0017	0.0034	--	--	0.0007	0.0007	-0.0014	0.0027	--	--	--	--	-0.0092	0.0113	-0.0138	0.0119	-0.0108	0.0085	-0.0104	0.0033
Total Net	-0.0376	0.0160	--	--	0.0009	0.0009	-0.0297	0.0126	--	--	--	--	-0.0761	0.0469	-0.1168	0.1000	-0.0898	0.0458	-0.0459	0.0172
Fire																				
Mortality	-0.2261	0.0356	-0.7281	0.1927	-0.1025	0.0532	-0.3137	0.0449	-0.1080	0.0567	-0.0197	0.0154	-0.0061	0.0046	-0.1101	0.0465	-0.0411	0.0160	-0.1803	0.0236
Cut	0.0000	0.0000	-0.0005	0.0005	--	--	-0.0001	0.0001	--	--	--	--	--	--	--	--	--	--	-0.0001	0.0000
Gross Growth	0.0689	0.0074	0.1675	0.0423	0.0305	0.0154	0.0864	0.0096	0.0348	0.0147	0.0009	0.0007	0.0006	0.0005	0.0295	0.0111	0.0103	0.0038	0.0497	0.0052
Net Live	-0.1564	0.0327	-0.5611	0.1719	-0.0720	0.0426	-0.2275	0.0405	-0.0732	0.0486	-0.0189	0.0147	-0.0056	0.0041	-0.0806	0.0394	-0.0308	0.0136	-0.1306	0.0211
Standing Dead Change	0.1033	0.0211	0.3113	0.0993	0.0369	0.0223	0.1392	0.0246	0.0302	0.0328	0.0169	0.0132	0.0053	0.0042	0.0416	0.0350	0.0175	0.0121	0.0778	0.0133
Dead Woody Debris Change	-0.0273	0.0087	-0.0280	0.0320	-0.0514	0.0371	-0.0281	0.0091	-0.0088	0.0057	0.0007	0.0010	-0.0038	0.0035	0.0070	0.0130	-0.0002	0.0050	-0.0147	0.0048
Total Net	-0.0934	0.0191	-0.3432	0.1148	-0.0880	0.0530	-0.1386	0.0258	-0.0572	0.0321	-0.0012	0.0023	-0.0040	0.0033	-0.0416	0.0242	-0.0166	0.0085	-0.0800	0.0134
Insect and Disease																				
Mortality	-0.2639	0.0162	-0.4562	0.0831	-0.0963	0.0463	-0.2941	0.0198	-0.0902	0.0331	-0.0415	0.0281	-0.0408	0.0112	-0.0397	0.0153	-0.0404	0.0090	-0.1691	0.0110
Cut	-0.0051	0.0022	-0.0017	0.0017	--	--	-0.0043	0.0018	-0.0009	0.0009	--	--	-0.0005	0.0004	-0.0030	0.0017	-0.0013	0.0006	-0.0027	0.0009
Gross Growth	0.4689	0.0200	0.5526	0.0664	0.0795	0.0299	0.4732	0.0200	0.2031	0.0428	0.1885	0.0993	0.2515	0.0480	0.2053	0.0415	0.2359	0.0348	0.3443	0.0170
Net Live	0.2000	0.0180	0.0948	0.0712	-0.0169	0.0409	0.1748	0.0193	0.1120	0.0429	0.1471	0.0750	0.2102	0.0392	0.1626	0.0371	0.1942	0.0289	0.1725	0.0151
Standing Dead Change	0.0169	0.0127	-0.0334	0.0757	0.0184	0.0317	0.0078	0.0171	0.0124	0.0241	0.0142	0.0136	0.0027	0.0066	-0.0191	0.0133	-0.0046	0.0063	0.0043	0.0091
Dead Woody Debris Change	-0.0344	0.0129	-0.0912	0.0636	-0.0240	0.0220	-0.0444	0.0154	0.0065	0.0245	-0.0271	0.0438	-0.0263	0.0113	-0.0299	0.0191	-0.0275	0.0099	-0.0313	0.0089
Total Net	0.2341	0.0237	-0.0366	0.1019	-0.0244	0.0243	0.1777	0.0264	0.1502	0.0445	0.1772	0.1202	0.2429	0.0509	0.1418	0.0388	0.2089	0.0362	0.1851	0.0195
Other cut and weather																				
Mortality	-0.0328	0.0073	-0.0656	0.0500	--	--	-0.0378	0.0108	-0.0267	0.0154	-0.0726	0.0578	-0.1085	0.0380	-0.0341	0.0105	-0.0835	0.0255	-0.0538	0.0108
Cut	-0.0030	0.0012	--	--	--	--	-0.0023	0.0009	-0.0058	0.0042	--	--	-0.0316	0.0159	-0.0651	0.0348	-0.0429	0.0157	-0.0170	0.0056
Gross Growth	0.0621	0.0094	0.0355	0.0153	0.0024	0.0024	0.0556	0.0080	0.1117	0.0457	0.1440	0.0791	0.1913	0.0438	0.1993	0.0529	0.1940	0.0339	0.1148	0.0141
Net Live	0.0264	0.0084	-0.0301	0.0370	0.0024	0.0024	0.0154	0.0094	0.0792	0.0359	0.0714	0.0645	0.0512	0.0425	0.1002	0.0497	0.0677	0.0327	0.0441	0.0134
Standing Dead Change	-0.0102	0.0068	-0.0060	0.0045	--	--	-0.0092	0.0054	0.0004	0.0015	0.0173	0.0146	0.0362	0.0176	0.0020	0.0063	0.0247	0.0119	0.0050	0.0050
Dead Woody Debris Change	0.0135	0.0071	0.0046	0.0086	0.0010	0.0010	0.0115	0.0058	-0.0066	0.0121	0.0434	0.0612	-0.0038	0.0158	-0.0260	0.0309	-0.0113	0.0148	0.0024	0.0065
Total Net	0.0330	0.0135	-0.0438	0.0417	0.0039	0.0039	0.0182	0.0131	0.0998	0.0449	0.1477	0.0914	0.1114	0.0482	0.1035	0.0695	0.1087	0.0395	0.0655	0.0167
Less than 25% disturbed																				
Mortality	-0.5160	0.0205	-0.6078	0.0688	-0.2207	0.0537	-0.5244	0.0204	-0.5060	0.0623	-0.6853	0.1652	-0.2791	0.0235	-0.2708	0.0332	-0.2763	0.0189	-0.4410	0.0157
Cut	-0.0129	0.0026	-0.0012	0.0009	-0.0009	0.0009	-0.0104	0.0021	-0.0472	0.0187	-0.1742	0.1649	-0.1765	0.0833	-0.0732	0.0303	-0.1417	0.0562	-0.0676	0.0209
Gross Growth	1.9503	0.0368	1.5460	0.1057	0.4793	0.0619	1.8357	0.0345	2.6789	0.1405	3.3924	0.3203	2.8450	0.1390	1.9601	0.1442	2.5471	0.1034	2.2536	0.0453
Net Live	1.4214	0.0387	0.9370	0.1005	0.2577	0.0565	1.3009	0.0356	2.1257	0.1471	2.5329	0.3650	2.3894	0.1530	1.6161	0.1336	2.1291	0.1107	1.7450	0.0484
Standing Dead Change	-0.0886	0.0186	-0.4093	0.1211	-0.0922	0.0510	-0.1469	0.0266	0.0283	0.0483	0.0843	0.1074	0.0124	0.0129	-0.0226	0.0150	0.0006	0.0099	-0.0637	0.0152
Dead Woody Debris Change	-0.1108	0.0285	0.3149	0.1041	0.0694	0.1121	-0.0285	0.0296	-0.3144	0.0765	-0.2095	0.1296	-0.4609	0.0587	-0.0761	0.0473	-0.3314	0.0424	-0.1785	0.0233
Total Net	1.5575	0.0535	1.0083	0.1807	0.2524	0.1428	1.4212	0.0534	2.4108	0.1887	3.1297	0.4484	2.5852	0.2084	1.9279	0.1713	2.3639	0.1492	1.9450	0.0653
Total																				
Mortality	-1.0837	0.0423	-1.8589	0.2049	-0.4268	0.0912	-1.2061	0.0500	-0.7465	0.0875	-0.8948	0.1731	-0.4802	0.0460	-0.4859	0.0577	-0.4821	0.0360	-0.8808	0.0303
Cut	-0.2904	0.0283	-0.0044	0.0020	-0.0071	0.0038	-0.2305	0.0224	-0.2587	0.0701	-2.8093	0.7070	-3.4154	0.3133	-1.3569	0.2351	-2.7225	0.2208	-1.2089	0.0826
Gross Growth	2.7530	0.0325	2.3074	0.0906	0.6072	0.0633	2.6121	0.0301	3.2919	0.1327	4.4969	0.2621	4.0804	0.1284	2.7907	0.1412	3.6463	0.0961	3.1351	0.0413
Net Live	1.3789	0.0609	0.4441	0.2183	0.1734	0.0878	1.1755	0.0625	2.2868	0.1708	0.7928	0.7776	0.1848	0.3568	0.9478	0.2636	0.4416	0.2526	1.0453	0.1004
Standing Dead Change	-0.0028	0.0330	-0.1379	0.1785	-0.0414	0.0652	-0.0284	0.0417	0.0718	0.0638	0.0976	0.1151	-0.0192	0.0282	-0.0091	0.0414	-0.0158	0.0233	-0.0663	0.0236
Dead Woody Debris Change	-0.1697	0.																		

Table B11: Annual Net Change in Carbon Stocks for Aboveground Pools on Timberland by Disturbance, and Owner Group, 2001-2006 to 2011-2016: All Oregon

	USDA Forest Service		Other Public				Private				Total		Total	
	Total	SE	Other federal		State and local govt.		Corporate		Non Corporate		Total	SE	Total	SE
			Total	SE	Total	SE	Total	SE	Total	SE				
<i>thousand metric tons CO2 equivalent per year</i>														
Cut														
Mortality	-334	44	-58	26	-84	42	-232	69	-96	40	-328	79	-803	103
Cut	-2,635	280	-722	242	-2,910	764	-21,160	2,070	-3,706	764	-24,866	2,152	-31,132	2,294
Gross Growth	2,085	157	966	250	852	200	5,253	497	1,228	242	6,481	541	10,384	645
Net Live	-884	234	186	212	-2,141	672	-16,138	1,891	-2,574	656	-18,712	1,963	-21,551	2,083
Standing Dead Change	-298	98	3	16	-39	36	-510	106	-39	16	-549	106	-883	150
Dead Woody Debris Change	-97	92	-223	111	39	164	-28	235	18	55	-10	241	-291	325
Total Net	-1,566	322	23	312	-2,764	885	-21,298	2,459	-3,332	846	-24,630	2,553	-28,936	2,719
Cut and Fire														
Mortality	-160	61	--	--	--	--	-75	63	-10	10	-85	63	-245	88
Cut	-318	132	--	--	--	--	-350	277	-326	260	-675	379	-994	401
Gross Growth	130	34	--	--	--	--	59	38	55	32	114	50	244	60
Net Live	-348	147	--	--	--	--	-366	247	-281	242	-647	344	-995	374
Standing Dead Change	33	26	--	--	--	--	2	7	3	6	5	9	38	28
Dead Woody Debris Change	-19	37	--	--	--	--	-62	76	-47	41	-109	86	-128	94
Total Net	-412	175	--	--	--	--	-511	315	-398	341	-908	463	-1,320	495
Fire														
Mortality	-2,478	391	-166	104	--	--	-33	30	-324	157	-357	160	-3,001	435
Cut			--	--	--	--	--	--	--	--	--	--	--	--
Gross Growth	764	81	99	50	--	--	3	3	82	37	86	37	950	102
Net Live	-1,714	358	-67	79	--	--	-30	27	-241	133	-271	136	-2,052	391
Standing Dead Change	1,133	232	-14	82	--	--	31	28	156	116	187	120	1,305	274
Dead Woody Debris Change	-299	96	-38	21	--	--	-26	24	20	43	-6	49	-344	110
Total Net	-1,024	210	-123	81	--	--	-25	22	-89	71	-114	75	-1,260	237
Insect and Disease														
Mortality	-2,893	179	-159	90	-46	31	-273	75	-131	53	-404	91	-3,502	222
Cut	-55	24	-3	3	--	--	-3	2	-6	4	-9	5	-68	25
Gross Growth	5,140	222	517	141	208	110	1,687	324	670	144	2,356	352	8,221	453
Net Live	2,192	198	354	139	163	83	1,410	265	533	128	1,943	292	4,651	388
Standing Dead Change	185	139	22	72	16	15	18	44	-31	29	-13	53	210	166
Dead Woody Debris Change	-377	141	1	89	-30	48	-177	76	-114	62	-290	98	-697	199
Total Net	2,566	261	429	154	196	133	1,629	344	488	134	2,117	367	5,309	493
Other cut and weather														
Mortality	-359	81	-96	57	-75	64	-728	256	-116	36	-844	258	-1,374	283
Cut	-32	13	-22	16	--	--	-212	107	-211	118	-423	158	-477	160
Gross Growth	681	104	409	168	89	70	1,282	295	673	181	1,956	343	3,135	402
Net Live	289	92	292	132	15	52	342	285	347	170	689	331	1,285	372
Standing Dead Change	-112	74	1	6	17	16	243	118	8	21	250	120	156	142
Dead Woody Debris Change	148	78	-20	44	67	60	-25	106	-87	105	-113	149	82	184
Total Net	362	148	372	166	106	82	746	323	361	237	1,107	400	1,947	465
Less than 25% disturbed														
Mortality	-5,656	226	-1,542	206	-705	184	-1,868	162	-885	119	-2,753	191	-10,656	403
Cut	-142	29	-150	64	-193	182	-1,181	559	-249	103	-1,430	568	-1,914	601
Gross Growth	21,379	420	9,159	507	3,438	370	19,002	1,030	6,360	574	25,362	1,085	59,337	1,302
Net Live	15,581	433	7,467	524	2,541	408	15,953	1,095	5,226	519	21,179	1,149	46,768	1,384
Standing Dead Change	-971	204	53	160	121	114	102	85	-61	51	40	99	-756	300
Dead Woody Debris Change	-1,215	312	-915	257	-240	137	-3,150	399	-219	157	-3,368	427	-5,738	602
Total Net	17,072	594	8,648	670	3,166	495	17,227	1,455	6,297	653	23,524	1,534	52,411	1,829
Total														
Mortality	-11,880	467	-2,021	246	-909	194	-3,209	316	-1,562	208	-4,771	364	-19,581	668
Cut	-3,183	310	-897	257	-3,102	775	-22,906	2,140	-4,497	822	-27,403	2,227	-34,585	2,372
Gross Growth	30,178	392	11,150	497	4,588	330	27,287	1,065	9,068	640	36,355	1,051	82,271	1,230
Net Live	15,115	674	8,232	578	577	853	1,172	2,394	3,009	906	4,181	2,557	28,105	2,834
Standing Dead Change	-30	362	66	195	115	122	-115	188	36	134	-80	231	71	487
Dead Woody Debris Change	-1,860	375	-1,195	295	-165	224	-3,468	485	-429	215	-3,896	527	-7,116	742
Total Net	16,999	793	9,349	761	704	1,106	-2,231	3,098	3,327	1,156	1,097	3,306	28,149	3,651

Total Net value includes change from roots and understory vegetation which are not enumerated in this table.

Table B12: Annual Net Change Per Acre in Carbon Stock for Aboveground Pools on Timberland by Disturbance, and Owner Group, 2001-2006 to 2011-2016: All Oregon

	USDA Forest Service		Other Public				Private				Total		Total	
	Mean	SE	Other federal		State and local gov.		Corporate		Non Corporate		Mean	SE	Mean	SE
			Mean	SE	Mean	SE	Mean	SE	Mean	SE				
	<i>metric tons CO2 equivalent per year and acre</i>													
Cut														
Mortality	-0.0304	0.0040	-0.0252	0.0113	-0.0897	0.0448	-0.0359	0.0106	-0.0352	0.0144	-0.0357	0.0086	-0.0343	0.0044
Cut	-0.2404	0.0256	-0.3142	0.1045	-3.1223	0.8198	-3.2775	0.3149	-1.3565	0.2704	-2.7063	0.2343	-1.3316	0.0981
Gross Growth	0.1902	0.0143	0.4203	0.1076	0.9142	0.2129	0.8137	0.0744	0.4494	0.0852	0.7054	0.0580	0.4441	0.0274
Net Live	-0.0806	0.0213	0.0810	0.0924	-2.2979	0.7215	-2.4997	0.2900	-0.9422	0.2351	-2.0365	0.2144	-0.9218	0.0893
Standing Dead Change	-0.0272	0.0090	0.0014	0.0070	-0.0418	0.0390	-0.0790	0.0163	-0.0143	0.0056	-0.0598	0.0116	-0.0378	0.0064
Dead Woody Debris Change	-0.0089	0.0084	-0.0968	0.0483	0.0417	0.1764	-0.0044	0.0364	0.0067	0.0203	-0.0011	0.0262	-0.0124	0.0139
Total Net	-0.1428	0.0294	0.0098	0.1359	-2.9660	0.9503	-3.2989	0.3768	-1.2194	0.3029	-2.6805	0.2785	-1.2377	0.1165
Cut and Fire														
Mortality	-0.0146	0.0055	--	--	--	--	-0.0117	0.0097	-0.0037	0.0037	-0.0093	0.0069	-0.0105	0.0038
Cut	-0.0290	0.0120	--	--	--	--	-0.0541	0.0428	-0.1192	0.0950	-0.0735	0.0412	-0.0425	0.0171
Gross Growth	0.0118	0.0031	--	--	--	--	0.0092	0.0059	0.0200	0.0117	0.0124	0.0054	0.0104	0.0026
Net Live	-0.0318	0.0134	--	--	--	--	-0.0566	0.0382	-0.1029	0.0883	-0.0704	0.0375	-0.0426	0.0160
Standing Dead Change	0.0030	0.0024	--	--	--	--	0.0003	0.0011	0.0011	0.0023	0.0005	0.0010	0.0016	0.0012
Dead Woody Debris Change	-0.0017	0.0034	--	--	--	--	-0.0096	0.0118	-0.0172	0.0149	-0.0119	0.0094	-0.0055	0.0040
Total Net	-0.0376	0.0160	--	--	--	--	-0.0791	0.0487	-0.1455	0.1244	-0.0988	0.0503	-0.0565	0.0212
Fire														
Mortality	-0.2261	0.0356	-0.0724	0.0451	--	--	-0.0051	0.0051	-0.1185	0.0571	-0.0388	0.0174	-0.1284	0.0186
Cut	0.0000	0.0000	--	--	--	--	--	--	--	--	--	--	0.0000	0.0000
Gross Growth	0.0697	0.0074	0.0433	0.0217	--	--	0.0005	0.0005	0.0302	0.0134	0.0093	0.0040	0.0406	0.0044
Net Live	-0.1564	0.0327	-0.0291	0.0346	--	--	-0.0046	0.0046	-0.0884	0.0485	-0.0295	0.0148	-0.0878	0.0167
Standing Dead Change	0.1033	0.0211	-0.0060	0.0357	--	--	0.0047	0.0047	0.0572	0.0425	0.0203	0.0130	0.0558	0.0117
Dead Woody Debris Change	-0.0273	0.0087	-0.0166	0.0090	--	--	-0.0041	0.0041	0.0073	0.0157	-0.0007	0.0053	-0.0147	0.0047
Total Net	-0.0934	0.0191	-0.0534	0.0352	--	--	-0.0038	0.0038	-0.0327	0.0261	-0.0124	0.0081	-0.0539	0.0102
Insect and Disease														
Mortality	-0.2639	0.0162	-0.0694	0.0391	-0.0492	0.0333	-0.0423	0.0116	-0.0479	0.0190	-0.0440	0.0099	-0.1498	0.0095
Cut	-0.0051	0.0022	-0.0015	0.0015	--	--	-0.0005	0.0004	-0.0021	0.0016	-0.0010	0.0005	-0.0029	0.0011
Gross Growth	0.4689	0.0200	0.2248	0.0600	0.2236	0.1174	0.2612	0.0498	0.2451	0.0509	0.2564	0.0382	0.3516	0.0193
Net Live	0.2000	0.0180	0.1539	0.0599	0.1744	0.0887	0.2184	0.0407	0.1951	0.0455	0.2115	0.0317	0.1989	0.0165
Standing Dead Change	0.0169	0.0127	0.0096	0.0315	0.0169	0.0161	0.0028	0.0069	-0.0113	0.0108	-0.0014	0.0058	0.0090	0.0071
Dead Woody Debris Change	-0.0344	0.0129	0.0003	0.0386	-0.0321	0.0519	-0.0273	0.0117	-0.0416	0.0226	-0.0316	0.0106	-0.0298	0.0085
Total Net	0.2341	0.0237	0.1869	0.0658	0.2102	0.1423	0.2524	0.0529	0.1786	0.0480	0.2304	0.0398	0.2271	0.0210
Other cut and weather														
Mortality	-0.0328	0.0073	-0.0417	0.0246	-0.0801	0.0684	-0.1127	0.0395	-0.0424	0.0131	-0.0918	0.0280	-0.0587	0.0121
Cut	-0.0030	0.0012	-0.0094	0.0068	--	--	-0.0329	0.0165	-0.0772	0.0433	-0.0460	0.0173	-0.0204	0.0068
Gross Growth	0.0621	0.0094	0.1782	0.0730	0.0958	0.0752	0.1986	0.0454	0.2465	0.0657	0.2128	0.0373	0.1341	0.0172
Net Live	0.0264	0.0084	0.1271	0.0573	0.0157	0.0557	0.0530	0.0442	0.1269	0.0617	0.0750	0.0360	0.0549	0.0159
Standing Dead Change	-0.0102	0.0068	0.0005	0.0025	0.0184	0.0173	0.0376	0.0182	0.0029	0.0079	0.0272	0.0131	0.0067	0.0061
Dead Woody Debris Change	0.0135	0.0071	-0.0088	0.0192	0.0715	0.0643	-0.0039	0.0165	-0.0320	0.0384	-0.0123	0.0163	0.0035	0.0079
Total Net	0.0330	0.0135	0.1617	0.0720	0.1141	0.0884	0.1156	0.0500	0.1321	0.0865	0.1205	0.0435	0.0833	0.0199
Less than 25% disturbed														
Mortality	-0.5160	0.0205	-0.6709	0.0889	-0.7565	0.1925	-0.2894	0.0243	-0.3238	0.0406	-0.2996	0.0207	-0.4558	0.0172
Cut	-0.0129	0.0026	-0.0652	0.0278	-0.2066	0.1955	-0.1829	0.0866	-0.0911	0.0377	-0.1556	0.0619	-0.0819	0.0257
Gross Growth	1.9503	0.0368	3.9857	0.2082	3.6897	0.3517	2.9433	0.1432	2.3278	0.1725	2.7603	0.1120	2.5380	0.0532
Net Live	1.4214	0.0387	3.2497	0.2203	2.7266	0.4176	2.4710	0.1581	1.9128	0.1611	2.3050	0.1205	2.0004	0.0575
Standing Dead Change	-0.0886	0.0186	0.0232	0.0697	0.1299	0.1224	0.0158	0.0132	-0.0224	0.0185	0.0044	0.0107	-0.0323	0.0128
Dead Woody Debris Change	-0.1108	0.0285	-0.3982	0.1113	-0.2580	0.1465	-0.4879	0.0607	-0.0800	0.0574	-0.3666	0.0462	-0.2454	0.0257
Total Net	1.5575	0.0535	3.7636	0.2847	3.3976	0.5118	2.6683	0.2157	2.3047	0.2063	2.5602	0.1629	2.2417	0.0767
Total														
Mortality	-1.0837	0.0423	-0.8796	0.1048	-0.9755	0.2012	-0.4971	0.0476	-0.5715	0.0703	-0.5192	0.0394	-0.8375	0.0285
Cut	-0.2904	0.0283	-0.3902	0.1105	-3.3289	0.8307	-3.5480	0.3249	-1.6460	0.2886	-2.9824	0.2424	-1.4793	0.1014
Gross Growth	2.7530	0.0325	4.8524	0.1797	4.9233	0.2678	4.2266	0.1305	3.3189	0.1605	3.9567	0.1017	3.5189	0.0472
Net Live	1.3789	0.0609	3.5826	0.2381	0.6188	0.9129	0.1815	0.3707	1.1014	0.3265	0.4550	0.2778	1.2021	0.1205
Standing Dead Change	-0.0028	0.0030	0.0287	0.0850	0.1234	0.1311	-0.0179	0.0292	0.0130	0.0489	-0.0087	0.0251	0.0030	0.0208
Dead Woody Debris Change	-0.1697	0.0342	-0.5201	0.1275	-0.1769	0.2400	-0.5371	0.0737	-0.1569	0.0783	-0.4241	0.0570	-0.3044	0.0316
Total Net	1.5507	0.0718	4.0687	0.3197	0.7558	1.1847	-0.3455	0.4801	1.2178	0.4184	0.1194	0.3596	1.2040	0.1556

Total Net value includes change from roots and understory vegetation which are not enumerated in this table.

Table C1: Aboveground Carbon, Dry Weight (Regional Biomass Method) of Live Trees Including Foliage (>= 1 inch) by Owner Group and Forest Land Status, 2007-2016: All Oregon

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	449,536	4,805	5,713	590	455,249	4,757	114,015	4,682	3,968	1,054	117,983	4,563	573,232	5,931
National Grasslands	--	--	22	10	22	10	--	--	--	--	--	--	22	10
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	449,536	4,805	5,735	590	455,271	4,757	114,015	4,682	3,968	1,054	117,983	4,563	573,254	5,931
Other federal government:														
Bureau of Land Management	142,414	4,907	5,236	690	147,650	4,893	4,921	1,561	294	146	5,215	1,567	152,865	4,792
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	6,909	1,498	789	648	7,698	1,627	7,698	1,627
U.S. Fish and Wildlife Service	--	--	--	--	--	--	262	195	28	34	290	198	290	198
Other federal	118	120	--	--	118	120	332	255	--	--	332	255	450	282
Total	142,532	4,908	5,236	690	147,768	4,894	12,425	2,137	1,111	665	13,536	2,228	161,303	4,649
State and local government:														
Local	4,092	1,099	166	83	4,258	1,103	1,142	766	--	--	1,142	766	5,400	1,340
State	40,710	2,552	445	250	41,155	2,562	3,021	1,435	286	322	3,307	1,464	44,462	2,676
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	44,802	2,682	611	263	45,413	2,693	4,163	1,623	286	322	4,449	1,649	49,862	2,810
Private:														
Corporate	161,662	5,476	2,571	878	164,232	5,532	--	--	--	--	--	--	164,232	5,532
Noncorporate private:														
Total, noncorporate private	83,803	4,388	6,743	710	90,545	4,414	--	--	--	--	--	--	90,545	4,414
All private	245,464	5,761	9,313	1,123	254,778	5,781	--	--	--	--	--	--	254,778	5,781
All owners	882,334	9,128	20,895	1,467	903,229	9,104	130,602	5,397	5,366	1,288	135,968	5,339	1,039,197	9,632

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C2: Aboveground Carbon, Dry Weight (Regional Biomass Method) of Live Trees Including Foliage (>= 1 inch) by Owner Group and Forest Land Status, 2007-2016: Blue Mountains

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	76,048	1,162	1,115	189	77,162	1,153	21,121	1,358	614	259	21,735	1,360	98,897	1,657
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	76,048	1,162	1,115	189	77,162	1,153	21,121	1,358	614	259	21,735	1,360	98,897	1,657
Other federal government:														
Bureau of Land Management	1,329	459	--	--	1,329	459	--	--	--	--	--	--	1,329	459
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
U.S. Fish and Wildlife Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other federal	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	1,329	459	--	--	1,329	459	--	--	--	--	--	--	1,329	459
State and local government:														
Local	468	255	--	--	468	255	--	--	--	--	--	--	468	255
State	560	309	--	--	560	309	--	--	--	--	--	--	560	309
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	1,028	401	--	--	1,028	401	--	--	--	--	--	--	1,028	401
Private:														
Corporate	6,931	892	63	44	6,994	893	--	--	--	--	--	--	6,994	893
Noncorporate private:														
Total, noncorporate private	8,825	1,153	124	68	8,948	1,156	--	--	--	--	--	--	8,948	1,156
All private	15,756	1,432	186	81	15,942	1,435	--	--	--	--	--	--	15,942	1,435
All owners	94,160	1,940	1,301	206	95,461	1,937	21,121	1,358	614	259	21,735	1,360	117,196	2,274

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C3: Aboveground Carbon, Dry Weight (Regional Biomass Method) of Live Trees Including Foliage (>= 1 inch) by Owner Group and Forest Land Status, 2007-2016: East Cascades+Modoc

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	57,757	1,314	734	136	58,491	1,306	4,413	864	364	183	4,777	875	63,268	1,553
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	57,757	1,314	734	136	58,491	1,306	4,413	864	364	183	4,777	875	63,268	1,553
Other federal government:														
Bureau of Land Management	4,060	1,552	557	193	4,617	1,561	705	475	184	136	889	494	5,506	1,636
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
U.S. Fish and Wildlife Service	--	--	--	--	--	--	219	188	--	--	219	188	219	188
Other federal	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	4,060	1,552	557	193	4,617	1,561	924	511	184	136	1,108	529	5,725	1,644
State and local government:														
Local	229	118	102	74	330	147	--	--	--	--	--	--	330	147
State	1,464	478	79	110	1,543	491	--	--	--	--	--	--	1,543	491
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	1,693	485	181	133	1,873	505	--	--	--	--	--	--	1,873	505
Private:														
Corporate	11,309	1,024	404	160	11,713	1,029	--	--	--	--	--	--	11,713	1,029
Noncorporate private:														
Total, noncorporate private	9,166	1,460	1,281	278	10,447	1,485	--	--	--	--	--	--	10,447	1,485
All private	20,475	1,742	1,685	320	22,160	1,759	--	--	--	--	--	--	22,160	1,759
All owners	83,985	2,716	3,157	419	87,141	2,731	5,336	1,004	548	228	5,885	1,022	93,026	2,903

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C4: Aboveground Carbon, Dry Weight (Regional Biomass Method) of Live Trees Including Foliage (>= 1 inch) by Owner Group and Forest Land Status, 2007-2016: Eastern OR Lowlands

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total			
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	1,567	253	271	50	1,838	259	50	39	--	--	50	39	1,887	261
National Grasslands	--	--	22	10	22	10	--	--	--	--	--	--	22	10
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	1,567	253	293	51	1,860	259	50	39	--	--	50	39	1,909	261
Other federal government:														
Bureau of Land Management	665	239	3,193	295	3,858	370	--	--	110	52	110	52	3,968	372
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
U.S. Fish and Wildlife Service	--	--	--	--	--	--	--	--	28	34	28	34	28	34
Other federal	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	665	239	3,193	295	3,858	370	--	--	138	62	138	62	3,996	373
State and local government:														
Local	--	--	61	37	61	37	--	--	--	--	--	--	61	37
State	26	28	167	66	192	71	--	--	--	--	--	--	192	71
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	26	28	227	75	253	80	--	--	--	--	--	--	253	80
Private:														
Corporate	750	221	441	161	1,191	273	--	--	--	--	--	--	1,191	273
Noncorporate private:														
Total, noncorporate private	2,506	519	2,101	280	4,607	585	--	--	--	--	--	--	4,607	585
All private	3,256	561	2,542	322	5,798	640	--	--	--	--	--	--	5,798	640
All owners	5,514	673	6,255	445	11,769	797	50	39	138	62	187	73	11,956	800

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C5: Aboveground Carbon, Dry Weight (Regional Biomass Method) of Live Trees Including Foliage (>= 1 inch) by Owner Group and Forest Land Status, 2007-2016: Klamath Mountains

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	39,172	2,155	1,191	282	40,364	2,148	8,922	1,921	146	86	9,068	1,909	49,432	2,854
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	39,172	2,155	1,191	282	40,364	2,148	8,922	1,921	146	86	9,068	1,909	49,432	2,854
Other federal government:														
Bureau of Land Management	39,562	3,747	1,075	498	40,636	3,753	2,108	1,020	--	--	2,108	1,020	42,744	3,835
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
U.S. Fish and Wildlife Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other federal	118	120	--	--	118	120	95	95	--	--	95	95	213	153
Total	39,679	3,749	1,075	498	40,754	3,755	2,203	1,024	--	--	2,203	1,024	42,957	3,838
State and local government:														
Local	1,814	763	--	--	1,814	763	--	--	--	--	--	--	1,814	763
State	1,347	734	--	--	1,347	734	--	--	--	--	--	--	1,347	734
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	3,161	1,059	--	--	3,161	1,059	--	--	--	--	--	--	3,161	1,059
Private:														
Corporate	17,094	2,151	220	109	17,314	2,156	--	--	--	--	--	--	17,314	2,156
Noncorporate private:														
Total, noncorporate private	12,892	1,774	1,647	370	14,539	1,818	--	--	--	--	--	--	14,539	1,818
All private	29,986	2,741	1,867	385	31,853	2,771	--	--	--	--	--	--	31,853	2,771
All owners	111,999	5,210	4,132	689	116,132	5,225	11,125	2,177	146	86	11,271	2,167	127,403	5,607

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C6: Aboveground Carbon, Dry Weight (Regional Biomass Method) of Live Trees Including Foliage (>= 1 inch) by Owner Group and Forest Land Status, 2007-2016: Oregon Coast Range

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		All forest land	
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	61,609	2,520	153	114	61,762	2,516	5,662	2,076	97	53	5,759	2,076	67,521	3,200
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	61,609	2,520	153	114	61,762	2,516	5,662	2,076	97	53	5,759	2,076	67,521	3,200
Other federal government:														
Bureau of Land Management	61,611	5,211	411	336	62,022	5,221	--	--	--	--	--	--	62,022	5,221
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
U.S. Fish and Wildlife Service	--	--	--	--	--	--	43	49	--	--	43	49	43	49
Other federal	--	--	--	--	--	--	237	237	--	--	237	237	237	237
Total	61,611	5,211	411	336	62,022	5,221	281	242	--	--	281	242	62,303	5,226
State and local government:														
Local	1,400	725	--	--	1,400	725	828	699	--	--	828	699	2,228	1,003
State	33,958	2,622	--	--	33,958	2,622	2,082	1,093	57	48	2,140	1,094	36,098	2,705
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	35,358	2,661	--	--	35,358	2,661	2,911	1,294	57	48	2,968	1,294	38,326	2,756
Private:														
Corporate	76,181	4,694	212	168	76,393	4,698	--	--	--	--	--	--	76,393	4,698
Noncorporate private:														
Total, noncorporate private	21,095	2,609	190	147	21,286	2,613	--	--	--	--	--	--	21,286	2,613
All private	97,276	5,151	403	223	97,678	5,155	--	--	--	--	--	--	97,678	5,155
All owners	255,854	8,165	967	419	256,821	8,173	8,854	2,458	154	72	9,008	2,459	265,828	8,437

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C7: Aboveground Carbon, Dry Weight (Regional Biomass Method) of Live Trees Including Foliage (>= 1 inch) by Owner Group and Forest Land Status, 2007-2016: Western Cascades

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	213,383	4,072	2,249	447	215,632	4,051	73,847	4,095	2,748	1,003	76,595	4,007	292,227	5,202
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	213,383	4,072	2,249	447	215,632	4,051	73,847	4,095	2,748	1,003	76,595	4,007	292,227	5,202
Other federal government:														
Bureau of Land Management	29,300	3,614	--	--	29,300	3,614	2,108	1,095	--	--	2,108	1,095	31,408	3,749
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	6,909	1,498	789	648	7,698	1,627	7,698	1,627
U.S. Fish and Wildlife Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other federal	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	29,300	3,614	--	--	29,300	3,614	9,017	1,815	789	648	9,806	1,921	39,106	3,988
State and local government:														
Local	179	183	--	--	179	183	--	--	--	--	--	--	179	183
State	1,744	780	--	--	1,744	780	925	946	--	--	925	946	2,669	1,227
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	1,923	802	--	--	1,923	802	925	946	--	--	925	946	2,848	1,238
Private:														
Corporate	38,954	3,351	104	73	39,058	3,351	--	--	--	--	--	--	39,058	3,351
Noncorporate private:														
Total, noncorporate private	12,504	2,022	517	251	13,021	2,036	--	--	--	--	--	--	13,021	2,036
All private	51,458	3,824	621	261	52,079	3,830	--	--	--	--	--	--	52,079	3,830
All owners	296,064	6,724	2,870	517	298,934	6,714	83,790	4,578	3,537	1,194	87,326	4,543	386,260	7,709

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C8: Aboveground Carbon, Dry Weight (Regional Biomass Method) of Live Trees Including Foliage (>= 1 inch) by Owner Group and Forest Land Status, 2007-2016: Willamette Valley

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other federal government:														
Bureau of Land Management	5,888	1,830	--	--	5,888	1,830	--	--	--	--	--	--	5,888	1,830
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
U.S. Fish and Wildlife Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other federal	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	5,888	1,830	--	--	5,888	1,830	--	--	--	--	--	--	5,888	1,830
State and local government:														
Local	2	2	4	4	6	5	313	313	--	--	313	313	320	313
State	1,612	878	199	215	1,811	904	14	19	229	319	242	318	2,053	951
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	1,614	878	203	215	1,817	904	327	313	229	319	556	446	2,373	1,002
Private:														
Corporate	10,442	1,683	1,126	820	11,568	1,872	--	--	--	--	--	--	11,568	1,872
Noncorporate private:														
Total, noncorporate private	16,815	2,228	883	369	17,698	2,250	--	--	--	--	--	--	17,698	2,250
All private	27,257	2,762	2,010	899	29,267	2,880	--	--	--	--	--	--	29,267	2,880
All owners	34,758	3,430	2,213	924	36,971	3,532	327	313	229	319	556	446	37,527	3,553

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C9.1: Aboveground Carbon, Dry Weight (Regional Biomass Method) of Live Trees Including Foliage (>= 1 inch) by Owner Group and Forest Land Status, All Oregon (10 year averages): 2001 - 2010

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	443,637	9,438	5,700	950	449,337	9,387	93,921	6,059	3,284	923	97,204	6,108	546,541	8,804
National Grasslands	--	--	46	26	46	26	--	--	--	--	--	--	46	26
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	443,637	9,438	5,746	950	449,383	9,386	93,921	6,059	3,284	923	97,204	6,108	546,587	8,804
Other federal government:														
Bureau of Land Management	122,559	5,830	5,514	648	128,073	5,804	5,330	1,533	221	100	5,552	1,536	133,624	5,697
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	6,629	1,078	644	642	7,274	1,144	7,274	1,144
U.S. Fish and Wildlife Service	--	--	--	--	--	--	179	125	93	75	272	145	272	145
Other federal	497	354	--	--	497	354	218	229	--	--	218	229	715	422
Total	123,056	5,841	5,514	648	128,570	5,815	12,357	1,893	959	654	13,315	1,934	141,886	5,721
State and local government:														
Local	3,730	1,088	123	70	3,853	1,091	1,054	685	--	--	1,054	685	4,907	1,286
State	42,840	3,420	610	323	43,450	3,435	3,990	1,669	210	219	4,200	1,683	47,650	3,730
Other public	9	9	--	--	9	9	--	--	--	--	--	--	9	9
Total	46,579	3,586	733	331	47,312	3,601	5,044	1,804	210	219	5,255	1,817	52,566	3,942
Private:														
Corporate	143,382	5,489	2,245	801	145,627	5,520	--	--	--	--	--	--	145,627	5,520
Noncorporate private:														
Total, noncorporate private	89,227	4,580	6,451	745	95,678	4,602	--	--	--	--	--	--	95,678	4,602
All private	232,609	6,120	8,697	1,091	241,305	6,112	--	--	--	--	--	--	241,305	6,112
All owners	845,881	12,400	20,689	1,618	866,570	12,337	111,322	6,594	4,453	1,152	115,774	6,655	982,345	11,840

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C9.1: Aboveground Carbon, Dry Weight (Regional Biomass Method) of Live Trees Including Foliage (>= 1 inch) by Owner Group and Forest Land Status, All Oregon (10 year averages): 2002 - 2011

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	449,505	9,490	5,519	948	455,024	9,440	91,699	5,937	3,380	934	95,080	5,989	550,104	8,834
National Grasslands	--	--	47	26	47	26	--	--	--	--	--	--	47	26
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	449,505	9,490	5,567	948	455,072	9,440	91,699	5,937	3,380	934	95,080	5,989	550,151	8,833
Other federal government:														
Bureau of Land Management	126,745	5,820	5,280	635	132,025	5,793	5,103	1,505	158	75	5,261	1,507	137,286	5,678
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	6,277	1,104	778	644	7,055	1,154	7,055	1,154
U.S. Fish and Wildlife Service	--	--	--	--	--	--	231	173	88	72	320	188	320	188
Other federal	527	362	--	--	527	362	222	231	--	--	222	231	749	429
Total	127,272	5,831	5,280	635	132,552	5,803	11,834	1,889	1,024	653	12,858	1,921	145,410	5,689
State and local government:														
Local	3,722	1,071	133	71	3,854	1,073	1,031	674	--	--	1,031	674	4,886	1,266
State	42,005	3,336	588	321	42,593	3,352	4,032	1,682	210	219	4,242	1,696	46,835	3,661
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	45,727	3,502	720	329	46,447	3,517	5,063	1,812	210	219	5,274	1,825	51,721	3,871
Private:														
Corporate	146,893	5,556	2,155	778	149,048	5,588	--	--	--	--	--	--	149,048	5,588
Noncorporate private:														
Total, noncorporate private	89,372	4,583	6,634	762	96,006	4,606	--	--	--	--	--	--	96,006	4,606
All private	236,265	6,170	8,788	1,084	245,054	6,163	--	--	--	--	--	--	245,054	6,163
All owners	858,769	12,474	20,356	1,607	879,125	12,412	108,596	6,484	4,614	1,160	113,211	6,545	992,336	11,891

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C9.1: Aboveground Carbon, Dry Weight (Regional Biomass Method) of Live Trees Including Foliage (>= 1 inch) by Owner Group and Forest Land Status, All Oregon (10 year averages): 2003 - 2012

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total			
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	435,651	5,030	5,633	576	441,284	4,991	106,274	4,632	3,655	1,002	109,929	4,519	551,213	5,894
National Grasslands	--	--	20	9	20	9	--	--	--	--	--	--	20	9
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	435,651	5,030	5,653	576	441,303	4,991	106,274	4,632	3,655	1,002	109,929	4,519	551,233	5,894
Other federal government:														
Bureau of Land Management	129,867	4,800	5,334	652	135,201	4,782	4,869	1,551	241	136	5,110	1,556	140,311	4,708
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	7,116	1,513	791	648	7,907	1,640	7,907	1,640
U.S. Fish and Wildlife Service	--	--	--	--	--	--	258	191	89	73	347	205	347	205
Other federal	494	355	--	--	494	355	239	237	--	--	239	237	733	427
Total	130,362	4,781	5,334	652	135,695	4,764	12,482	2,140	1,121	666	13,603	2,231	149,298	4,574
State and local government:														
Local	3,718	1,059	146	78	3,864	1,062	1,012	691	--	--	1,012	691	4,876	1,265
State	39,974	2,370	502	294	40,476	2,387	2,914	1,401	170	181	3,084	1,410	43,560	2,495
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	43,693	2,479	648	305	44,341	2,496	3,926	1,560	170	181	4,096	1,568	48,436	2,593
Private:														
Corporate	153,160	5,231	2,549	879	155,708	5,290	--	--	--	--	--	--	155,708	5,290
Noncorporate private:														
Total, noncorporate private	88,344	4,418	6,832	773	95,177	4,450	--	--	--	--	--	--	95,177	4,450
All private	241,504	5,445	9,381	1,163	250,885	5,473	--	--	--	--	--	--	250,885	5,473
All owners	851,209	8,866	21,016	1,483	872,225	8,851	122,682	5,336	4,947	1,217	127,628	5,278	999,853	9,268

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C9.1: Aboveground Carbon, Dry Weight (Regional Biomass Method) of Live Trees Including Foliage (>= 1 inch) by Owner Group and Forest Land Status, All Oregon (10 year averages): 2004 - 2013

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	439,034	5,054	5,771	607	444,805	5,011	108,622	4,659	3,736	1,017	112,358	4,545	557,163	5,921
National Grasslands	--	--	20	9	20	9	--	--	--	--	--	--	20	9
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	439,034	5,054	5,791	607	444,825	5,011	108,622	4,659	3,736	1,017	112,358	4,545	557,183	5,921
Other federal government:														
Bureau of Land Management	133,215	4,823	5,310	650	138,526	4,804	4,874	1,551	250	139	5,124	1,556	143,650	4,723
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	7,188	1,518	791	648	7,979	1,645	7,979	1,645
U.S. Fish and Wildlife Service	--	--	--	--	--	--	258	191	89	73	347	205	347	205
Other federal	494	355	--	--	494	355	334	256	--	--	334	256	828	438
Total	133,710	4,803	5,310	650	139,020	4,784	12,654	2,145	1,130	666	13,785	2,236	152,805	4,582
State and local government:														
Local	3,530	1,001	157	81	3,686	1,005	1,061	734	--	--	1,061	734	4,747	1,243
State	40,242	2,390	459	249	40,701	2,401	2,924	1,406	172	181	3,096	1,414	43,797	2,515
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	43,772	2,502	616	262	44,388	2,514	3,985	1,584	172	181	4,157	1,591	48,545	2,624
Private:														
Corporate	153,441	5,285	2,618	880	156,059	5,343	--	--	--	--	--	--	156,059	5,343
Noncorporate private:														
Total, noncorporate private	86,681	4,398	6,822	772	93,503	4,430	--	--	--	--	--	--	93,503	4,430
All private	240,122	5,528	9,440	1,163	249,562	5,554	--	--	--	--	--	--	249,562	5,554
All owners	856,637	8,940	21,157	1,487	877,795	8,918	125,261	5,368	5,039	1,230	130,300	5,309	1,008,095	9,335

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C9.1: Aboveground Carbon, Dry Weight (Regional Biomass Method) of Live Trees Including Foliage (>= 1 inch) by Owner Group and Forest Land Status, All Oregon (10 year averages): 2005 - 2014

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		All forest land	
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	442,272	4,970	5,487	573	447,759	4,927	110,963	4,678	3,719	1,019	114,682	4,566	562,441	5,942
National Grasslands	--	--	20	10	20	10	--	--	--	--	--	--	20	10
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	442,272	4,970	5,507	573	447,779	4,927	110,963	4,678	3,719	1,019	114,682	4,566	562,461	5,942
Other federal government:														
Bureau of Land Management	138,265	4,877	5,048	582	143,313	4,858	4,928	1,561	250	139	5,178	1,567	148,491	4,766
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	7,070	1,515	801	652	7,871	1,643	7,871	1,643
U.S. Fish and Wildlife Service	--	--	--	--	--	--	258	191	89	73	347	205	347	205
Other federal	118	120	--	--	118	120	334	256	--	--	334	256	452	283
Total	138,383	4,878	5,048	582	143,431	4,860	12,589	2,149	1,141	671	13,730	2,241	157,161	4,638
State and local government:														
Local	3,664	1,045	159	81	3,823	1,049	1,073	740	--	--	1,073	740	4,896	1,281
State	40,846	2,442	459	249	41,306	2,452	2,930	1,407	172	181	3,102	1,415	44,407	2,559
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	44,511	2,554	618	262	45,129	2,566	4,003	1,587	172	181	4,174	1,594	49,303	2,669
Private:														
Corporate	154,863	5,276	2,735	884	157,598	5,333	--	--	--	--	--	--	157,598	5,333
Noncorporate private:														
Total, noncorporate private	86,375	4,457	6,688	750	93,063	4,486	--	--	--	--	--	--	93,063	4,486
All private	241,238	5,587	9,423	1,152	250,661	5,606	--	--	--	--	--	--	250,661	5,606
All owners	866,404	9,008	20,596	1,435	887,000	8,983	127,555	5,387	5,031	1,233	132,586	5,330	1,019,586	9,445

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C9.1: Aboveground Carbon, Dry Weight (Regional Biomass Method) of Live Trees Including Foliage (>= 1 inch) by Owner Group and Forest Land Status, All Oregon (10 year averages): 2006 - 2015

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total			
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	446,010	4,952	5,595	584	451,606	4,909	112,322	4,713	3,851	1,051	116,173	4,603	567,779	5,945
National Grasslands	--	--	23	10	23	10	--	--	--	--	--	--	23	10
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	446,010	4,952	5,618	584	451,628	4,909	112,322	4,713	3,851	1,051	116,173	4,603	567,801	5,945
Other federal government:														
Bureau of Land Management	141,416	4,903	5,303	660	146,718	4,882	4,910	1,558	247	139	5,157	1,564	151,875	4,784
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	7,030	1,511	787	648	7,817	1,638	7,817	1,638
U.S. Fish and Wildlife Service	--	--	--	--	--	--	262	195	22	27	285	196	285	196
Other federal	118	120	--	--	118	120	333	256	--	--	333	256	451	282
Total	141,534	4,905	5,303	660	146,836	4,884	12,535	2,144	1,057	663	13,592	2,234	160,428	4,646
State and local government:														
Local	3,668	1,046	161	82	3,830	1,051	1,072	739	--	--	1,072	739	4,902	1,281
State	40,800	2,541	479	250	41,279	2,551	2,953	1,413	277	322	3,230	1,443	44,508	2,665
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	44,468	2,650	640	263	45,109	2,661	4,025	1,592	277	322	4,301	1,619	49,410	2,771
Private:														
Corporate	158,856	5,441	2,593	877	161,449	5,497	--	--	--	--	--	--	161,449	5,497
Noncorporate private:														
Total, noncorporate private	84,862	4,381	6,374	685	91,236	4,407	--	--	--	--	--	--	91,236	4,407
All private	243,718	5,708	8,967	1,107	252,685	5,731	--	--	--	--	--	--	252,685	5,731
All owners	875,730	9,122	20,528	1,438	896,258	9,099	128,882	5,417	5,185	1,284	134,066	5,366	1,030,325	9,562

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C9.1: Aboveground Carbon, Dry Weight (Regional Biomass Method) of Live Trees Including Foliage (>= 1 inch) by Owner Group and Forest Land Status, All Oregon (10 year averages): 2007 - 2016

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total			
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	449,536	4,805	5,713	590	455,249	4,757	114,015	4,682	3,968	1,054	117,983	4,563	573,232	5,931
National Grasslands	--	--	22	10	22	10	--	--	--	--	--	--	22	10
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	449,536	4,805	5,735	590	455,271	4,757	114,015	4,682	3,968	1,054	117,983	4,563	573,254	5,931
Other federal government:														
Bureau of Land Management	142,414	4,907	5,236	690	147,650	4,893	4,921	1,561	294	146	5,215	1,567	152,865	4,792
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	6,909	1,498	789	648	7,698	1,627	7,698	1,627
U.S. Fish and Wildlife Service	--	--	--	--	--	--	262	195	28	34	290	198	290	198
Other federal	118	120	--	--	118	120	332	255	--	--	332	255	450	282
Total	142,532	4,908	5,236	690	147,768	4,894	12,425	2,137	1,111	665	13,536	2,228	161,303	4,649
State and local government:														
Local	4,092	1,099	166	83	4,258	1,103	1,142	766	--	--	1,142	766	5,400	1,340
State	40,710	2,552	445	250	41,155	2,562	3,021	1,435	286	322	3,307	1,464	44,462	2,676
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	44,802	2,682	611	263	45,413	2,693	4,163	1,623	286	322	4,449	1,649	49,862	2,810
Private:														
Corporate	161,662	5,476	2,571	878	164,232	5,532	--	--	--	--	--	--	164,232	5,532
Noncorporate private:														
Total, noncorporate private	83,803	4,388	6,743	710	90,545	4,414	--	--	--	--	--	--	90,545	4,414
All private	245,464	5,761	9,313	1,123	254,778	5,781	--	--	--	--	--	--	254,778	5,781
All owners	882,334	9,128	20,895	1,467	903,229	9,104	130,602	5,397	5,366	1,288	135,968	5,339	1,039,197	9,632

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C10: Aboveground Carbon, Dry Weight (Regional Biomass Method) of Dead Trees (>= 5 inch) by Owner Group and Forest Land Status, 2007-2016: All Oregon

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total			
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	40,080	941	918	127	40,998	943	16,689	986	1,022	276	17,711	970	58,708	1,318
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	40,080	941	918	127	40,998	943	16,689	986	1,022	276	17,711	970	58,708	1,318
Other federal government:														
Bureau of Land Management	7,192	566	558	170	7,750	586	336	177	12	6	347	177	8,097	600
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	942	240	102	76	1,044	250	1,044	250
U.S. Fish and Wildlife Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other federal	6	6	--	--	6	6	25	25	--	--	25	25	31	25
Total	7,198	566	558	170	7,756	586	1,303	295	114	76	1,417	303	9,173	621
State and local government:														
Local	233	90	--	--	233	90	14	12	--	--	14	12	246	90
State	2,132	285	39	26	2,170	286	137	81	1	2	138	81	2,309	291
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	2,364	296	39	26	2,403	297	151	82	1	2	152	82	2,555	301
Private:														
Corporate	5,279	365	64	26	5,344	366	--	--	--	--	--	--	5,344	366
Noncorporate private:														
Total, noncorporate private	2,986	332	329	84	3,316	341	--	--	--	--	--	--	3,316	341
All private	8,266	472	393	88	8,659	478	--	--	--	--	--	--	8,659	478
All owners	57,908	1,227	1,908	231	59,816	1,239	18,143	1,032	1,137	287	19,280	1,019	79,096	1,558

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C11: Aboveground Carbon, Dry Weight (Regional Biomass Method) of Dead Trees (>= 5 inch) by Owner Group and Forest Land Status, 2007-2016: Blue Mountains

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total			
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	7,504	271	180	55	7,684	274	4,189	489	129	70	4,318	491	12,002	557
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	7,504	271	180	55	7,684	274	4,189	489	129	70	4,318	491	12,002	557
Other federal government:														
Bureau of Land Management	181	105	--	--	181	105	--	--	--	--	--	--	181	105
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
U.S. Fish and Wildlife Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other federal	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	181	105	--	--	181	105	--	--	--	--	--	--	181	105
State and local government:														
Local	12	8	--	--	12	8	--	--	--	--	--	--	12	8
State	52	33	--	--	52	33	--	--	--	--	--	--	52	33
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	63	34	--	--	63	34	--	--	--	--	--	--	63	34
Private:														
Corporate	266	84	--	--	266	84	--	--	--	--	--	--	266	84
Noncorporate private:														
Total, noncorporate private	320	91	1	1	321	91	--	--	--	--	--	--	321	91
All private	585	124	1	1	586	124	--	--	--	--	--	--	586	124
All owners	8,334	317	181	55	8,515	320	4,189	489	129	70	4,318	491	12,833	581

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C12: Aboveground Carbon, Dry Weight (Regional Biomass Method) of Dead Trees (>= 5 inch) by Owner Group and Forest Land Status, 2007-2016: East Cascades+Modoc

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total			
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	5,080	292	66	25	5,146	293	818	244	31	16	849	244	5,995	382
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	5,080	292	66	25	5,146	293	818	244	31	16	849	244	5,995	382
Other federal government:														
Bureau of Land Management	116	49	29	19	144	53	34	35	6	5	39	36	184	64
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
U.S. Fish and Wildlife Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other federal	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	116	49	29	19	144	53	34	35	6	5	40	36	184	64
State and local government:														
Local	5	6	--	--	5	6	--	--	--	--	--	--	5	6
State	41	28	4	5	45	29	--	--	--	--	--	--	45	29
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	47	29	4	5	50	29	--	--	--	--	--	--	50	29
Private:														
Corporate	353	70	9	8	363	70	--	--	--	--	--	--	363	70
Noncorporate private:														
Total, noncorporate private	829	259	29	12	858	259	--	--	--	--	--	--	858	259
All private	1,182	267	39	15	1,221	267	--	--	--	--	--	--	1,221	267
All owners	6,425	400	137	35	6,562	401	852	246	36	16	888	247	7,450	472

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C13: Aboveground Carbon, Dry Weight (Regional Biomass Method) of Dead Trees (>= 5 inch) by Owner Group and Forest Land Status, 2007-2016: Eastern OR Lowlands

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	85	29	5	2	89	29	3	3	--	--	3	3	92	29
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	85	29	5	2	89	29	3	3	--	--	3	3	92	29
Other federal government:														
Bureau of Land Management	101	80	180	40	281	89	--	--	6	3	6	3	287	89
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
U.S. Fish and Wildlife Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other federal	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	101	80	180	40	281	89	--	--	6	3	6	3	287	89
State and local government:														
Local	--	--	--	--	--	--	--	--	--	--	--	--	--	--
State	--	--	35	26	35	26	--	--	--	--	--	--	35	26
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	--	--	35	26	35	26	--	--	--	--	--	--	35	26
Private:														
Corporate	51	31	16	13	67	34	--	--	--	--	--	--	67	34
Noncorporate private:														
Total, noncorporate private	37	15	82	30	119	33	--	--	--	--	--	--	119	33
All private	88	35	98	33	187	48	--	--	--	--	--	--	187	48
All owners	274	92	319	58	592	108	3	3	6	3	9	5	601	108

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C14: Aboveground Carbon, Dry Weight (Regional Biomass Method) of Dead Trees (>= 5 inch) by Owner Group and Forest Land Status, 2007-2016: Klamath Mountains

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total			
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	4,824	467	378	92	5,202	471	1,023	261	261	155	1,284	287	6,486	550
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	4,824	467	378	92	5,202	471	1,023	261	261	155	1,284	287	6,486	550
Other federal government:														
Bureau of Land Management	2,544	373	316	162	2,860	405	71	42	--	--	71	42	2,932	406
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
U.S. Fish and Wildlife Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other federal	6	6	--	--	6	6	1	1	--	--	1	1	7	6
Total	2,550	373	316	162	2,867	405	72	42	--	--	72	42	2,939	406
State and local government:														
Local	142	81	--	--	142	81	--	--	--	--	--	--	142	81
State	64	52	--	--	64	52	--	--	--	--	--	--	64	52
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	206	96	--	--	206	96	--	--	--	--	--	--	206	96
Private:														
Corporate	668	173	17	12	686	173	--	--	--	--	--	--	686	173
Noncorporate private:														
Total, noncorporate private	583	102	67	28	650	106	--	--	--	--	--	--	650	106
All private	1,251	200	84	30	1,335	202	--	--	--	--	--	--	1,335	202
All owners	8,832	637	778	189	9,610	660	1,095	264	261	155	1,356	290	10,966	719

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C15: Aboveground Carbon, Dry Weight (Regional Biomass Method) of Dead Trees (>= 5 inch) by Owner Group and Forest Land Status, 2007-2016: Oregon Coast Range

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total			
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	3,503	300	18	10	3,520	300	272	139	1	1	273	139	3,794	329
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	3,503	300	18	10	3,520	300	272	139	1	1	273	139	3,794	329
Other federal government:														
Bureau of Land Management	2,444	369	33	28	2,477	370	--	--	--	--	--	--	2,477	370
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
U.S. Fish and Wildlife Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other federal	--	--	--	--	--	--	25	25	--	--	25	25	25	25
Total	2,444	369	33	28	2,477	370	25	25	--	--	25	25	2,502	371
State and local government:														
Local	71	38	--	--	71	38	14	12	--	--	14	12	85	40
State	1,820	280	--	--	1,820	280	116	79	--	--	116	79	1,936	286
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	1,891	280	--	--	1,891	280	130	80	--	--	130	80	2,021	286
Private:														
Corporate	2,599	286	2	1	2,600	286	--	--	--	--	--	--	2,600	286
Noncorporate private:														
Total, noncorporate private	446	94			447	94	--	--	--	--	--	--	447	94
All private	3,045	297	2	1	3,047	297	--	--	--	--	--	--	3,047	297
All owners	10,883	625	52	30	10,935	625	427	162	1	1	428	162	11,364	642

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C16: Aboveground Carbon, Dry Weight (Regional Biomass Method) of Dead Trees (>= 5 inch) by Owner Group and Forest Land Status, 2007-2016: Western Cascades

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total			
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	19,084	691	272	62	19,356	691	10,383	854	600	218	10,984	838	30,340	1,063
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	19,084	691	272	62	19,356	691	10,383	854	600	218	10,984	838	30,340	1,063
Other federal government:														
Bureau of Land Management	1,729	340	--	--	1,729	340	231	169	--	--	231	169	1,959	377
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	942	240	102	76	1,044	250	1,044	250
U.S. Fish and Wildlife Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other federal	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	1,729	340	--	--	1,729	340	1,173	289	102	76	1,275	298	3,004	442
State and local government:														
Local	2	2	--	--	2	2	--	--	--	--	--	--	2	2
State	81	50	--	--	81	50	20	21	--	--	20	21	102	54
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	83	50	--	--	83	50	20	21	--	--	20	21	104	54
Private:														
Corporate	1,122	140	1	1	1,123	140	--	--	--	--	--	--	1,123	140
Noncorporate private:														
Total, noncorporate private	483	130	149	73	632	149	--	--	--	--	--	--	632	149
All private	1,605	190	150	73	1,755	203	--	--	--	--	--	--	1,755	203
All owners	22,502	796	422	96	22,924	799	11,577	902	702	230	12,279	889	35,203	1,171

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C17: Aboveground Carbon, Dry Weight (Regional Biomass Method) of Dead Trees (>= 5 inch) by Owner Group and Forest Land Status, 2007-2016: Willamette Valley

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE		
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other federal government:														
Bureau of Land Management	77	33	--	--	77	33	--	--	--	--	--	--	77	33
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
U.S. Fish and Wildlife Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other federal	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	77	33	--	--	77	33	--	--	--	--	--	--	77	33
State and local government:														
Local	--	--	--	--	--	--	--	--	--	--	--	--	--	--
State	73	43	--	--	73	43	--	--	1	2	1	2	75	43
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	73	43	--	--	73	43	--	--	1	2	1	2	75	43
Private:														
Corporate	220	49	18	16	239	51	--	--	--	--	--	--	239	51
Noncorporate private:														
Total, noncorporate private	289	56			289	56	--	--	--	--	--	--	289	56
All private	509	73	19	16	528	75	--	--	--	--	--	--	528	75
All owners	659	91	19	16	678	93	--	--	1	2	1	2	680	93

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C18.1: Aboveground Carbon, Dry Weight (Regional Biomass Method) of Dead Trees (>= 5 inch) by Owner Group and Forest Land Status, All Oregon (10 year averages): 2001 - 2010

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total			
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	42,703	1,667	1,311	288	44,014	1,677	14,077	1,115	781	219	14,858	1,132	58,872	1,868
National Grasslands	--	--	2	2	2	2	--	--	--	--	--	--	2	2
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	42,703	1,667	1,313	288	44,016	1,677	14,077	1,115	781	219	14,858	1,132	58,874	1,868
Other federal government:														
Bureau of Land Management	6,635	568	422	102	7,057	571	434	201	7	6	441	201	7,498	589
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	682	157	68	68	750	163	750	163
U.S. Fish and Wildlife Service	--	--	--	--	--	--	--	--	2	2	2	2	2	2
Other federal	37	27	--	--	37	27	23	24	--	--	23	24	60	36
Total	6,673	568	422	102	7,094	572	1,138	256	78	69	1,216	260	8,310	609
State and local government:														
Local	248	96	--	--	248	96	21	15	--	--	21	15	270	97
State	2,050	238	8	7	2,058	238	240	120	--	--	240	120	2,298	263
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	2,298	256	8	7	2,306	256	261	121	--	--	261	121	2,567	280
Private:														
Corporate	4,714	304	102	37	4,816	306	--	--	--	--	--	--	4,816	306
Noncorporate private:														
Total, noncorporate private	3,312	288	360	110	3,672	305	--	--	--	--	--	--	3,672	305
All private	8,025	400	463	115	8,488	413	--	--	--	--	--	--	8,488	413
All owners	59,699	1,813	2,205	327	61,904	1,826	15,476	1,150	859	230	16,335	1,168	78,240	2,015

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C18.1: Aboveground Carbon, Dry Weight (Regional Biomass Method) of Dead Trees (>= 5 inch) by Owner Group and Forest Land Status, All Oregon (10 year averages): 2002 - 2011

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total			
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	43,773	1,687	1,307	287	45,080	1,697	14,854	1,167	813	223	15,667	1,184	60,747	1,905
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	43,773	1,687	1,307	287	45,080	1,697	14,854	1,167	813	223	15,667	1,184	60,747	1,905
Other federal government:														
Bureau of Land Management	6,844	578	412	103	7,256	582	422	198	10	7	432	198	7,688	598
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	648	154	100	74	749	160	749	160
U.S. Fish and Wildlife Service	--	--	--	--	--	--	--	--	2	2	2	2	2	2
Other federal	37	27	--	--	37	27	23	24	--	--	23	24	60	36
Total	6,881	579	412	103	7,293	582	1,093	252	112	75	1,205	256	8,498	618
State and local government:														
Local	245	94	--	--	245	94	21	15	--	--	21	15	265	95
State	2,077	239	8	7	2,085	239	244	122	--	--	244	122	2,329	264
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	2,322	257	8	7	2,330	257	265	123	--	--	265	123	2,595	281
Private:														
Corporate	4,873	338	101	37	4,974	340	--	--	--	--	--	--	4,974	340
Noncorporate private:														
Total, noncorporate private	3,296	292	369	114	3,665	310	--	--	--	--	--	--	3,665	310
All private	8,169	429	470	119	8,639	441	--	--	--	--	--	--	8,639	441
All owners	61,144	1,841	2,198	328	63,342	1,854	16,212	1,200	925	235	17,137	1,217	80,479	2,058

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C18.1: Aboveground Carbon, Dry Weight (Regional Biomass Method) of Dead Trees (>= 5 inch) by Owner Group and Forest Land Status, All Oregon (10 year averages): 2003 - 2012

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total			
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	40,562	971	1,039	142	41,601	973	17,270	1,123	1,010	267	18,280	1,106	59,881	1,429
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	40,562	971	1,039	142	41,601	973	17,270	1,123	1,010	267	18,280	1,106	59,881	1,429
Other federal government:														
Bureau of Land Management	7,109	579	399	102	7,507	587	410	201	11	7	421	201	7,928	607
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	792	205	102	75	894	218	894	218
U.S. Fish and Wildlife Service	--	--	--	--	--	--	--	--	2	2	3	2	3	2
Other federal	35	26	--	--	35	26	25	25	--	--	25	25	60	36
Total	7,144	579	399	102	7,543	586	1,227	284	115	76	1,342	293	8,884	619
State and local government:														
Local	250	95	--	--	250	95	21	15	--	--	21	15	271	96
State	1,975	220	4	5	1,978	220	176	102	--	--	176	102	2,154	232
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	2,225	236	4	5	2,228	236	198	103	--	--	198	103	2,426	246
Private:														
Corporate	5,095	360	105	37	5,200	362	--	--	--	--	--	--	5,200	362
Noncorporate private:														
Total, noncorporate private	3,272	300	386	118	3,658	321	--	--	--	--	--	--	3,658	321
All private	8,367	447	491	124	8,858	461	--	--	--	--	--	--	8,858	461
All owners	58,298	1,232	1,932	214	60,230	1,241	18,694	1,163	1,125	278	19,820	1,149	80,050	1,637

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C18.1: Aboveground Carbon, Dry Weight (Regional Biomass Method) of Dead Trees (>= 5 inch) by Owner Group and Forest Land Status, All Oregon (10 year averages): 2004 - 2013

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total			
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	40,530	975	989	131	41,519	976	16,761	1,057	937	256	17,699	1,048	59,217	1,385
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	40,530	975	989	131	41,519	976	16,761	1,057	937	256	17,699	1,048	59,217	1,385
Other federal government:														
Bureau of Land Management	7,137	581	402	102	7,539	588	410	201	11	6	420	201	7,959	608
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	832	210	102	75	934	222	934	222
U.S. Fish and Wildlife Service	--	--	--	--	--	--	--	--	2	2	3	2	3	2
Other federal	35	26	--	--	35	26	25	25	--	--	25	25	61	36
Total	7,172	580	402	102	7,574	588	1,267	288	115	76	1,382	296	8,956	621
State and local government:														
Local	247	94	--	--	247	94	19	13	--	--	19	13	266	95
State	1,932	217	4	5	1,935	217	181	102	--	--	181	102	2,116	230
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	2,179	233	4	5	2,183	233	200	103	--	--	200	103	2,382	245
Private:														
Corporate	5,093	362	117	39	5,210	363	--	--	--	--	--	--	5,210	363
Noncorporate private:														
Total, noncorporate private	3,305	303	385	118	3,690	324	--	--	--	--	--	--	3,690	324
All private	8,398	449	502	125	8,900	463	--	--	--	--	--	--	8,900	463
All owners	58,279	1,235	1,897	208	60,176	1,245	18,228	1,100	1,052	267	19,280	1,094	79,456	1,600

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C18.1: Aboveground Carbon, Dry Weight (Regional Biomass Method) of Dead Trees (>= 5 inch) by Owner Group and Forest Land Status, All Oregon (10 year averages): 2005 - 2014

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total			
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	40,367	968	906	128	41,273	969	17,141	1,077	896	248	18,037	1,061	59,310	1,394
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	40,367	968	906	128	41,273	969	17,141	1,077	896	248	18,037	1,061	59,310	1,394
Other federal government:														
Bureau of Land Management	7,099	554	355	89	7,454	560	411	201	11	6	422	201	7,876	581
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	884	222	104	76	988	233	988	233
U.S. Fish and Wildlife Service	--	--	--	--	--	--	--	--	2	2	3	2	3	2
Other federal	6	6	--	--	6	6	25	25	--	--	25	25	32	25
Total	7,105	554	355	89	7,460	560	1,321	296	117	76	1,437	304	8,898	599
State and local government:														
Local	219	88	--	--	219	88	19	13	--	--	19	13	238	89
State	2,150	279	21	19	2,171	280	181	102	--	--	181	102	2,352	289
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	2,369	290	21	19	2,390	290	200	103	--	--	200	103	2,590	298
Private:														
Corporate	5,038	358	117	40	5,155	360	--	--	--	--	--	--	5,155	360
Noncorporate private:														
Total, noncorporate private	3,168	300	358	117	3,526	320	--	--	--	--	--	--	3,526	320
All private	8,206	445	475	123	8,681	459	--	--	--	--	--	--	8,681	459
All owners	58,046	1,229	1,757	200	59,804	1,238	18,662	1,122	1,013	259	19,674	1,109	79,478	1,608

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C18.1: Aboveground Carbon, Dry Weight (Regional Biomass Method) of Dead Trees (>= 5 inch) by Owner Group and Forest Land Status, All Oregon (10 year averages): 2006 - 2015

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total			
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	40,474	980	922	130	41,396	982	16,699	970	893	248	17,591	954	58,987	1,322
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	40,474	980	922	130	41,396	982	16,699	970	893	248	17,591	954	58,987	1,322
Other federal government:														
Bureau of Land Management	7,229	562	371	93	7,600	569	385	184	11	6	395	184	7,995	584
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	868	220	102	75	970	231	970	231
U.S. Fish and Wildlife Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other federal	6	6	--	--	6	6	25	25	--	--	25	25	32	25
Total	7,235	563	371	93	7,606	569	1,278	284	112	76	1,391	292	8,997	599
State and local government:														
Local	226	89	--	--	226	89	19	13	--	--	19	13	245	90
State	2,144	282	23	19	2,167	283	182	103	1	2	183	103	2,350	292
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	2,371	293	23	19	2,393	293	201	104	1	2	202	104	2,595	301
Private:														
Corporate	5,204	369	91	35	5,295	371	--	--	--	--	--	--	5,295	371
Noncorporate private:														
Total, noncorporate private	3,174	345	296	78	3,470	352	--	--	--	--	--	--	3,470	352
All private	8,378	484	386	86	8,765	489	--	--	--	--	--	--	8,765	489
All owners	58,458	1,259	1,701	182	60,159	1,265	18,178	1,016	1,006	259	19,184	1,003	79,343	1,556

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C18.1: Aboveground Carbon, Dry Weight (Regional Biomass Method) of Dead Trees (>= 5 inch) by Owner Group and Forest Land Status, All Oregon (10 year averages): 2007 - 2016

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total			
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	40,080	941	918	127	40,998	943	16,689	986	1,022	276	17,711	970	58,708	1,318
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	40,080	941	918	127	40,998	943	16,689	986	1,022	276	17,711	970	58,708	1,318
Other federal government:														
Bureau of Land Management	7,192	566	558	170	7,750	586	336	177	12	6	347	177	8,097	600
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	942	240	102	76	1,044	250	1,044	250
U.S. Fish and Wildlife Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other federal	6	6	--	--	6	6	25	25	--	--	25	25	31	25
Total	7,198	566	558	170	7,756	586	1,303	295	114	76	1,417	303	9,173	621
State and local government:														
Local	233	90	--	--	233	90	14	12	--	--	14	12	246	90
State	2,132	285	39	26	2,170	286	137	81	1	2	138	81	2,309	291
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	2,364	296	39	26	2,403	297	151	82	1	2	152	82	2,555	301
Private:														
Corporate	5,279	365	64	26	5,344	366	--	--	--	--	--	--	5,344	366
Noncorporate private:														
Total, noncorporate private	2,986	332	329	84	3,316	341	--	--	--	--	--	--	3,316	341
All private	8,266	472	393	88	8,659	478	--	--	--	--	--	--	8,659	478
All owners	57,908	1,227	1,908	231	59,816	1,239	18,143	1,032	1,137	287	19,280	1,019	79,096	1,558

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C19: Aboveground Carbon, Dry Weight of Live Understory Vegetation by Owner Group and Forest Land Status, 2007-2016: All Oregon

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	11,595.74	65.41	666.93	38.63	12,262.68	63.48	2,399.03	63.13	215.95	39.05	2,614.98	59.30	14,877.66	72.19
National Grasslands	--	--	22.77	7.95	22.77	7.95	--	--	--	--	--	--	22.77	7.95
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	11,595.74	65.41	689.70	38.95	12,285.44	63.62	2,399.03	63.13	215.95	39.05	2,614.98	59.30	14,900.43	72.32
Other federal government:														
Bureau of Land Management	2,533.02	70.25	1,612.12	101.92	4,145.14	113.64	80.48	22.19	69.32	24.31	149.80	32.83	4,294.94	111.43
Department of Defense and Energy	0.14	0.13	--	--	0.14	0.13	--	--	--	--	--	--	0.14	0.13
National Park Service	--	--	--	--	--	--	111.85	21.89	9.32	6.59	121.16	22.68	121.16	22.68
U.S. Fish and Wildlife Service	--	--	--	--	--	--	9.12	6.40	8.82	7.37	17.94	9.75	17.94	9.75
Other federal	7.72	7.86	--	--	7.72	7.86	9.26	6.95	--	--	9.26	6.95	16.98	10.49
Total	2,540.87	70.69	1,612.12	101.92	4,153.00	113.91	210.71	31.95	87.45	25.96	298.16	40.71	4,451.16	107.76
State and local government:														
Local	170.88	35.14	62.15	21.80	233.04	41.98	16.64	10.46	--	--	16.64	10.46	249.68	43.21
State	933.71	43.71	112.16	30.25	1,045.87	51.56	35.07	14.06	14.54	11.76	49.62	17.66	1,095.48	51.18
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	1,104.59	50.73	174.31	37.27	1,278.90	61.73	51.72	17.47	14.54	11.76	66.26	20.48	1,345.16	61.02
Private:														
Corporate	7,823.88	166.75	386.72	55.84	8,210.59	173.02	--	--	--	--	--	--	8,210.59	173.02
Noncorporate private:														
Total, noncorporate private	3,655.70	150.25	1,384.75	101.45	5,040.45	174.86	--	--	--	--	--	--	5,040.45	174.86
All private	11,479.58	161.14	1,771.47	114.26	13,251.05	173.65	--	--	--	--	--	--	13,251.05	173.65
All owners	26,720.79	181.88	4,247.60	161.80	30,968.39	211.69	2,661.46	72.88	317.95	48.34	2,979.41	74.78	33,947.80	209.65

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C20: Aboveground Carbon, Dry Weight of Live Understory Vegetation by Owner Group and Forest Land Status, 2007-2016: Blue Mountains

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	3,705.13	41.86	190.74	20.59	3,895.86	41.49	854.71	48.83	50.38	17.89	905.09	49.32	4,800.96	59.13
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	3,705.13	41.86	190.74	20.59	3,895.86	41.49	854.71	48.83	50.38	17.89	905.09	49.32	4,800.96	59.13
Other federal government:														
Bureau of Land Management	87.22	24.95	11.22	10.56	98.43	27.06	--	--	--	--	--	--	98.43	27.06
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
U.S. Fish and Wildlife Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other federal	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	87.22	24.95	11.22	10.56	98.43	27.06	--	--	--	--	--	--	98.43	27.06
State and local government:														
Local	25.90	13.10	--	--	25.90	13.10	--	--	--	--	--	--	25.90	13.10
State	25.22	13.63	--	--	25.22	13.63	--	--	--	--	--	--	25.22	13.63
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	51.12	18.90	--	--	51.12	18.90	--	--	--	--	--	--	51.12	18.90
Private:														
Corporate	652.02	66.80	16.23	11.18	668.24	67.70	--	--	--	--	--	--	668.24	67.70
Noncorporate private:														
Total, noncorporate private	638.10	63.52	27.53	14.22	665.63	65.24	--	--	--	--	--	--	665.63	65.24
All private	1,290.12	89.66	43.76	18.08	1,333.88	91.46	--	--	--	--	--	--	1,333.88	91.46
All owners	5,133.58	103.71	245.71	29.36	5,379.29	105.64	854.71	48.83	50.38	17.89	905.09	49.32	6,284.38	113.73

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C21: Aboveground Carbon, Dry Weight of Live Understory Vegetation by Owner Group and Forest Land Status, 2007-2016: East Cascades+Modoc

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE		
	<i>thousand metric tons C</i>													
USDA Forest Service:														
National Forest	2,716.93	38.71	126.29	17.23	2,843.22	39.07	115.99	18.74	14.26	7.82	130.25	20.02	2,973.47	41.52
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	2,716.93	38.71	126.29	17.23	2,843.22	39.07	115.99	18.74	14.26	7.82	130.25	20.02	2,973.47	41.52
Other federal government:														
Bureau of Land Management	128.50	28.06	113.73	29.80	242.24	39.82	18.68	11.88	15.98	11.67	34.65	16.65	276.89	43.08
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
U.S. Fish and Wildlife Service	--	--	--	--	--	--	6.78	5.84	--	--	6.78	5.84	6.78	5.84
Other federal	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	128.50	28.06	113.73	29.80	242.24	39.82	25.45	13.23	15.98	11.67	41.43	17.65	283.67	43.41
State and local government:														
Local	21.18	11.70	22.78	12.83	43.96	18.87	--	--	--	--	--	--	43.96	18.87
State	72.67	21.11	4.98	6.95	77.66	22.23	--	--	--	--	--	--	77.66	22.23
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	93.86	23.47	27.76	14.60	121.62	28.61	--	--	--	--	--	--	121.62	28.61
Private:														
Corporate	1,159.21	79.48	50.93	18.36	1,210.14	80.66	--	--	--	--	--	--	1,210.14	80.66
Noncorporate private:														
Total, noncorporate private	497.89	58.06	290.92	49.96	788.81	76.13	--	--	--	--	--	--	788.81	76.13
All private	1,657.11	91.98	341.85	53.15	1,998.95	103.08	--	--	--	--	--	--	1,998.95	103.08
All owners	4,596.40	105.12	609.63	65.32	5,206.03	118.99	141.45	22.94	30.24	14.05	171.68	26.68	5,377.71	121.07

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C22: Aboveground Carbon, Dry Weight of Live Understory Vegetation by Owner Group and Forest Land Status, 2007-2016: Eastern OR Lowlands

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	125.23	16.13	132.63	17.19	257.87	23.50	3.33	2.20	2.62	2.85	5.95	3.60	263.81	23.72
National Grasslands	--	--	22.77	7.95	22.77	7.95	--	--	--	--	--	--	22.77	7.95
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	125.23	16.13	155.40	18.02	280.63	24.08	3.33	2.20	2.62	2.85	5.95	3.60	286.58	24.29
Other federal government:														
Bureau of Land Management	65.45	20.28	1,373.21	95.17	1,438.66	96.16	--	--	53.35	21.32	53.35	21.32	1,492.01	96.73
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
U.S. Fish and Wildlife Service	--	--	--	--	--	--	--	--	8.36	7.35	8.36	7.35	8.36	7.35
Other federal	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	65.45	20.28	1,373.21	95.17	1,438.66	96.16	--	--	61.71	22.23	61.71	22.23	1,500.37	96.87
State and local government:														
Local	0.40	0.41	29.23	15.96	29.63	15.96	--	--	--	--	--	--	29.63	15.96
State	4.31	4.69	102.40	29.25	106.71	29.62	--	--	--	--	--	--	106.71	29.62
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	4.71	4.71	131.63	33.32	136.34	33.65	--	--	--	--	--	--	136.34	33.65
Private:														
Corporate	93.50	25.34	199.87	41.55	293.37	48.83	--	--	--	--	--	--	293.37	48.83
Noncorporate private:														
Total, noncorporate private	242.81	39.24	806.62	79.57	1,049.43	87.84	--	--	--	--	--	--	1,049.43	87.84
All private	336.31	46.35	1,006.49	89.18	1,342.80	99.46	--	--	--	--	--	--	1,342.80	99.46
All owners	531.70	53.80	2,666.74	135.62	3,198.44	144.36	3.33	2.20	64.33	22.41	67.66	22.52	3,266.10	144.86

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C23: Aboveground Carbon, Dry Weight of Live Understory Vegetation by Owner Group and Forest Land Status, 2007-2016: Klamath Mountains

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	855.98	32.96	136.36	18.74	992.34	33.19	257.26	35.38	43.79	22.08	301.05	37.10	1,293.40	49.23
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	855.98	32.96	136.36	18.74	992.34	33.19	257.26	35.38	43.79	22.08	301.05	37.10	1,293.40	49.23
Other federal government:														
Bureau of Land Management	806.32	66.15	104.58	30.85	910.90	71.61	25.70	11.56	--	--	25.70	11.56	936.61	71.96
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
U.S. Fish and Wildlife Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other federal	7.72	7.86	--	--	7.72	7.86	2.97	2.97	--	--	2.97	2.97	10.69	8.40
Total	814.04	66.61	104.58	30.85	918.62	72.04	28.67	11.93	--	--	28.67	11.93	947.29	72.45
State and local government:														
Local	61.12	21.68	--	--	61.12	21.68	--	--	--	--	--	--	61.12	21.68
State	26.15	13.95	0.28	0.28	26.43	14.10	--	--	--	--	--	--	26.43	14.10
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	87.27	25.78	0.28	0.28	87.55	25.86	--	--	--	--	--	--	87.55	25.86
Private:														
Corporate	705.16	71.58	40.21	17.61	745.37	74.14	--	--	--	--	--	--	745.37	74.14
Noncorporate private:														
Total, noncorporate private	488.29	56.55	165.98	33.97	654.27	66.66	--	--	--	--	--	--	654.27	66.66
All private	1,193.45	89.62	206.19	38.13	1,399.64	97.91	--	--	--	--	--	--	1,399.64	97.91
All owners	2,950.74	118.90	447.41	52.49	3,398.15	128.31	285.94	37.34	43.79	22.08	329.73	38.97	3,727.87	133.63

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C24: Aboveground Carbon, Dry Weight of Live Understory Vegetation by Owner Group and Forest Land Status, 2007-2016: Oregon Coast Range

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	802.43	23.35	8.76	4.44	811.20	23.26	69.15	21.56	11.67	5.32	80.82	22.20	892.01	31.18
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	802.43	23.35	8.76	4.44	811.20	23.26	69.15	21.56	11.67	5.32	80.82	22.20	892.01	31.18
Other federal government:														
Bureau of Land Management	882.87	63.87	9.37	7.26	892.24	64.25	--	--	--	--	--	--	892.24	64.25
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
U.S. Fish and Wildlife Service	--	--	--	--	--	--	2.34	2.63	0.45	0.51	2.80	2.63	2.80	2.63
Other federal	--	--	--	--	--	--	6.29	6.28	--	--	6.29	6.28	6.29	6.28
Total	882.87	63.87	9.37	7.26	892.24	64.25	8.64	6.81	0.45	0.51	9.09	6.81	901.33	64.59
State and local government:														
Local	54.11	20.52	--	--	54.11	20.52	10.75	8.66	--	--	10.75	8.66	64.86	22.17
State	721.91	44.55	--	--	721.91	44.55	27.52	12.43	11.52	11.25	39.04	16.30	760.94	45.84
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	776.02	45.79	--	--	776.02	45.79	38.27	15.09	11.52	11.25	49.79	18.41	825.81	46.54
Private:														
Corporate	3,022.86	135.89	15.86	10.73	3,038.72	136.38	--	--	--	--	--	--	3,038.72	136.38
Noncorporate private:														
Total, noncorporate private	729.77	71.30	6.90	4.68	736.66	71.64	--	--	--	--	--	--	736.66	71.64
All private	3,752.62	145.74	22.76	11.70	3,775.38	146.27	--	--	--	--	--	--	3,775.38	146.27
All owners	6,213.95	165.18	40.89	14.47	6,254.84	165.77	116.06	27.18	23.64	12.45	139.70	29.63	6,394.54	167.13

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C25: Aboveground Carbon, Dry Weight of Live Understory Vegetation by Owner Group and Forest Land Status, 2007-2016: Western Cascades

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
	<i>thousand metric tons C</i>													
USDA Forest Service:														
National Forest	3,390.04	44.34	72.15	11.92	3,462.19	44.08	1,098.58	49.35	93.23	26.10	1,191.82	49.44	4,654.00	59.37
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	3,390.04	44.34	72.15	11.92	3,462.19	44.08	1,098.58	49.35	93.23	26.10	1,191.82	49.44	4,654.00	59.37
Other federal government:														
Bureau of Land Management	467.98	51.33	--	--	467.98	51.33	36.10	15.04	--	--	36.10	15.04	504.08	52.94
Department of Defense and Energy	0.14	0.13	--	--	0.14	0.13	--	--	--	--	--	--	0.14	0.13
National Park Service	--	--	--	--	--	--	111.85	21.89	9.32	6.59	121.16	22.68	121.16	22.68
U.S. Fish and Wildlife Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other federal	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	468.12	51.33	--	--	468.12	51.33	147.95	26.00	9.32	6.59	157.26	26.64	625.38	55.91
State and local government:														
Local	6.43	6.58	--	--	6.43	6.58	--	--	--	--	--	--	6.43	6.58
State	44.87	17.47	--	--	44.87	17.47	6.51	6.66	--	--	6.51	6.66	51.38	18.70
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	51.30	18.67	--	--	51.30	18.67	6.51	6.66	--	--	6.51	6.66	57.81	19.78
Private:														
Corporate	1,692.55	107.27	42.85	20.03	1,735.40	109.06	--	--	--	--	--	--	1,735.40	109.06
Noncorporate private:														
Total, noncorporate private	389.01	52.20	45.73	18.51	434.75	55.31	--	--	--	--	--	--	434.75	55.31
All private	2,081.57	116.04	88.58	27.25	2,170.15	118.84	--	--	--	--	--	--	2,170.15	118.84
All owners	5,991.03	135.94	160.73	29.74	6,151.75	138.25	1,253.04	56.18	102.55	26.92	1,355.59	56.56	7,507.34	145.57

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C26: Aboveground Carbon, Dry Weight of Live Understory Vegetation by Owner Group and Forest Land Status, 2007-2016: Willamette Valley

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other federal government:														
Bureau of Land Management	94.68	25.27	--	--	94.68	25.27	--	--	--	--	--	--	94.68	25.27
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
U.S. Fish and Wildlife Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other federal	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	94.68	25.27	--	--	94.68	25.27	--	--	--	--	--	--	94.68	25.27
State and local government:														
Local	1.74	1.76	10.15	7.48	11.89	7.69	5.89	5.88	--	--	5.89	5.88	17.78	9.68
State	38.58	15.80	4.50	3.81	43.07	16.26	1.05	1.46	3.02	4.22	4.07	4.37	47.15	16.70
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	40.32	15.90	14.65	8.40	54.96	17.98	6.94	6.06	3.02	4.22	9.97	7.33	64.93	19.30
Private:														
Corporate	498.58	62.34	20.77	11.16	519.36	63.35	--	--	--	--	--	--	519.36	63.35
Noncorporate private:														
Total, noncorporate private	669.82	87.38	41.08	14.35	710.90	88.28	--	--	--	--	--	--	710.90	88.28
All private	1,168.40	106.24	61.85	18.17	1,230.25	107.39	--	--	--	--	--	--	1,230.25	107.39
All owners	1,303.40	110.56	76.49	20.23	1,379.89	112.01	6.94	6.06	3.02	4.22	9.97	7.33	1,389.86	112.18

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C27.1: Aboveground and Belowground Carbon, Dry Weight of Live Understory Vegetation by Owner Group and Forest Land Status, All Oregon (10 year averages): 2001 - 2010

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	13,435.86	162.61	676.44	71.95	14,112.30	160.79	2,318.33	116.75	198.20	39.86	2,516.53	121.81	16,628.83	121.28
National Grasslands	--	--	86.97	29.14	86.97	29.14	--	--	--	--	--	--	86.97	29.14
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	13,435.86	162.61	763.41	76.40	14,199.27	161.06	2,318.33	116.75	198.20	39.86	2,516.53	121.81	16,715.80	121.54
Other federal government:														
Bureau of Land Management	2,812.57	99.61	2,070.28	124.90	4,882.85	152.60	111.96	27.75	84.00	29.26	195.95	40.26	5,078.80	151.96
Department of Defense and Energy	0.12	0.13	--	--	0.12	0.13	--	--	--	--	--	--	0.12	0.13
National Park Service	--	--	--	--	--	--	125.01	19.10	7.04	5.66	132.05	19.11	132.05	19.11
U.S. Fish and Wildlife Service	--	--	--	--	--	--	10.92	7.61	18.44	13.30	29.36	15.32	29.36	15.32
Other federal	17.98	11.91	--	--	17.98	11.91	6.42	6.75	--	--	6.42	6.75	24.40	13.70
Total	2,830.67	100.30	2,070.28	124.90	4,900.95	153.05	254.31	35.19	109.48	32.64	363.79	47.53	5,264.74	151.59
State and local government:														
Local	184.12	40.12	44.77	19.84	228.89	45.44	19.96	11.97	--	--	19.96	11.97	248.85	46.94
State	1,165.38	77.92	120.86	33.82	1,286.24	84.87	53.45	18.51	4.68	4.88	58.13	19.14	1,344.37	85.67
Other public	8.76	9.02	--	--	8.76	9.02	--	--	--	--	--	--	8.76	9.02
Total	1,358.26	87.80	165.64	39.21	1,523.89	96.34	73.41	22.04	4.68	4.88	78.08	22.58	1,601.98	97.73
Private:														
Corporate	7,963.58	190.64	357.75	56.53	8,321.33	195.02	--	--	--	--	--	--	8,321.33	195.02
Noncorporate private:														
Total, noncorporate private	4,774.78	177.95	2,000.11	127.76	6,774.90	209.86	--	--	--	--	--	--	6,774.90	209.86
All private	12,738.37	185.99	2,357.86	137.60	15,096.22	205.42	--	--	--	--	--	--	15,096.22	205.42
All owners	30,363.14	246.89	5,357.19	202.98	35,720.34	282.19	2,646.05	123.85	312.35	51.75	2,958.40	132.59	38,678.73	257.66

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C27.1: Aboveground and Belowground Carbon, Dry Weight of Live Understory Vegetation by Owner Group and Forest Land Status, All Oregon (10 year averages): 2002 - 2011

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
	<i>thousand metric tons C</i>													
USDA Forest Service:														
National Forest	13,472.56	162.48	657.60	71.40	14,130.16	160.81	2,339.20	118.25	205.07	40.90	2,544.27	123.53	16,674.43	121.76
National Grasslands	--	--	75.63	27.44	75.63	27.44	--	--	--	--	--	--	75.63	27.44
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	13,472.56	162.48	733.24	75.52	14,205.79	160.94	2,339.20	118.25	205.07	40.90	2,544.27	123.53	16,750.06	121.82
Other federal government:														
Bureau of Land Management	2,800.00	96.72	1,931.15	121.29	4,731.15	148.06	107.16	27.18	80.28	28.43	187.44	39.31	4,918.59	148.01
Department of Defense and Energy	0.13	0.13	--	--	0.13	0.13	--	--	--	--	--	--	0.13	0.13
National Park Service	--	--	--	--	--	--	115.31	19.03	12.06	7.42	127.37	18.95	127.37	18.95
U.S. Fish and Wildlife Service	--	--	--	--	--	--	9.20	6.42	17.75	12.99	26.96	14.49	26.96	14.49
Other federal	17.29	11.44	--	--	17.29	11.44	6.54	6.81	--	--	6.54	6.81	23.84	13.31
Total	2,817.42	97.37	1,931.15	121.29	4,748.58	148.49	238.22	34.47	110.09	32.12	348.31	46.41	5,096.89	147.65
State and local government:														
Local	180.00	39.50	54.23	22.27	234.24	46.02	19.61	11.84	--	--	19.61	11.84	253.84	47.48
State	1,136.94	76.23	98.91	30.17	1,235.85	81.92	53.85	18.56	5.75	4.99	59.60	19.22	1,295.44	82.79
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	1,316.94	85.56	153.14	37.50	1,470.08	93.63	73.45	22.02	5.75	4.99	79.20	22.58	1,549.29	95.08
Private:														
Corporate	7,955.37	188.46	297.85	50.68	8,253.22	191.46	--	--	--	--	--	--	8,253.22	191.46
Noncorporate private:														
Total, noncorporate private	4,736.61	176.64	1,899.72	123.61	6,636.33	206.48	--	--	--	--	--	--	6,636.33	206.48
All private	12,691.98	184.41	2,197.57	132.14	14,889.54	201.91	--	--	--	--	--	--	14,889.54	201.91
All owners	30,298.90	245.25	5,015.10	196.12	35,314.00	277.55	2,650.87	125.06	320.92	52.24	2,971.78	133.80	38,285.78	253.16

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C27.1: Aboveground and Belowground Carbon, Dry Weight of Live Understory Vegetation by Owner Group and Forest Land Status, All Oregon (10 year averages): 2003 - 2012

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE		
	<i>thousand metric tons C</i>													
USDA Forest Service:														
National Forest	13,045.53	76.38	812.86	45.11	13,858.39	74.28	2,592.84	70.74	253.55	44.38	2,846.39	66.83	16,704.79	81.01
National Grasslands	--	--	28.78	9.48	28.78	9.48	--	--	--	--	--	--	28.78	9.48
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	13,045.53	76.38	841.64	45.45	13,887.17	74.41	2,592.84	70.74	253.55	44.38	2,846.39	66.83	16,733.57	81.12
Other federal government:														
Bureau of Land Management	2,812.12	81.03	1,952.17	117.75	4,764.29	131.50	95.75	26.13	70.39	26.83	166.14	37.37	4,930.43	129.21
Department of Defense and Energy	0.15	0.14	--	--	0.15	0.14	--	--	--	--	--	--	0.15	0.14
National Park Service	--	--	--	--	--	--	130.49	25.00	13.34	7.73	143.83	26.16	143.83	26.16
U.S. Fish and Wildlife Service	--	--	--	--	--	--	9.99	6.99	17.20	12.96	27.19	14.72	27.19	14.72
Other federal	14.33	10.12	--	--	14.33	10.12	7.03	6.99	--	--	7.03	6.99	21.36	12.30
Total	2,826.61	81.15	1,952.17	117.75	4,778.77	131.57	243.27	36.68	100.92	30.42	344.19	47.24	5,122.96	125.39
State and local government:														
Local	185.53	39.98	58.84	23.03	244.37	46.87	18.65	11.73	--	--	18.65	11.73	263.02	48.29
State	1,048.19	48.58	102.10	30.28	1,150.29	55.19	38.75	15.57	6.71	5.02	45.46	16.14	1,195.75	54.28
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	1,233.73	57.95	160.93	38.04	1,394.66	67.77	57.40	19.43	6.71	5.02	64.11	19.90	1,458.77	66.55
Private:														
Corporate	8,268.17	187.01	314.61	51.88	8,582.78	191.37	--	--	--	--	--	--	8,582.78	191.37
Noncorporate private:														
Total, noncorporate private	4,553.27	174.79	1,816.80	124.62	6,370.07	206.41	--	--	--	--	--	--	6,370.07	206.41
All private	12,821.44	181.26	2,131.41	133.75	14,952.85	196.60	--	--	--	--	--	--	14,952.85	196.60
All owners	29,927.30	205.95	5,086.16	187.43	35,013.45	241.23	2,893.51	82.02	361.18	54.04	3,254.69	84.22	38,268.15	238.14

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C27.1: Aboveground and Belowground Carbon, Dry Weight of Live Understory Vegetation by Owner Group and Forest Land Status, All Oregon (10 year averages): 2004 - 2013

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE		
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	13,015.01	76.30	790.44	44.50	13,805.45	74.19	2,608.70	70.09	242.07	42.94	2,850.77	66.64	16,656.22	80.80
National Grasslands	--	--	28.73	9.46	28.73	9.46	--	--	--	--	--	--	28.73	9.46
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	13,015.01	76.30	819.16	44.85	13,834.17	74.32	2,608.70	70.09	242.07	42.94	2,850.77	66.64	16,684.94	80.91
Other federal government:														
Bureau of Land Management	2,802.89	80.33	1,874.35	114.46	4,677.24	128.42	95.95	26.14	70.12	26.69	166.07	37.28	4,843.30	126.16
Department of Defense and Energy	0.15	0.14	--	--	0.15	0.14	--	--	--	--	--	--	0.15	0.14
National Park Service	--	--	--	--	--	--	133.25	25.22	13.34	7.73	146.58	26.36	146.58	26.36
U.S. Fish and Wildlife Service	--	--	--	--	--	--	9.99	6.99	17.20	12.96	27.19	14.72	27.19	14.72
Other federal	14.33	10.12	--	--	14.33	10.12	10.34	7.74	--	--	10.34	7.74	24.67	12.74
Total	2,817.37	80.45	1,874.35	114.46	4,691.72	128.49	249.53	36.96	100.65	30.29	350.18	47.38	5,041.90	122.33
State and local government:														
Local	186.30	40.12	58.61	22.95	244.91	46.92	18.65	11.73	--	--	18.65	11.73	263.56	48.34
State	1,046.56	48.12	94.59	28.36	1,141.15	53.75	38.73	15.57	6.83	5.06	45.56	16.16	1,186.71	52.81
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	1,232.86	57.63	153.20	36.48	1,386.06	66.59	57.37	19.44	6.83	5.06	64.20	19.91	1,450.26	65.34
Private:														
Corporate	8,330.70	186.58	383.76	58.36	8,714.46	192.52	--	--	--	--	--	--	8,714.46	192.52
Noncorporate private:														
Total, noncorporate private	4,483.20	174.62	1,654.76	117.90	6,137.95	202.59	--	--	--	--	--	--	6,137.95	202.59
All private	12,813.90	181.02	2,038.51	130.11	14,852.41	194.59	--	--	--	--	--	--	14,852.41	194.59
All owners	29,879.14	205.61	4,885.22	182.24	34,764.36	237.74	2,915.60	81.58	349.56	52.80	3,265.16	84.15	38,029.52	234.64

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C27.1: Aboveground and Belowground Carbon, Dry Weight of Live Understory Vegetation by Owner Group and Forest Land Status, All Oregon (10 year averages): 2005 - 2014

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
	<i>thousand metric tons C</i>													
USDA Forest Service:														
National Forest	12,996.35	75.72	770.27	44.11	13,766.62	73.64	2,641.24	69.59	226.16	41.55	2,867.40	65.68	16,634.02	80.23
National Grasslands	--	--	28.84	9.51	28.84	9.51	--	--	--	--	--	--	28.84	9.51
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	12,996.35	75.72	799.12	44.50	13,795.46	73.80	2,641.24	69.59	226.16	41.55	2,867.40	65.68	16,662.86	80.38
Other federal government:														
Bureau of Land Management	2,798.92	78.03	1,839.47	113.17	4,638.39	126.35	89.90	24.73	70.12	26.69	160.02	36.30	4,798.41	124.11
Department of Defense and Energy	0.15	0.14	--	--	0.15	0.14	--	--	--	--	--	--	0.15	0.14
National Park Service	--	--	--	--	--	--	124.69	24.21	13.57	7.82	138.26	25.41	138.26	25.41
U.S. Fish and Wildlife Service	--	--	--	--	--	--	9.99	6.99	17.21	12.96	27.19	14.72	27.19	14.72
Other federal	8.58	8.73	--	--	8.58	8.73	10.34	7.74	--	--	10.34	7.74	18.92	11.66
Total	2,807.65	78.51	1,839.47	113.17	4,647.12	126.65	234.92	35.45	100.89	30.32	335.82	46.21	4,982.94	120.35
State and local government:														
Local	177.66	38.77	69.28	24.39	246.94	46.48	18.79	11.78	--	--	18.79	11.78	265.73	47.93
State	1,058.51	48.92	104.11	30.00	1,162.62	55.30	38.87	15.61	6.83	5.06	45.70	16.20	1,208.32	54.27
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	1,236.17	57.74	173.39	38.66	1,409.56	67.89	57.66	19.50	6.83	5.06	64.49	19.97	1,474.05	66.68
Private:														
Corporate	8,468.48	186.35	398.04	59.33	8,866.52	192.37	--	--	--	--	--	--	8,866.52	192.37
Noncorporate private:														
Total, noncorporate private	4,323.89	172.20	1,585.50	115.28	5,909.39	199.86	--	--	--	--	--	--	5,909.39	199.86
All private	12,792.37	180.34	1,983.54	128.04	14,775.92	193.58	--	--	--	--	--	--	14,775.92	193.58
All owners	29,832.54	204.45	4,795.52	180.30	34,628.06	236.48	2,933.82	80.49	333.88	51.68	3,267.71	82.75	37,895.76	233.40

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C27.1: Aboveground and Belowground Carbon, Dry Weight of Live Understory Vegetation by Owner Group and Forest Land Status, All Oregon (10 year averages): 2006 - 2015

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	12,964.48	75.91	766.01	43.97	13,730.49	74.02	2,651.67	70.23	224.53	40.90	2,876.20	65.91	16,606.69	80.58
National Grasslands	--	--	24.98	8.79	24.98	8.79	--	--	--	--	--	--	24.98	8.79
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	12,964.48	75.91	790.99	44.31	13,755.47	74.16	2,651.67	70.23	224.53	40.90	2,876.20	65.91	16,631.67	80.71
Other federal government:														
Bureau of Land Management	2,814.95	77.84	1,817.54	112.93	4,632.49	125.82	89.52	24.67	68.57	25.87	158.09	35.65	4,790.58	123.47
Department of Defense and Energy	0.15	0.14	--	--	0.15	0.14	--	--	--	--	--	--	0.15	0.14
National Park Service	--	--	--	--	--	--	122.65	23.98	10.30	7.28	132.95	24.87	132.95	24.87
U.S. Fish and Wildlife Service	--	--	--	--	--	--	10.14	7.11	7.23	8.04	17.37	10.72	17.37	10.72
Other federal	8.58	8.72	--	--	8.58	8.72	10.32	7.73	--	--	10.32	7.73	18.90	11.65
Total	2,823.68	78.33	1,817.54	112.93	4,641.22	126.12	232.62	35.28	86.10	27.71	318.72	44.36	4,959.94	119.44
State and local government:														
Local	175.88	38.29	69.50	24.41	245.39	46.11	18.77	11.77	--	--	18.77	11.77	264.16	47.57
State	1,047.37	49.13	125.41	33.43	1,172.78	57.40	38.98	15.69	7.52	5.72	46.50	16.45	1,219.28	56.47
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	1,223.26	57.65	194.91	41.38	1,418.17	69.41	57.75	19.55	7.52	5.72	65.27	20.16	1,483.44	68.30
Private:														
Corporate	8,581.77	185.82	413.25	60.87	8,995.02	192.48	--	--	--	--	--	--	8,995.02	192.48
Noncorporate private:														
Total, noncorporate private	4,176.38	168.74	1,546.29	113.55	5,722.67	196.52	--	--	--	--	--	--	5,722.67	196.52
All private	12,758.15	178.82	1,959.54	127.24	14,717.69	193.35	--	--	--	--	--	--	14,717.69	193.35
All owners	29,769.57	203.24	4,762.99	179.87	34,532.55	236.40	2,942.04	80.99	318.15	49.73	3,260.19	81.96	37,792.74	233.17

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C27.1: Aboveground and Belowground Carbon, Dry Weight of Live Understory Vegetation by Owner Group and Forest Land Status, All Oregon (10 year averages): 2007 - 2016

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE		
	<i>thousand metric tons C</i>													
USDA Forest Service:														
National Forest	12,884.16	72.68	741.03	42.92	13,625.19	70.53	2,665.59	70.15	239.95	43.39	2,905.54	65.89	16,530.73	80.22
National Grasslands	--	--	25.30	8.84	25.30	8.84	--	--	--	--	--	--	25.30	8.84
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	12,884.16	72.68	766.33	43.28	13,650.49	70.69	2,665.59	70.15	239.95	43.39	2,905.54	65.89	16,556.03	80.35
Other federal government:														
Bureau of Land Management	2,814.47	78.06	1,791.25	113.25	4,605.71	126.26	89.42	24.65	77.03	27.01	166.44	36.48	4,772.16	123.81
Department of Defense and Energy	0.15	0.14	--	--	0.15	0.14	--	--	--	--	--	--	0.15	0.14
National Park Service	--	--	--	--	--	--	124.27	24.32	10.35	7.32	134.63	25.20	134.63	25.20
U.S. Fish and Wildlife Service	--	--	--	--	--	--	10.14	7.11	9.79	8.18	19.93	10.83	19.93	10.83
Other federal	8.58	8.73	--	--	8.58	8.73	10.29	7.72	--	--	10.29	7.72	18.87	11.65
Total	2,823.19	78.55	1,791.25	113.25	4,614.44	126.57	234.12	35.50	97.17	28.84	331.29	45.23	4,945.73	119.73
State and local government:														
Local	189.87	39.04	69.06	24.22	258.93	46.64	18.49	11.63	--	--	18.49	11.63	277.42	48.01
State	1,037.45	48.56	124.62	33.61	1,162.07	57.29	38.97	15.63	16.16	13.06	55.13	19.62	1,217.20	56.87
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	1,227.32	56.36	193.68	41.41	1,421.00	68.58	57.46	19.42	16.16	13.06	73.62	22.75	1,494.63	67.80
Private:														
Corporate	8,693.20	185.27	429.68	62.04	9,122.88	192.25	--	--	--	--	--	--	9,122.88	192.25
Noncorporate private:														
Total, noncorporate private	4,061.88	166.94	1,538.62	112.72	5,600.50	194.28	--	--	--	--	--	--	5,600.50	194.28
All private	12,755.08	179.04	1,968.30	126.95	14,723.38	192.95	--	--	--	--	--	--	14,723.38	192.95
All owners	29,689.76	202.09	4,719.56	179.78	34,409.32	235.21	2,957.18	80.98	353.28	53.71	3,310.45	83.09	37,719.77	232.94

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C28: Belowground Carbon, Dry Weight of Live Understory Vegetation, by Owner Group and Forest Land Status, 2007-2016: All Oregon

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	1,288.42	7.27	74.10	4.29	1,362.52	7.05	266.56	7.01	23.99	4.34	290.55	6.59	1,653.07	8.02
National Grasslands	--	--	2.53	0.88	2.53	0.88	--	--	--	--	--	--	2.53	0.88
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	1,288.42	7.27	76.63	4.33	1,365.05	7.07	266.56	7.01	23.99	4.34	290.55	6.59	1,655.60	8.04
Other federal government:														
Bureau of Land Management	281.45	7.81	179.12	11.32	460.57	12.63	8.94	2.47	7.70	2.70	16.64	3.65	477.22	12.38
Department of Defense and Energy	0.02	0.01	--	--	0.02	0.01	--	--	--	--	--	--	0.02	0.01
National Park Service	--	--	--	--	--	--	12.43	2.43	1.04	0.73	13.46	2.52	13.46	2.52
U.S. Fish and Wildlife Service	--	--	--	--	--	--	1.01	0.71	0.98	0.82	1.99	1.08	1.99	1.08
Other federal	0.86	0.87	--	--	0.86	0.87	1.03	0.77	--	--	1.03	0.77	1.89	1.17
Total	282.32	7.85	179.12	11.32	461.44	12.66	23.41	3.55	9.72	2.88	33.13	4.52	494.57	11.97
State and local government:														
Local	18.99	3.90	6.91	2.42	25.89	4.66	1.85	1.16	--	--	1.85	1.16	27.74	4.80
State	103.75	4.86	12.46	3.36	116.21	5.73	3.90	1.56	1.62	1.31	5.51	1.96	121.72	5.69
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	122.73	5.64	19.37	4.14	142.10	6.86	5.75	1.94	1.62	1.31	7.36	2.28	149.46	6.78
Private:														
Corporate	869.32	18.53	42.97	6.20	912.29	19.22	--	--	--	--	--	--	912.29	19.22
Noncorporate private:														
Total, noncorporate private	406.19	16.69	153.86	11.27	560.05	19.43	--	--	--	--	--	--	560.05	19.43
All private	1,275.51	17.90	196.83	12.70	1,472.34	19.29	--	--	--	--	--	--	1,472.34	19.29
All owners	2,968.98	20.21	471.96	17.98	3,440.93	23.52	295.72	8.10	35.33	5.37	331.05	8.31	3,771.98	23.29

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C29: Belowground Carbon, Dry Weight of Live Understory Vegetation, by Owner Group and Forest Land Status, 2007-2016: Blue Mountains

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE		
	<i>thousand metric tons C</i>													
USDA Forest Service:														
National Forest	411.68	4.65	21.19	2.29	432.87	4.61	94.97	5.43	5.60	1.99	100.57	5.48	533.44	6.57
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	411.68	4.65	21.19	2.29	432.87	4.61	94.97	5.43	5.60	1.99	100.57	5.48	533.44	6.57
Other federal government:														
Bureau of Land Management	9.69	2.77	1.25	1.17	10.94	3.01	--	--	--	--	--	--	10.94	3.01
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
U.S. Fish and Wildlife Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other federal	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	9.69	2.77	1.25	1.17	10.94	3.01	--	--	--	--	--	--	10.94	3.01
State and local government:														
Local	2.88	1.46	--	--	2.88	1.46	--	--	--	--	--	--	2.88	1.46
State	2.80	1.51	--	--	2.80	1.51	--	--	--	--	--	--	2.80	1.51
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	5.68	2.10	--	--	5.68	2.10	--	--	--	--	--	--	5.68	2.10
Private:														
Corporate	72.45	7.42	1.80	1.24	74.25	7.52	--	--	--	--	--	--	74.25	7.52
Noncorporate private:														
Total, noncorporate private	70.90	7.06	3.06	1.58	73.96	7.25	--	--	--	--	--	--	73.96	7.25
All private	143.35	9.96	4.86	2.01	148.21	10.16	--	--	--	--	--	--	148.21	10.16
All owners	570.40	11.52	27.30	3.26	597.70	11.74	94.97	5.43	5.60	1.99	100.57	5.48	698.26	12.64

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C30: Belowground Carbon, Dry Weight of Live Understory Vegetation, by Owner Group and Forest Land Status, 2007-2016: East Cascades+Modoc

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE		
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	301.88	4.30	14.03	1.91	315.91	4.34	12.89	2.08	1.58	0.87	14.47	2.22	330.39	4.61
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	301.88	4.30	14.03	1.91	315.91	4.34	12.89	2.08	1.58	0.87	14.47	2.22	330.39	4.61
Other federal government:														
Bureau of Land Management	14.28	3.12	12.64	3.31	26.92	4.42	2.08	1.32	1.78	1.30	3.85	1.85	30.77	4.79
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
U.S. Fish and Wildlife Service	--	--	--	--	--	--	0.75	0.65	--	--	0.75	0.65	0.75	0.65
Other federal	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	14.28	3.12	12.64	3.31	26.92	4.42	2.83	1.47	1.78	1.30	4.60	1.96	31.52	4.82
State and local government:														
Local	2.35	1.30	2.53	1.43	4.88	2.10	--	--	--	--	--	--	4.88	2.10
State	8.07	2.35	0.55	0.77	8.63	2.47	--	--	--	--	--	--	8.63	2.47
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	10.43	2.61	3.08	1.62	13.51	3.18	--	--	--	--	--	--	13.51	3.18
Private:														
Corporate	128.80	8.83	5.66	2.04	134.46	8.96	--	--	--	--	--	--	134.46	8.96
Noncorporate private:														
Total, noncorporate private	55.32	6.45	32.32	5.55	87.65	8.46	--	--	--	--	--	--	87.65	8.46
All private	184.12	10.22	37.98	5.91	222.11	11.45	--	--	--	--	--	--	222.11	11.45
All owners	510.71	11.68	67.74	7.26	578.45	13.22	15.72	2.55	3.36	1.56	19.08	2.96	597.52	13.45

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C31: Belowground Carbon, Dry Weight of Live Understory Vegetation, by Owner Group and Forest Land Status, 2007-2016: Eastern OR Lowlands

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE		
	<i>thousand metric tons C</i>													
USDA Forest Service:														
National Forest	13.91	1.79	14.74	1.91	28.65	2.61	0.37	0.24	0.29	0.32	0.66	0.40	29.31	2.64
National Grasslands	--	--	2.53	0.88	2.53	0.88	--	--	--	--	--	--	2.53	0.88
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	13.91	1.79	17.27	2.00	31.18	2.68	0.37	0.24	0.29	0.32	0.66	0.40	31.84	2.70
Other federal government:														
Bureau of Land Management	7.27	2.25	152.58	10.57	159.85	10.68	--	--	5.93	2.37	5.93	2.37	165.78	10.75
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
U.S. Fish and Wildlife Service	--	--	--	--	--	--	--	--	0.93	0.82	0.93	0.82	0.93	0.82
Other federal	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	7.27	2.25	152.58	10.57	159.85	10.68	--	--	6.86	2.47	6.86	2.47	166.71	10.76
State and local government:														
Local	0.04	0.05	3.25	1.77	3.29	1.77	--	--	--	--	--	--	3.29	1.77
State	0.48	0.52	11.38	3.25	11.86	3.29	--	--	--	--	--	--	11.86	3.29
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	0.52	0.52	14.63	3.70	15.15	3.74	--	--	--	--	--	--	15.15	3.74
Private:														
Corporate	10.39	2.82	22.21	4.62	32.60	5.43	--	--	--	--	--	--	32.60	5.43
Noncorporate private:														
Total, noncorporate private	26.98	4.36	89.62	8.84	116.60	9.76	--	--	--	--	--	--	116.60	9.76
All private	37.37	5.15	111.83	9.91	149.20	11.05	--	--	--	--	--	--	149.20	11.05
All owners	59.08	5.98	296.30	15.07	355.38	16.04	0.37	0.24	7.15	2.49	7.52	2.50	362.90	16.10

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C32: Belowground Carbon, Dry Weight of Live Understory Vegetation, by Owner Group and Forest Land Status, 2007-2016: Klamath Mountains

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE		
	<i>thousand metric tons C</i>													
USDA Forest Service:														
National Forest	95.11	3.66	15.15	2.08	110.26	3.69	28.58	3.93	4.87	2.45	33.45	4.12	143.71	5.47
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	95.11	3.66	15.15	2.08	110.26	3.69	28.58	3.93	4.87	2.45	33.45	4.12	143.71	5.47
Other federal government:														
Bureau of Land Management	89.59	7.35	11.62	3.43	101.21	7.96	2.86	1.28	--	--	2.86	1.28	104.07	8.00
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
U.S. Fish and Wildlife Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other federal	0.86	0.87	--	--	0.86	0.87	0.33	0.33	--	--	0.33	0.33	1.19	0.93
Total	90.45	7.40	11.62	3.43	102.07	8.00	3.19	1.33	--	--	3.19	1.33	105.25	8.05
State and local government:														
Local	6.79	2.41	--	--	6.79	2.41	--	--	--	--	--	--	6.79	2.41
State	2.91	1.55	0.03	0.03	2.94	1.57	--	--	--	--	--	--	2.94	1.57
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	9.70	2.86	0.03	0.03	9.73	2.87	--	--	--	--	--	--	9.73	2.87
Private:														
Corporate	78.35	7.95	4.47	1.96	82.82	8.24	--	--	--	--	--	--	82.82	8.24
Noncorporate private:														
Total, noncorporate private	54.25	6.28	18.44	3.77	72.70	7.41	--	--	--	--	--	--	72.70	7.41
All private	132.61	9.96	22.91	4.24	155.52	10.88	--	--	--	--	--	--	155.52	10.88
All owners	327.86	13.21	49.71	5.83	377.57	14.26	31.77	4.15	4.87	2.45	36.64	4.33	414.21	14.85

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C33: Belowground Carbon, Dry Weight of Live Understory Vegetation, by Owner Group and Forest Land Status, 2007-2016: Oregon Coast Range

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE		
	<i>thousand metric tons C</i>													
USDA Forest Service:														
National Forest	89.16	2.59	0.97	0.49	90.13	2.58	7.68	2.40	1.30	0.59	8.98	2.47	99.11	3.46
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	89.16	2.59	0.97	0.49	90.13	2.58	7.68	2.40	1.30	0.59	8.98	2.47	99.11	3.46
Other federal government:														
Bureau of Land Management	98.10	7.10	1.04	0.81	99.14	7.14	--	--	--	--	--	--	99.14	7.14
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
U.S. Fish and Wildlife Service	--	--	--	--	--	--	0.26	0.29	0.05	0.06	0.31	0.29	0.31	0.29
Other federal	--	--	--	--	--	--	0.70	0.70	--	--	0.70	0.70	0.70	0.70
Total	98.10	7.10	1.04	0.81	99.14	7.14	0.96	0.76	0.05	0.06	1.01	0.76	100.15	7.18
State and local government:														
Local	6.01	2.28	--	--	6.01	2.28	1.19	0.96	--	--	1.19	0.96	7.21	2.46
State	80.21	4.95	--	--	80.21	4.95	3.06	1.38	1.28	1.25	4.34	1.81	84.55	5.09
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	86.22	5.09	--	--	86.22	5.09	4.25	1.68	1.28	1.25	5.53	2.05	91.76	5.17
Private:														
Corporate	335.87	15.10	1.76	1.19	337.64	15.15	--	--	--	--	--	--	337.64	15.15
Noncorporate private:														
Total, noncorporate private	81.09	7.92	0.77	0.52	81.85	7.96	--	--	--	--	--	--	81.85	7.96
All private	416.96	16.19	2.53	1.30	419.49	16.25	--	--	--	--	--	--	419.49	16.25
All owners	690.44	18.35	4.54	1.61	694.98	18.42	12.90	3.02	2.63	1.38	15.52	3.29	710.50	18.57

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C34: Belowground Carbon, Dry Weight of Live Understory Vegetation, by Owner Group and Forest Land Status, 2007-2016: Western Cascades

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE		
	<i>thousand metric tons C</i>													
USDA Forest Service:														
National Forest	376.67	4.93	8.02	1.32	384.69	4.90	122.06	5.48	10.36	2.90	132.42	5.49	517.11	6.60
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	376.67	4.93	8.02	1.32	384.69	4.90	122.06	5.48	10.36	2.90	132.42	5.49	517.11	6.60
Other federal government:														
Bureau of Land Management	52.00	5.70	--	--	52.00	5.70	4.01	1.67	--	--	4.01	1.67	56.01	5.88
Department of Defense and Energy	0.02	0.01	--	--	0.02	0.01	--	--	--	--	--	--	0.02	0.01
National Park Service	--	--	--	--	--	--	12.43	2.43	1.04	0.73	13.46	2.52	13.46	2.52
U.S. Fish and Wildlife Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other federal	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	52.01	5.70	--	--	52.01	5.70	16.44	2.89	1.04	0.73	17.47	2.96	69.49	6.21
State and local government:														
Local	0.71	0.73	--	--	0.71	0.73	--	--	--	--	--	--	0.71	0.73
State	4.99	1.94	--	--	4.99	1.94	0.72	0.74	--	--	0.72	0.74	5.71	2.08
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	5.70	2.07	--	--	5.70	2.07	0.72	0.74	--	--	0.72	0.74	6.42	2.20
Private:														
Corporate	188.06	11.92	4.76	2.23	192.82	12.12	--	--	--	--	--	--	192.82	12.12
Noncorporate private:														
Total, noncorporate private	43.22	5.80	5.08	2.06	48.31	6.15	--	--	--	--	--	--	48.31	6.15
All private	231.29	12.89	9.84	3.03	241.13	13.20	--	--	--	--	--	--	241.13	13.20
All owners	665.67	15.10	17.86	3.30	683.53	15.36	139.23	6.24	11.39	2.99	150.62	6.28	834.15	16.17

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C35: Belowground Carbon, Dry Weight of Live Understory Vegetation, by Owner Group and Forest Land Status, 2007-2016: Willamette Valley

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
	<i>thousand metric tons C</i>													
USDA Forest Service:														
National Forest	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other federal government:														
Bureau of Land Management	10.52	2.81	--	--	10.52	2.81	--	--	--	--	--	--	10.52	2.81
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
U.S. Fish and Wildlife Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other federal	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	10.52	2.81	--	--	10.52	2.81	--	--	--	--	--	--	10.52	2.81
State and local government:														
Local	0.19	0.20	1.13	0.83	1.32	0.85	0.65	0.65	--	--	0.65	0.65	1.98	1.08
State	4.29	1.76	0.50	0.42	4.79	1.81	0.12	0.16	0.34	0.47	0.45	0.49	5.24	1.86
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	4.48	1.77	1.63	0.93	6.11	2.00	0.77	0.67	0.34	0.47	1.11	0.81	7.21	2.14
Private:														
Corporate	55.40	6.93	2.31	1.24	57.71	7.04	--	--	--	--	--	--	57.71	7.04
Noncorporate private:														
Total, noncorporate private	74.42	9.71	4.56	1.59	78.99	9.81	--	--	--	--	--	--	78.99	9.81
All private	129.82	11.80	6.87	2.02	136.69	11.93	--	--	--	--	--	--	136.69	11.93
All owners	144.82	12.28	8.50	2.25	153.32	12.45	0.77	0.67	0.34	0.47	1.11	0.81	154.43	12.46

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C36: Belowground Carbon, Dry Weight of Live Trees (>= 1 inch) by Owner Group and Forest Land Status, 2007-2016: All Oregon

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	91,035	1,009	1,080	117	92,115	1,000	23,246	987	758	208	24,003	965	116,119	1,256
National Grasslands	--	--	4	2	4	2	--	--	--	--	--	--	4	2
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	91,035	1,009	1,084	117	92,119	1,000	23,246	987	758	208	24,003	965	116,122	1,256
Other federal government:														
Bureau of Land Management	30,142	1,051	905	140	31,047	1,047	1,013	327	56	31	1,069	328	32,116	1,028
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	1,274	273	154	126	1,428	300	1,428	300
U.S. Fish and Wildlife Service	--	--	--	--	--	--	44	33	4	5	49	33	49	33
Other federal	24	24	--	--	24	24	68	53	--	--	68	53	92	58
Total	30,166	1,051	905	140	31,071	1,048	2,399	421	214	130	2,613	439	33,684	997
State and local government:														
Local	845	233	32	17	877	234	244	162	--	--	244	162	1,121	284
State	8,765	563	85	53	8,851	566	625	296	40	46	666	299	9,517	583
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	9,611	590	117	56	9,728	593	869	337	40	46	910	340	10,637	611
Private:														
Corporate	33,397	1,176	497	190	33,894	1,188	--	--	--	--	--	--	33,894	1,188
Noncorporate private:														
Total, noncorporate private	17,191	923	1,299	145	18,490	929	--	--	--	--	--	--	18,490	929
All private	50,588	1,241	1,796	238	52,384	1,247	--	--	--	--	--	--	52,384	1,247
All owners	181,400	1,957	3,902	305	185,302	1,954	26,514	1,125	1,012	249	27,526	1,113	212,828	2,068

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C37: Belowground Carbon, Dry Weight of Live Trees (>= 1 inch) by Owner Group and Forest Land Status, 2007-2016: Blue Mountains

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	14,948	243	208	37	15,156	242	4,184	277	105	45	4,289	278	19,445	344
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	14,948	243	208	37	15,156	242	4,184	277	105	45	4,289	278	19,445	344
Other federal government:														
Bureau of Land Management	269	93	--	--	269	93	--	--	--	--	--	--	269	93
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
U.S. Fish and Wildlife Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other federal	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	269	93	--	--	269	93	--	--	--	--	--	--	269	93
State and local government:														
Local	92	51	--	--	92	51	--	--	--	--	--	--	92	51
State	114	63	--	--	114	63	--	--	--	--	--	--	114	63
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	206	81	--	--	206	81	--	--	--	--	--	--	206	81
Private:														
Corporate	1,248	167	11	8	1,259	167	--	--	--	--	--	--	1,259	167
Noncorporate private:														
Total, noncorporate private	1,718	232	24	13	1,742	233	--	--	--	--	--	--	1,742	233
All private	2,966	281	35	15	3,001	282	--	--	--	--	--	--	3,001	282
All owners	18,389	392	243	40	18,632	391	4,184	277	105	45	4,289	278	22,921	461

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C38: Belowground Carbon, Dry Weight of Live Trees (>= 1 inch) by Owner Group and Forest Land Status, 2007-2016: East Cascades+Modoc

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total			
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	10,962	253	122	23	11,084	252	809	154	64	32	873	156	11,957	292
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	10,962	253	122	23	11,084	252	809	154	64	32	873	156	11,957	292
Other federal government:														
Bureau of Land Management	737	281	96	33	833	283	142	94	41	30	183	99	1,016	299
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
U.S. Fish and Wildlife Service	--	--	--	--	--	--	37	32	--	--	37	32	37	32
Other federal	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	737	281	96	33	833	283	179	100	41	30	220	104	1,053	301
State and local government:														
Local	49	26	21	16	71	32	--	--	--	--	--	--	71	32
State	289	97	15	21	304	99	--	--	--	--	--	--	304	99
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	338	99	37	27	374	103	--	--	--	--	--	--	374	103
Private:														
Corporate	2,038	193	59	24	2,097	194	--	--	--	--	--	--	2,097	194
Noncorporate private:														
Total, noncorporate private	1,791	294	259	58	2,050	300	--	--	--	--	--	--	2,050	300
All private	3,829	345	318	63	4,147	349	--	--	--	--	--	--	4,147	349
All owners	15,865	521	573	79	16,438	524	988	184	105	44	1,093	188	17,531	554

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C39: Belowground Carbon, Dry Weight of Live Trees (>= 1 inch) by Owner Group and Forest Land Status, 2007-2016: Eastern OR Lowlands

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	324	53	47	9	371	54	10	8	--	--	10	8	381	54
National Grasslands	--	--	4	2	4	2	--	--	--	--	--	--	4	2
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	324	53	50	9	375	54	10	8	--	--	10	8	385	54
Other federal government:														
Bureau of Land Management	138	50	496	49	634	68	--	--	15	7	15	7	649	68
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
U.S. Fish and Wildlife Service	--	--	--	--	--	--	--	--	4	5	4	5	4	5
Other federal	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	138	50	496	49	634	68	--	--	20	9	20	9	653	68
State and local government:														
Local	--	--	10	6	10	6	--	--	--	--	--	--	10	6
State	5	6	26	11	31	12	--	--	--	--	--	--	31	12
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	5	6	35	12	41	13	--	--	--	--	--	--	41	13
Private:														
Corporate	149	44	78	31	227	54	--	--	--	--	--	--	227	54
Noncorporate private:														
Total, noncorporate private	503	105	357	50	860	116	--	--	--	--	--	--	860	116
All private	652	113	435	59	1,087	127	--	--	--	--	--	--	1,087	127
All owners	1,120	137	1,017	78	2,136	156	10	8	20	9	30	12	2,166	156

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C40: Belowground Carbon, Dry Weight of Live Trees (>= 1 inch) by Owner Group and Forest Land Status, 2007-2016: Klamath Mountains

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	7,839	435	227	54	8,066	434	1,814	393	27	16	1,841	391	9,907	580
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	7,839	435	227	54	8,066	434	1,814	393	27	16	1,841	391	9,907	580
Other federal government:														
Bureau of Land Management	8,090	767	237	113	8,327	769	450	223	--	--	450	223	8,777	789
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
U.S. Fish and Wildlife Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other federal	24	24	--	--	24	24	19	19	--	--	19	19	42	30
Total	8,113	767	237	113	8,351	769	469	224	--	--	469	224	8,820	790
State and local government:														
Local	378	164	--	--	378	164	--	--	--	--	--	--	378	164
State	288	157	--	--	288	157	--	--	--	--	--	--	288	157
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	666	227	--	--	666	227	--	--	--	--	--	--	666	227
Private:														
Corporate	3,473	446	43	21	3,516	447	--	--	--	--	--	--	3,516	447
Noncorporate private:														
Total, noncorporate private	2,721	375	340	78	3,061	384	--	--	--	--	--	--	3,061	384
All private	6,194	573	383	80	6,577	580	--	--	--	--	--	--	6,577	580
All owners	22,812	1,072	847	149	23,659	1,075	2,283	452	27	16	2,310	450	25,969	1,156

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C41: Belowground Carbon, Dry Weight of Live Trees (>= 1 inch) by Owner Group and Forest Land Status, 2007-2016: Oregon Coast Range

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total			
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	13,090	539	31	24	13,121	538	1,221	456	18	10	1,239	456	14,360	693
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	13,090	539	31	24	13,121	538	1,221	456	18	10	1,239	456	14,360	693
Other federal government:														
Bureau of Land Management	13,374	1,132	75	60	13,450	1,134	--	--	--	--	--	--	13,450	1,134
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
U.S. Fish and Wildlife Service	--	--	--	--	--	--	8	8	--	--	8	8	8	8
Other federal	--	--	--	--	--	--	49	49	--	--	49	49	49	49
Total	13,374	1,132	75	60	13,450	1,134	57	50	--	--	57	50	13,507	1,135
State and local government:														
Local	290	154	--	--	290	154	174	146	--	--	174	146	464	211
State	7,338	577	--	--	7,338	577	443	235	7	6	450	235	7,788	594
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	7,628	585	--	--	7,628	585	616	276	7	6	624	276	8,252	604
Private:														
Corporate	15,969	1,006	40	32	16,010	1,006	--	--	--	--	--	--	16,010	1,006
Noncorporate private:														
Total, noncorporate private	4,328	549	34	27	4,361	549	--	--	--	--	--	--	4,361	549
All private	20,297	1,101	74	41	20,371	1,101	--	--	--	--	--	--	20,371	1,101
All owners	54,390	1,763	180	77	54,570	1,764	1,894	536	25	11	1,920	536	56,489	1,823

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C42: Belowground Carbon, Dry Weight of Live Trees (>= 1 inch) by Owner Group and Forest Land Status, 2007-2016: Western Cascades

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	43,872	849	446	91	44,318	845	15,208	851	543	199	15,751	833	60,068	1,084
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	43,872	849	446	91	44,318	845	15,208	851	543	199	15,751	833	60,068	1,084
Other federal government:														
Bureau of Land Management	6,232	773	--	--	6,232	773	421	223	--	--	421	223	6,653	799
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	1,274	273	154	126	1,428	300	1,428	300
U.S. Fish and Wildlife Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other federal	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	6,232	773	--	--	6,232	773	1,695	344	154	126	1,848	365	8,080	835
State and local government:														
Local	35	36	--	--	35	36	--	--	--	--	--	--	35	36
State	389	178	--	--	389	178	180	184	--	--	180	184	569	256
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	424	181	--	--	424	181	180	184	--	--	180	184	604	258
Private:														
Corporate	8,289	729	20	15	8,308	729	--	--	--	--	--	--	8,308	729
Noncorporate private:														
Total, noncorporate private	2,609	428	100	49	2,709	430	--	--	--	--	--	--	2,709	430
All private	10,897	827	120	51	11,017	828	--	--	--	--	--	--	11,017	828
All owners	61,425	1,431	566	104	61,991	1,429	17,083	936	696	236	17,779	928	79,770	1,623

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C43: Belowground Carbon, Dry Weight of Live Trees (>= 1 inch) by Owner Group and Forest Land Status, 2007-2016: Willamette Valley

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other federal government:														
Bureau of Land Management	1,303	404	--	--	1,303	404	--	--	--	--	--	--	1,303	404
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
U.S. Fish and Wildlife Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other federal	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	1,303	404	--	--	1,303	404	--	--	--	--	--	--	1,303	404
State and local government:														
Local			1	1	1	1	70	70	--	--	70	70	71	70
State	343	195	44	48	387	201	3	4	33	46	36	46	423	205
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	343	195	45	48	388	201	73	70	33	46	106	83	494	217
Private:														
Corporate	2,232	369	246	181	2,477	411	--	--	--	--	--	--	2,477	411
Noncorporate private:														
Total, noncorporate private	3,521	474	186	79	3,707	479	--	--	--	--	--	--	3,707	479
All private	5,753	594	432	197	6,185	621	--	--	--	--	--	--	6,185	621
All owners	7,399	745	477	203	7,876	768	73	70	33	46	106	83	7,982	771

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C44.1: Belowground Carbon, Dry Weight of Live Trees (>= 1 inch) and Dead Trees (>= 5 inch) by Owner Group and Forest Land Status, All Oregon (10 year averages): 2001 - 2010

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	101,676	2,152	1,396	228	103,072	2,139	22,805	1,427	824	216	23,629	1,438	126,701	1,988
National Grasslands	--	--	8	4	8	4	--	--	--	--	--	--	8	4
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	101,676	2,152	1,404	228	103,080	2,139	22,805	1,427	824	216	23,629	1,438	126,709	1,988
Other federal government:														
Bureau of Land Management	27,864	1,341	1,082	146	28,946	1,334	1,191	359	48	24	1,239	359	30,185	1,313
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	1,410	222	142	142	1,552	238	1,552	238
U.S. Fish and Wildlife Service	--	--	--	--	--	--	25	17	18	15	43	22	43	22
Other federal	124	90	--	--	124	90	66	70	--	--	66	70	190	114
Total	27,988	1,344	1,082	146	29,070	1,337	2,692	428	208	145	2,900	437	31,970	1,320
State and local government:														
Local	831	250	22	14	853	250	227	146	--	--	227	146	1,080	289
State	9,887	795	121	69	10,007	798	928	399	31	33	960	400	10,967	872
Other public	1	1	--	--	1	1	--	--	--	--	--	--	1	1
Total	10,719	833	142	70	10,861	836	1,156	425	31	33	1,187	426	12,048	918
Private:														
Corporate	31,145	1,231	467	180	31,612	1,238	--	--	--	--	--	--	31,612	1,238
Noncorporate private:														
Total, noncorporate private	19,417	1,019	1,334	165	20,751	1,024	--	--	--	--	--	--	20,751	1,024
All private	50,563	1,377	1,801	243	52,363	1,376	--	--	--	--	--	--	52,363	1,376
All owners	190,945	2,827	4,429	370	195,374	2,811	26,653	1,548	1,063	262	27,716	1,561	223,090	2,688

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C44.1: Belowground Carbon, Dry Weight of Live Trees (>= 1 inch) and Dead Trees (>= 5 inch) by Owner Group and Forest Land Status, All Oregon (10 year averages): 2002 - 2011

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE		
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	103,220	2,168	1,361	228	104,580	2,154	22,530	1,410	844	218	23,374	1,421	127,954	1,996
National Grasslands	--	--	8	4	8	4	--	--	--	--	--	--	8	4
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	103,220	2,168	1,368	228	104,588	2,154	22,530	1,410	844	218	23,374	1,421	127,962	1,996
Other federal government:														
Bureau of Land Management	28,786	1,339	1,040	143	29,826	1,331	1,143	353	33	19	1,177	353	31,003	1,308
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	1,329	226	176	143	1,506	239	1,506	239
U.S. Fish and Wildlife Service	--	--	--	--	--	--	39	29	17	15	56	33	56	33
Other federal	129	91	--	--	129	91	68	70	--	--	68	70	196	115
Total	28,915	1,342	1,040	143	29,954	1,334	2,579	426	226	145	2,806	433	32,760	1,313
State and local government:														
Local	828	245	23	14	851	245	223	144	--	--	223	144	1,074	284
State	9,689	773	117	68	9,806	776	939	402	31	33	970	403	10,776	853
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	10,517	811	140	70	10,658	814	1,161	427	31	33	1,193	428	11,850	899
Private:														
Corporate	31,746	1,239	447	175	32,193	1,247	--	--	--	--	--	--	32,193	1,247
Noncorporate private:														
Total, noncorporate private	19,455	1,019	1,372	168	20,827	1,024	--	--	--	--	--	--	20,827	1,024
All private	51,201	1,383	1,819	242	53,021	1,383	--	--	--	--	--	--	53,021	1,383
All owners	193,853	2,844	4,367	368	198,220	2,828	26,271	1,532	1,102	264	27,372	1,545	225,593	2,698

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C44.1: Belowground Carbon, Dry Weight of Live Trees (>= 1 inch) and Dead Trees (>= 5 inch) by Owner Group and Forest Land Status, All Oregon (10 year averages): 2003 - 2012

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	99,620	1,177	1,318	134	100,938	1,167	26,242	1,077	943	238	27,185	1,046	128,123	1,358
National Grasslands	--	--	3	2	3	2	--	--	--	--	--	--	3	2
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	99,620	1,177	1,322	134	100,942	1,167	26,242	1,077	943	238	27,185	1,046	128,127	1,358
Other federal government:														
Bureau of Land Management	29,447	1,115	1,041	148	30,487	1,111	1,099	365	53	32	1,152	366	31,639	1,100
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	1,517	317	179	144	1,696	347	1,696	347
U.S. Fish and Wildlife Service	--	--	--	--	--	--	44	32	17	15	61	35	61	35
Other federal	122	90	--	--	122	90	73	72	--	--	73	72	195	115
Total	29,569	1,111	1,041	148	30,609	1,107	2,732	479	250	148	2,982	499	33,591	1,068
State and local government:														
Local	829	242	26	16	855	242	218	147	--	--	218	147	1,073	283
State	9,227	547	98	63	9,324	550	676	334	24	27	700	334	10,025	578
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	10,056	572	123	65	10,179	575	894	364	24	27	918	365	11,097	599
Private:														
Corporate	33,143	1,172	529	197	33,671	1,186	--	--	--	--	--	--	33,671	1,186
Noncorporate private:														
Total, noncorporate private	19,139	976	1,419	171	20,558	984	--	--	--	--	--	--	20,558	984
All private	52,282	1,225	1,947	259	54,229	1,233	--	--	--	--	--	--	54,229	1,233
All owners	191,526	2,044	4,433	333	195,959	2,041	29,868	1,234	1,217	281	31,085	1,215	227,044	2,131

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C44.1: Belowground Carbon, Dry Weight of Live Trees (>= 1 inch) and Dead Trees (>= 5 inch) by Owner Group and Forest Land Status, All Oregon (10 year averages): 2004 - 2013

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	100,156	1,180	1,343	139	101,500	1,170	26,557	1,079	950	242	27,507	1,049	129,007	1,361
National Grasslands	--	--	3	2	3	2	--	--	--	--	--	--	3	2
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	100,156	1,180	1,347	139	101,503	1,170	26,557	1,079	950	242	27,507	1,049	129,010	1,361
Other federal government:														
Bureau of Land Management	30,183	1,118	1,029	147	31,212	1,114	1,100	365	55	32	1,154	366	32,367	1,100
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	1,540	319	179	144	1,720	348	1,720	348
U.S. Fish and Wildlife Service	--	--	--	--	--	--	44	32	17	15	61	35	61	35
Other federal	122	90	--	--	122	90	92	75	--	--	92	75	214	117
Total	30,305	1,113	1,029	147	31,334	1,109	2,775	481	251	148	3,027	501	34,361	1,067
State and local government:														
Local	791	231	30	17	821	232	237	164	--	--	237	164	1,058	283
State	9,266	548	89	54	9,355	551	680	335	24	27	704	336	10,059	580
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	10,056	575	119	56	10,176	577	917	373	24	27	941	373	11,117	605
Private:														
Corporate	33,135	1,182	543	197	33,678	1,195	--	--	--	--	--	--	33,678	1,195
Noncorporate private:														
Total, noncorporate private	18,765	971	1,423	171	20,188	979	--	--	--	--	--	--	20,188	979
All private	51,901	1,242	1,966	260	53,866	1,249	--	--	--	--	--	--	53,866	1,249
All owners	192,418	2,056	4,461	334	196,879	2,052	30,249	1,239	1,225	285	31,475	1,221	228,354	2,141

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C44.1: Belowground Carbon, Dry Weight of Live Trees (>= 1 inch) and Dead Trees (>= 5 inch) by Owner Group and Forest Land Status, All Oregon (10 year averages): 2005 - 2014

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	100,745	1,158	1,260	130	102,005	1,147	27,136	1,088	934	241	28,070	1,057	130,075	1,369
National Grasslands	--	--	3	2	3	2	--	--	--	--	--	--	3	2
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	100,745	1,158	1,263	130	102,009	1,147	27,136	1,088	934	241	28,070	1,057	130,078	1,369
Other federal government:														
Bureau of Land Management	31,285	1,125	961	132	32,247	1,121	1,115	368	55	32	1,170	369	33,416	1,106
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	1,527	320	182	145	1,709	350	1,709	350
U.S. Fish and Wildlife Service	--	--	--	--	--	--	44	32	17	15	61	35	61	35
Other federal	25	25	--	--	25	25	92	75	--	--	92	75	117	79
Total	31,310	1,126	961	132	32,271	1,122	2,778	483	254	149	3,032	503	35,303	1,076
State and local government:														
Local	818	240	30	17	848	240	240	165	--	--	240	165	1,088	291
State	9,442	565	92	54	9,534	567	681	335	24	27	705	336	10,239	594
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	10,260	591	122	56	10,382	593	921	373	24	27	945	374	11,327	619
Private:														
Corporate	33,393	1,177	563	198	33,956	1,190	--	--	--	--	--	--	33,956	1,190
Noncorporate private:														
Total, noncorporate private	18,662	983	1,386	165	20,048	989	--	--	--	--	--	--	20,048	989
All private	52,055	1,251	1,948	256	54,004	1,257	--	--	--	--	--	--	54,004	1,257
All owners	194,371	2,066	4,295	321	198,666	2,061	30,835	1,248	1,212	285	32,047	1,229	230,712	2,166

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C44.1: Belowground Carbon, Dry Weight of Live Trees (>= 1 inch) and Dead Trees (>= 5 inch) by Owner Group and Forest Land Status, All Oregon (10 year averages): 2006 - 2015

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	101,395	1,151	1,284	133	102,680	1,141	27,337	1,084	962	246	28,299	1,053	130,979	1,358
National Grasslands	--	--	4	2	4	2	--	--	--	--	--	--	4	2
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	101,395	1,151	1,288	133	102,683	1,141	27,337	1,084	962	246	28,299	1,053	130,982	1,358
Other federal government:														
Bureau of Land Management	32,026	1,128	1,005	145	33,031	1,123	1,113	367	53	32	1,167	369	34,198	1,106
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	1,517	319	178	144	1,696	349	1,696	349
U.S. Fish and Wildlife Service	--	--	--	--	--	--	44	33	3	4	48	33	48	33
Other federal	25	25	--	--	25	25	91	75	--	--	91	75	116	79
Total	32,050	1,128	1,005	145	33,056	1,123	2,767	482	235	148	3,002	502	36,058	1,073
State and local government:														
Local	817	240	31	17	848	240	239	165	--	--	239	165	1,088	291
State	9,441	589	94	54	9,535	591	686	337	39	47	726	339	10,261	618
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	10,258	614	125	56	10,383	616	926	374	39	47	965	377	11,348	642
Private:														
Corporate	34,318	1,220	530	196	34,847	1,232	--	--	--	--	--	--	34,847	1,232
Noncorporate private:														
Total, noncorporate private	18,310	960	1,297	148	19,607	965	--	--	--	--	--	--	19,607	965
All private	52,627	1,278	1,827	245	54,454	1,285	--	--	--	--	--	--	54,454	1,285
All owners	196,331	2,089	4,245	319	200,576	2,084	31,030	1,244	1,236	291	32,266	1,226	232,842	2,182

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C44.1: Belowground Carbon, Dry Weight of Live Trees (>= 1 inch) and Dead Trees (>= 5 inch) by Owner Group and Forest Land Status, All Oregon (10 year averages): 2007 - 2016

Ownership group	Unreserved forests						Reserved forests						All forest land		
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE	
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE			
	<i>thousand metric tons C</i>														
USDA Forest Service:															
National Forest	101,905	1,102	1,308	135	103,213	1,091	27,701	1,085	1,019	253	28,720	1,052	131,934	1,357	
National Grasslands	--	--	4	2	4	2	--	--	--	--	--	--	4	2	
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Total	101,905	1,102	1,311	135	103,217	1,091	27,701	1,085	1,019	253	28,720	1,052	131,937	1,357	
Other federal government:															
Bureau of Land Management	32,140	1,118	1,046	161	33,186	1,112	1,107	367	59	32	1,166	368	34,352	1,094	
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
National Park Service	--	--	--	--	--	--	1,506	317	179	144	1,685	347	1,685	347	
U.S. Fish and Wildlife Service	--	--	--	--	--	--	44	33	4	5	49	33	49	33	
Other federal	25	25	--	--	25	25	91	74	--	--	91	74	116	79	
Total	32,164	1,119	1,046	161	33,211	1,112	2,749	481	243	148	2,991	501	36,202	1,061	
State and local government:															
Local	905	250	32	17	936	251	255	171	--	--	255	171	1,191	303	
State	9,410	591	92	54	9,502	593	664	317	41	47	705	319	10,207	613	
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Total	10,315	621	124	57	10,439	623	919	359	41	47	960	361	11,398	642	
Private:															
Corporate	34,918	1,224	515	196	35,433	1,237	--	--	--	--	--	--	35,433	1,237	
Noncorporate private:															
Total, noncorporate private	18,056	961	1,385	155	19,441	967	--	--	--	--	--	--	19,441	967	
All private	52,975	1,288	1,900	249	54,874	1,294	--	--	--	--	--	--	54,874	1,294	
All owners	197,359	2,074	4,381	330	201,741	2,068	31,369	1,240	1,302	297	32,671	1,220	234,412	2,190	

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C45: Belowground Carbon, Dry Weight of Dead Trees (>= 5 inch) by Owner Group and Forest Land Status, 2007-2016: All Oregon

Ownership group	Unreserved forests						Reserved forests						All forest	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE		
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	10,870	249	228	31	11,098	249	4,456	263	261	71	4,717	259	15,815	351
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	10,870	249	228	31	11,098	249	4,456	263	261	71	4,717	259	15,815	351
Other federal government:														
Bureau of Land Management	1,997	155	142	46	2,139	160	94	50	3	2	97	50	2,236	164
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	232	59	25	19	258	61	258	61
U.S. Fish and Wildlife Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other federal	1	1	--	--	1	1	23	23	--	--	23	23	24	23
Total	1,998	155	142	46	2,140	160	349	79	28	19	378	81	2,518	170
State and local government:														
Local	59	23	--	--	59	23	11	10	--	--	11	10	70	25
State	645	81	6	4	651	81	39	22		1	39	22	691	82
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	704	83	6	4	711	83	50	24		1	50	24	761	84
Private:														
Corporate	1,521	105	18	8	1,539	105	--	--	--	--	--	--	1,539	105
Noncorporate private:														
Total, noncorporate private	865	87	86	23	951	90	--	--	--	--	--	--	951	90
All private	2,386	130	104	24	2,490	132	--	--	--	--	--	--	2,490	132
All owners	15,959	330	479	60	16,439	334	4,855	276	290	74	5,145	273	21,584	419

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C46: Belowground Carbon, Dry Weight of Dead Trees (>= 5 inch) by Owner Group and Forest Land Status, 2007-2016: Blue Mountains

Ownership group	Unreserved forests						Reserved forests						All forest	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	1,965	70	45	14	2,009	71	1,106	127	34	18	1,140	128	3,149	145
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	1,965	70	45	14	2,009	71	1,106	127	34	18	1,140	128	3,149	145
Other federal government:														
Bureau of Land Management	40	23	--	--	40	23	--	--	--	--	--	--	40	23
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
U.S. Fish and Wildlife Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other federal	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	40	23	--	--	40	23	--	--	--	--	--	--	40	23
State and local government:														
Local	3	2	--	--	3	2	--	--	--	--	--	--	3	2
State	15	10	--	--	15	10	--	--	--	--	--	--	15	10
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	18	10	--	--	18	10	--	--	--	--	--	--	18	10
Private:														
Corporate	72	22	--	--	72	22	--	--	--	--	--	--	72	22
Noncorporate private:														
Total, noncorporate private	90	24			90	24	--	--	--	--	--	--	90	24
All private	162	33			162	33	--	--	--	--	--	--	162	33
All owners	2,185	81	45	14	2,230	82	1,106	127	34	18	1,140	128	3,370	151

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C47: Belowground Carbon, Dry Weight of Dead Trees (>= 5 inch) by Owner Group and Forest Land Status, 2007-2016: East Cascades+Modoc

Ownership group	Unreserved forests						Reserved forests						All forest	
	Timberland		Other forest		Total		Productive		Other forest		Total			
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	1,234	69	15	6	1,249	69	198	57	6	3	205	57	1,454	90
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	1,234	69	15	6	1,249	69	198	57	6	3	205	57	1,454	90
Other federal government:														
Bureau of Land Management	27	12	6	4	33	12	8	8	2	2	10	8	43	15
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
U.S. Fish and Wildlife Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other federal	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	27	12	6	4	33	12	8	8	2	2	10	8	43	15
State and local government:														
Local	1	2	--	--	1	2	--	--	--	--	--	--	1	2
State	12	8	1	1	13	8	--	--	--	--	--	--	13	8
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	13	8	1	1	14	8	--	--	--	--	--	--	14	8
Private:														
Corporate	87	17	2	2	89	17	--	--	--	--	--	--	89	17
Noncorporate private:														
Total, noncorporate private	209	63	7	3	216	63	--	--	--	--	--	--	216	63
All private	296	65	9	3	305	65	--	--	--	--	--	--	305	65
All owners	1,571	96	30	8	1,601	96	206	58	8	4	215	58	1,816	112

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C48: Belowground Carbon, Dry Weight of Dead Trees (>= 5 inch) by Owner Group and Forest Land Status, 2007-2016: Eastern OR Lowlands

Ownership group	Unreserved forests						Reserved forests						All forest	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	20	7	1	1	21	7	1	1	--	--	1	1	22	7
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	20	7	1	1	21	7	1	1	--	--	1	1	22	7
Other federal government:														
Bureau of Land Management	27	20	41	9	68	22	--	--	1	1	1	1	69	22
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
U.S. Fish and Wildlife Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other federal	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	27	20	41	9	68	22	--	--	1	1	1	1	69	22
State and local government:														
Local	--	--	--	--	--	--	--	--	--	--	--	--	--	--
State	--	--	5	4	5	4	--	--	--	--	--	--	5	4
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	--	--	5	4	5	4	--	--	--	--	--	--	5	4
Private:														
Corporate	13	7	3	3	16	8	--	--	--	--	--	--	16	8
Noncorporate private:														
Total, noncorporate private	11	4	18	7	29	8	--	--	--	--	--	--	29	8
All private	24	8	21	7	45	11	--	--	--	--	--	--	45	11
All owners	70	23	69	12	140	26	1	1	1	1	2	1	142	26

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C49: Belowground Carbon, Dry Weight of Dead Trees (>= 5 inch) by Owner Group and Forest Land Status, 2007-2016: Klamath Mountains

Ownership group	Unreserved forests						Reserved forests						All forest	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	1,199	112	90	21	1,288	113	244	58	60	38	305	65	1,593	130
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	1,199	112	90	21	1,288	113	244	58	60	38	305	65	1,593	130
Other federal government:														
Bureau of Land Management	670	96	87	44	757	105	20	11	--	--	20	11	777	105
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
U.S. Fish and Wildlife Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other federal	1	1	--	--	1	1	--	--	--	--	--	--	1	1
Total	672	96	87	44	758	105	20	11	--	--	20	11	778	105
State and local government:														
Local	36	21	--	--	36	21	--	--	--	--	--	--	36	21
State	17	14	--	--	17	14	--	--	--	--	--	--	17	14
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	54	25	--	--	54	25	--	--	--	--	--	--	54	25
Private:														
Corporate	191	49	5	3	196	49	--	--	--	--	--	--	196	49
Noncorporate private:														
Total, noncorporate private	182	33	21	10	203	34	--	--	--	--	--	--	203	34
All private	373	59	26	10	399	60	--	--	--	--	--	--	399	60
All owners	2,297	160	203	50	2,500	167	264	59	60	38	324	66	2,824	179

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C50: Belowground Carbon, Dry Weight of Dead Trees (>= 5 inch) by Owner Group and Forest Land Status, 2007-2016: Oregon Coast Range

Ownership group	Unreserved forests						Reserved forests						All forest	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	1,291	108	8	5	1,299	108	96	50			96	50	1,395	118
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	1,291	108	8	5	1,299	108	96	50			96	50	1,395	118
Other federal government:														
Bureau of Land Management	722	110	8	7	730	110	--	--	--	--	--	--	730	110
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
U.S. Fish and Wildlife Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other federal	--	--	--	--	--	--	23	23	--	--	23	23	23	23
Total	722	110	8	7	730	110	23	23	--	--	23	23	753	113
State and local government:														
Local	18	10	--	--	18	10	11	10	--	--	11	10	29	14
State	553	80	--	--	553	80	32	21	--	--	32	21	585	81
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	571	80	--	--	571	80	43	23	--	--	43	23	614	81
Private:														
Corporate	768	83			769	83	--	--	--	--	--	--	769	83
Noncorporate private:														
Total, noncorporate private	147	29			147	29	--	--	--	--	--	--	147	29
All private	915	87			915	87	--	--	--	--	--	--	915	87
All owners	3,500	193	17	9	3,516	193	161	60			162	60	3,678	201

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C51: Belowground Carbon, Dry Weight of Dead Trees (>= 5 inch) by Owner Group and Forest Land Status, 2007-2016: Western Cascades

Ownership group	Unreserved forests						Reserved forests						All forest	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	5,161	179	69	15	5,230	179	2,811	231	160	58	2,971	227	8,202	282
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	5,161	179	69	15	5,230	179	2,811	231	160	58	2,971	227	8,202	282
Other federal government:														
Bureau of Land Management	481	93	--	--	481	93	66	48	--	--	66	48	547	104
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	232	59	25	19	258	61	258	61
U.S. Fish and Wildlife Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other federal	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	481	93	--	--	481	93	299	75	25	19	324	77	805	118
State and local government:														
Local	1	1	--	--	1	1	--	--	--	--	--	--	1	1
State	26	16	--	--	26	16	7	7	--	--	7	7	33	17
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	27	16	--	--	27	16	7	7	--	--	7	7	34	17
Private:														
Corporate	324	41			324	41	--	--	--	--	--	--	324	41
Noncorporate private:														
Total, noncorporate private	139	36	39	19	177	40	--	--	--	--	--	--	177	40
All private	462	54	39	19	502	57	--	--	--	--	--	--	502	57
All owners	6,131	210	108	25	6,240	211	3,116	243	185	61	3,302	240	9,541	312

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C52: Belowground Carbon, Dry Weight of Dead Trees (>= 5 inch) by Owner Group and Forest Land Status, 2007-2016: Willamette Valley

Ownership group	Unreserved forests						Reserved forests						All forest	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other federal government:														
Bureau of Land Management	30	13	--	--	30	13	--	--	--	--	--	--	30	13
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
U.S. Fish and Wildlife Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other federal	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	30	13	--	--	30	13	--	--	--	--	--	--	30	13
State and local government:														
Local	--	--	--	--	--	--	--	--	--	--	--	--	--	--
State	22	12	--	--	22	12	--	--		1		1	22	12
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	22	12	--	--	22	12	--	--		1		1	22	12
Private:														
Corporate	66	15	7	6	73	16	--	--	--	--	--	--	73	16
Noncorporate private:														
Total, noncorporate private	88	17			88	17	--	--	--	--	--	--	88	17
All private	154	22	7	6	162	23	--	--	--	--	--	--	162	23
All owners	205	29	7	6	213	29	--	--		1		1	213	29

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C53: Soil Organic Carbon by Owner Group and Forest Land Status, 2007-2016: All Oregon

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
	<i>thousand metric tons C</i>													
USDA Forest Service:														
National Forest	583,782.99	2,873.69	26,833.09	1,522.97	610,616.09	2,666.40	125,466.86	2,920.34	10,491.79	1,806.33	135,958.65	2,605.35	746,574.73	2,715.00
National Grasslands	--	--	665.54	232.14	665.54	232.14	--	--	--	--	--	--	665.54	232.14
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	583,782.99	2,873.69	27,498.64	1,528.87	611,281.63	2,667.63	125,466.86	2,920.34	10,491.79	1,806.33	135,958.65	2,605.35	747,240.28	2,716.21
Other federal government:														
Bureau of Land Management	120,276.85	3,125.75	57,743.03	3,623.11	178,019.88	4,342.16	4,441.76	1,203.87	2,513.13	880.13	6,954.89	1,487.96	184,974.77	4,207.75
Department of Defense and Energy	3.86	3.64	--	--	3.86	3.64	--	--	--	--	--	--	3.86	3.64
National Park Service	--	--	--	--	--	--	7,528.98	1,464.55	659.24	466.24	8,188.22	1,524.58	8,188.22	1,524.58
U.S. Fish and Wildlife Service	--	--	--	--	--	--	509.35	372.00	331.84	302.01	841.19	478.86	841.19	478.86
Other federal	320.47	326.21	--	--	320.47	326.21	550.98	435.53	--	--	550.98	435.53	871.45	544.15
Total	120,601.18	3,142.72	57,743.03	3,623.11	178,344.21	4,354.40	13,031.08	1,937.35	3,504.20	1,031.25	16,535.28	2,167.96	194,879.49	3,984.81
State and local government:														
Local	7,977.88	1,602.28	2,012.21	714.02	9,990.10	1,773.44	834.49	525.84	--	--	834.49	525.84	10,824.59	1,846.54
State	50,653.26	2,233.21	4,020.96	1,073.32	54,674.22	2,426.23	2,293.09	911.84	632.66	439.74	2,925.75	985.40	57,599.97	2,424.29
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	58,631.14	2,461.19	6,033.17	1,288.65	64,664.32	2,735.24	3,127.58	1,050.34	632.66	439.74	3,760.24	1,114.80	68,424.55	2,697.01
Private:														
Corporate	341,255.03	7,116.00	13,887.63	1,974.49	355,142.67	7,271.93	--	--	--	--	--	--	355,142.67	7,271.93
Noncorporate private:														
Total, noncorporate private	159,126.54	5,977.59	50,459.74	3,648.13	209,586.29	6,745.86	--	--	--	--	--	--	209,586.29	6,745.86
All private	500,381.58	6,134.87	64,347.38	4,090.92	564,728.95	6,356.46	--	--	--	--	--	--	564,728.95	6,356.46
All owners	1,263,396.90	7,189.43	155,622.22	5,801.76	1,419,019.11	7,853.80	141,625.52	3,658.39	14,628.65	2,125.95	156,254.16	3,567.85	1,575,273.28	7,546.54

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C54: Soil Organic Carbon by Owner Group and Forest Land Status, 2007-2016: Blue Mountains

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE		
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	186,242.41	1,787.54	7,701.15	809.24	193,943.57	1,733.03	42,724.73	2,155.63	2,703.52	964.76	45,428.25	2,193.86	239,371.82	2,499.68
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	186,242.41	1,787.54	7,701.15	809.24	193,943.57	1,733.03	42,724.73	2,155.63	2,703.52	964.76	45,428.25	2,193.86	239,371.82	2,499.68
Other federal government:														
Bureau of Land Management	3,858.38	1,085.51	384.03	361.40	4,242.41	1,142.99	--	--	--	--	--	--	4,242.41	1,142.99
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
U.S. Fish and Wildlife Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other federal	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	3,858.38	1,085.51	384.03	361.40	4,242.41	1,142.99	--	--	--	--	--	--	4,242.41	1,142.99
State and local government:														
Local	1,175.79	589.61	--	--	1,175.79	589.61	--	--	--	--	--	--	1,175.79	589.61
State	1,232.04	623.79	--	--	1,232.04	623.79	--	--	--	--	--	--	1,232.04	623.79
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	2,407.83	858.35	--	--	2,407.83	858.35	--	--	--	--	--	--	2,407.83	858.35
Private:														
Corporate	29,970.72	3,009.73	663.03	457.04	30,633.75	3,043.09	--	--	--	--	--	--	30,633.75	3,043.09
Noncorporate private:														
Total, noncorporate private	29,406.93	2,881.10	1,174.31	607.87	30,581.24	2,949.70	--	--	--	--	--	--	30,581.24	2,949.70
All private	59,377.64	4,045.91	1,837.35	760.14	61,214.99	4,116.16	--	--	--	--	--	--	61,214.99	4,116.16
All owners	251,886.26	4,631.60	9,922.53	1,167.60	261,808.80	4,686.10	42,724.73	2,155.63	2,703.52	964.76	45,428.25	2,193.86	307,237.05	5,020.41

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C55: Soil Organic Carbon by Owner Group and Forest Land Status, 2007-2016: East Cascades+Modoc

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	132,858.62	1,669.14	4,983.64	663.98	137,842.26	1,641.04	6,349.93	1,022.45	847.77	453.93	7,197.69	1,098.31	145,039.95	1,843.44
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	132,858.62	1,669.14	4,983.64	663.98	137,842.26	1,641.04	6,349.93	1,022.45	847.77	453.93	7,197.69	1,098.31	145,039.95	1,843.44
Other federal government:														
Bureau of Land Management	6,069.84	1,314.60	4,181.04	1,069.03	10,250.89	1,642.25	904.94	573.28	665.99	486.24	1,570.93	751.72	11,821.82	1,801.63
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
U.S. Fish and Wildlife Service	--	--	--	--	--	--	413.78	356.20	--	--	413.78	356.20	413.78	356.20
Other federal	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	6,069.84	1,314.60	4,181.04	1,069.03	10,250.89	1,642.25	1,318.73	674.92	665.99	486.24	1,984.71	831.84	12,235.60	1,831.08
State and local government:														
Local	932.42	519.22	794.68	449.62	1,727.10	736.62	--	--	--	--	--	--	1,727.10	736.62
State	3,384.44	959.04	166.36	232.08	3,550.80	986.73	--	--	--	--	--	--	3,550.80	986.73
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	4,316.86	1,060.12	961.04	505.99	5,277.90	1,204.47	--	--	--	--	--	--	5,277.90	1,204.47
Private:														
Corporate	51,458.36	3,398.46	2,279.36	807.69	53,737.72	3,445.61	--	--	--	--	--	--	53,737.72	3,445.61
Noncorporate private:														
Total, noncorporate private	21,841.58	2,459.00	9,984.28	1,690.34	31,825.86	2,968.18	--	--	--	--	--	--	31,825.86	2,968.18
All private	73,299.94	3,883.22	12,263.63	1,869.69	85,563.57	4,179.50	--	--	--	--	--	--	85,563.57	4,179.50
All owners	216,545.26	4,502.56	22,389.36	2,322.62	238,934.62	4,861.57	7,668.66	1,225.12	1,513.75	665.20	9,182.41	1,377.77	248,117.03	5,000.75

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C56: Soil Organic Carbon by Owner Group and Forest Land Status, 2007-2016: Eastern OR Lowlands

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE		
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	5,587.66	694.39	4,650.13	599.25	10,237.79	915.55	158.26	101.02	86.84	94.52	245.10	138.35	10,482.89	923.41
National Grasslands	--	--	665.54	232.14	665.54	232.14	--	--	--	--	--	--	665.54	232.14
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	5,587.66	694.39	5,315.67	617.41	10,903.33	926.47	158.26	101.02	86.84	94.52	245.10	138.35	11,148.44	934.23
Other federal government:														
Bureau of Land Management	3,251.03	989.13	48,664.26	3,346.81	51,915.28	3,428.15	--	--	1,847.14	733.61	1,847.14	733.61	53,762.43	3,445.34
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
U.S. Fish and Wildlife Service	--	--	--	--	--	--	--	--	318.65	301.65	318.65	301.65	318.65	301.65
Other federal	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	3,251.03	989.13	48,664.26	3,346.81	51,915.28	3,428.15	--	--	2,165.80	780.67	2,165.80	780.67	54,081.08	3,452.65
State and local government:														
Local	11.91	12.04	967.11	525.75	979.02	525.89	--	--	--	--	--	--	979.02	525.89
State	204.82	222.96	3,635.63	1,033.20	3,840.45	1,056.98	--	--	--	--	--	--	3,840.45	1,056.98
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	216.74	223.29	4,602.74	1,159.14	4,819.47	1,180.45	--	--	--	--	--	--	4,819.47	1,180.45
Private:														
Corporate	4,393.08	1,167.16	6,663.25	1,374.73	11,056.33	1,804.37	--	--	--	--	--	--	11,056.33	1,804.37
Noncorporate private:														
Total, noncorporate private	11,066.88	1,761.68	28,594.52	2,800.13	39,661.40	3,265.17	--	--	--	--	--	--	39,661.40	3,265.17
All private	15,459.97	2,093.97	35,257.76	3,098.51	50,717.73	3,684.92	--	--	--	--	--	--	50,717.73	3,684.92
All owners	24,515.39	2,449.56	93,840.43	4,737.40	118,355.82	5,252.64	158.26	101.02	2,252.63	786.37	2,410.90	792.83	120,766.72	5,269.90

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C57: Soil Organic Carbon by Owner Group and Forest Land Status, 2007-2016: Klamath Mountains

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	42,799.06	1,567.77	5,456.36	732.63	48,255.42	1,534.77	11,936.73	1,579.68	1,611.49	801.88	13,548.22	1,583.05	61,803.64	2,175.62
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	42,799.06	1,567.77	5,456.36	732.63	48,255.42	1,534.77	11,936.73	1,579.68	1,611.49	801.88	13,548.22	1,583.05	61,803.64	2,175.62
Other federal government:														
Bureau of Land Management	37,867.59	3,010.99	3,860.16	1,132.40	41,727.75	3,154.78	1,582.41	697.19	--	--	1,582.41	697.19	43,310.16	3,186.01
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
U.S. Fish and Wildlife Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other federal	320.47	326.21	--	--	320.47	326.21	136.36	136.38	--	--	136.36	136.38	456.84	353.57
Total	38,188.07	3,028.61	3,860.16	1,132.40	42,048.23	3,171.60	1,718.77	710.40	--	--	1,718.77	710.40	43,767.00	3,205.57
State and local government:														
Local	2,640.30	887.99	--	--	2,640.30	887.99	--	--	--	--	--	--	2,640.30	887.99
State	1,157.02	617.03	8.41	8.49	1,165.43	621.35	--	--	--	--	--	--	1,165.43	621.35
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	3,797.32	1,081.32	8.41	8.49	3,805.74	1,083.79	--	--	--	--	--	--	3,805.74	1,083.79
Private:														
Corporate	30,407.56	3,023.99	1,514.06	651.95	31,921.62	3,108.07	--	--	--	--	--	--	31,921.62	3,108.07
Noncorporate private:														
Total, noncorporate private	20,284.87	2,334.45	6,555.34	1,330.30	26,840.22	2,717.44	--	--	--	--	--	--	26,840.22	2,717.44
All private	50,692.43	3,745.87	8,069.41	1,476.23	58,761.83	4,045.92	--	--	--	--	--	--	58,761.83	4,045.92
All owners	135,476.88	5,163.95	17,394.34	1,999.17	152,871.22	5,456.45	13,655.50	1,732.07	1,611.49	801.88	15,266.99	1,735.14	168,138.21	5,690.45

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C58: Soil Organic Carbon by Owner Group and Forest Land Status, 2007-2016: Oregon Coast Range

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	44,655.52	1,291.93	402.23	196.75	45,057.75	1,286.23	3,887.81	1,130.74	588.88	253.99	4,476.70	1,158.24	49,534.45	1,663.84
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	44,655.52	1,291.93	402.23	196.75	45,057.75	1,286.23	3,887.81	1,130.74	588.88	253.99	4,476.70	1,158.24	49,534.45	1,663.84
Other federal government:														
Bureau of Land Management	43,115.54	3,152.10	653.54	502.00	43,769.08	3,190.13	--	--	--	--	--	--	43,769.08	3,190.13
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
U.S. Fish and Wildlife Service	--	--	--	--	--	--	95.57	107.28	13.18	14.80	108.75	106.95	108.75	106.95
Other federal	--	--	--	--	--	--	414.62	413.62	--	--	414.62	413.62	414.62	413.62
Total	43,115.54	3,152.10	653.54	502.00	43,769.08	3,190.13	510.19	427.31	13.18	14.80	523.37	427.23	44,292.45	3,217.41
State and local government:														
Local	2,828.66	1,037.75	--	--	2,828.66	1,037.75	548.97	442.01	--	--	548.97	442.01	3,377.63	1,123.01
State	40,805.66	2,438.84	--	--	40,805.66	2,438.84	1,891.39	840.17	453.01	376.24	2,344.40	905.42	43,150.05	2,504.08
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	43,634.31	2,479.97	--	--	43,634.31	2,479.97	2,440.36	946.84	453.01	376.24	2,893.37	1,005.19	46,527.68	2,508.01
Private:														
Corporate	138,396.38	6,159.78	575.41	394.83	138,971.79	6,174.10	--	--	--	--	--	--	138,971.79	6,174.10
Noncorporate private:														
Total, noncorporate private	35,085.26	3,362.53	378.74	260.94	35,464.00	3,381.99	--	--	--	--	--	--	35,464.00	3,381.99
All private	173,481.64	6,631.83	954.15	473.27	174,435.79	6,649.73	--	--	--	--	--	--	174,435.79	6,649.73
All owners	304,887.02	7,755.94	2,009.92	717.43	306,896.94	7,785.36	6,838.36	1,535.48	1,055.07	454.19	7,893.44	1,592.00	314,790.37	7,857.53

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C59: Soil Organic Carbon by Owner Group and Forest Land Status, 2007-2016: Western Cascades

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	171,639.72	2,281.98	3,639.57	589.50	175,279.30	2,271.07	60,409.40	2,564.06	4,653.29	1,237.19	65,062.69	2,469.66	240,341.98	2,932.30
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	171,639.72	2,281.98	3,639.57	589.50	175,279.30	2,271.07	60,409.40	2,564.06	4,653.29	1,237.19	65,062.69	2,469.66	240,341.98	2,932.30
Other federal government:														
Bureau of Land Management	22,214.43	2,450.38	--	--	22,214.43	2,450.38	1,954.41	813.51	--	--	1,954.41	813.51	24,168.84	2,550.76
Department of Defense and Energy	3.86	3.64	--	--	3.86	3.64	--	--	--	--	--	--	3.86	3.64
National Park Service	--	--	--	--	--	--	7,528.98	1,464.55	659.24	466.24	8,188.22	1,524.58	8,188.22	1,524.58
U.S. Fish and Wildlife Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other federal	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	22,218.29	2,450.38	--	--	22,218.29	2,450.38	9,483.40	1,641.77	659.24	466.24	10,142.63	1,693.84	32,360.92	2,857.04
State and local government:														
Local	329.28	336.88	--	--	329.28	336.88	--	--	--	--	--	--	329.28	336.88
State	2,173.52	852.44	--	--	2,173.52	852.44	354.51	362.69	--	--	354.51	362.69	2,528.02	926.39
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	2,502.80	916.59	--	--	2,502.80	916.59	354.51	362.69	--	--	354.51	362.69	2,857.31	983.44
Private:														
Corporate	67,823.59	4,271.83	1,199.48	551.16	69,023.06	4,303.18	--	--	--	--	--	--	69,023.06	4,303.18
Noncorporate private:														
Total, noncorporate private	17,425.83	2,310.50	2,076.23	825.43	19,502.06	2,448.93	--	--	--	--	--	--	19,502.06	2,448.93
All private	85,249.42	4,707.89	3,275.70	991.76	88,525.12	4,794.19	--	--	--	--	--	--	88,525.12	4,794.19
All owners	281,610.23	5,855.76	6,915.28	1,153.74	288,525.51	5,920.87	70,247.30	3,066.16	5,312.53	1,322.12	75,559.82	3,016.59	364,085.33	6,376.71

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C60: Soil Organic Carbon by Owner Group and Forest Land Status, 2007-2016: Willamette Valley

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other federal government:														
Bureau of Land Management	3,900.03	1,038.14	--	--	3,900.03	1,038.14	--	--	--	--	--	--	3,900.03	1,038.14
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
U.S. Fish and Wildlife Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other federal	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	3,900.03	1,038.14	--	--	3,900.03	1,038.14	--	--	--	--	--	--	3,900.03	1,038.14
State and local government:														
Local	59.51	60.13	250.42	176.79	309.93	186.70	285.52	284.84	--	--	285.52	284.84	595.45	340.57
State	1,695.77	707.68	210.56	193.11	1,906.33	733.55	47.19	65.84	179.65	250.62	226.84	254.84	2,133.17	769.38
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	1,755.28	710.23	460.98	261.80	2,216.26	756.92	332.71	292.35	179.65	250.62	512.36	382.20	2,728.63	841.38
Private:														
Corporate	18,805.35	2,328.66	993.05	541.77	19,798.40	2,391.52	--	--	--	--	--	--	19,798.40	2,391.52
Noncorporate private:														
Total, noncorporate private	24,015.19	2,470.29	1,696.32	582.60	25,711.51	2,525.99	--	--	--	--	--	--	25,711.51	2,525.99
All private	42,820.54	3,341.82	2,689.37	795.38	45,509.91	3,413.72	--	--	--	--	--	--	45,509.91	3,413.72
All owners	48,475.85	3,578.35	3,150.35	845.75	51,626.20	3,656.75	332.71	292.35	179.65	250.62	512.36	382.20	52,138.57	3,671.47

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C61.1: Soil Organic Carbon by Owner Group and Forest Land Status, All Oregon (10 year averages): 2001 - 2010

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	601,734.65	6,664.10	25,125.05	2,612.86	626,859.70	6,466.95	110,860.29	5,420.25	8,393.02	1,597.83	119,253.30	5,586.24	746,113.01	4,159.62
National Grasslands	--	--	2,174.45	726.73	2,174.45	726.73	--	--	--	--	--	--	2,174.45	726.73
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	601,734.65	6,664.10	27,299.51	2,682.86	629,034.16	6,451.80	110,860.29	5,420.25	8,393.02	1,597.83	119,253.30	5,586.24	748,287.46	4,132.14
Other federal government:														
Bureau of Land Management	116,755.09	4,138.38	65,462.67	3,851.80	182,217.76	5,348.89	5,120.65	1,267.18	2,580.50	890.12	7,701.15	1,545.58	189,918.91	5,287.46
Department of Defense and Energy	3.12	3.28	--	--	3.12	3.28	--	--	--	--	--	--	3.12	3.28
National Park Service	--	--	--	--	--	--	7,653.77	1,130.66	390.03	343.65	8,043.79	1,121.76	8,043.79	1,121.76
U.S. Fish and Wildlife Service	--	--	--	--	--	--	470.11	337.15	651.89	471.85	1,122.00	579.92	1,122.00	579.92
Other federal	644.71	426.51	--	--	644.71	426.51	380.48	400.41	--	--	380.48	400.41	1,025.19	585.01
Total	117,402.92	4,159.63	65,462.67	3,851.80	182,865.59	5,365.35	13,625.01	1,777.01	3,622.42	1,064.45	17,247.42	2,033.06	200,113.01	5,268.82
State and local government:														
Local	7,067.07	1,508.96	1,303.54	579.00	8,370.60	1,631.87	907.38	544.87	--	--	907.38	544.87	9,277.99	1,717.96
State	55,656.94	3,477.32	3,925.50	1,082.01	59,582.44	3,639.10	3,057.02	1,051.78	237.60	247.94	3,294.62	1,080.61	62,877.06	3,718.92
Other public	280.54	288.77	--	--	280.54	288.77	--	--	--	--	--	--	280.54	288.77
Total	63,004.54	3,789.86	5,229.04	1,227.19	68,233.58	3,985.97	3,964.40	1,184.54	237.60	247.94	4,202.00	1,210.21	72,435.58	4,092.82
Private:														
Corporate	314,028.74	7,394.82	11,382.74	1,769.83	325,411.48	7,470.27	--	--	--	--	--	--	325,411.48	7,470.27
Noncorporate private:														
Total, noncorporate private	184,279.58	6,430.22	62,459.38	3,951.10	246,738.96	7,207.45	--	--	--	--	--	--	246,738.96	7,207.45
All private	498,308.32	6,693.39	73,842.12	4,258.88	572,150.44	6,945.98	--	--	--	--	--	--	572,150.44	6,945.98
All owners	1,280,450.44	9,452.01	171,833.33	6,402.64	1,452,283.77	9,945.53	128,449.70	5,822.59	12,253.03	1,935.87	140,702.72	6,061.19	1,592,986.49	8,388.43

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C61.1: Soil Organic Carbon by Owner Group and Forest Land Status, All Oregon (10 year averages): 2002 - 2011

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	604,600.10	6,670.86	24,116.28	2,558.49	628,716.38	6,474.54	110,573.65	5,419.57	8,642.51	1,630.30	119,216.16	5,593.55	747,932.54	4,174.41
National Grasslands	--	--	1,936.12	700.33	1,936.12	700.33	--	--	--	--	--	--	1,936.12	700.33
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	604,600.10	6,670.86	26,052.40	2,628.42	630,652.50	6,456.83	110,573.65	5,419.57	8,642.51	1,630.30	119,216.16	5,593.55	749,868.66	4,142.67
Other federal government:														
Bureau of Land Management	116,974.04	4,055.42	61,326.67	3,758.23	178,300.71	5,228.82	4,905.29	1,242.93	2,406.69	844.74	7,311.98	1,501.87	185,612.69	5,190.10
Department of Defense and Energy	3.30	3.39	--	--	3.30	3.39	--	--	--	--	--	--	3.30	3.39
National Park Service	--	--	--	--	--	--	7,038.17	1,127.90	700.98	457.43	7,739.15	1,112.66	7,739.15	1,112.66
U.S. Fish and Wildlife Service	--	--	--	--	--	--	452.46	331.73	627.86	461.05	1,080.31	567.99	1,080.31	567.99
Other federal	639.82	424.93	--	--	639.82	424.93	387.91	403.74	--	--	387.91	403.74	1,027.72	586.15
Total	117,617.16	4,076.96	61,326.67	3,758.23	178,943.83	5,245.55	12,783.82	1,757.77	3,735.53	1,065.41	16,519.35	1,992.27	195,463.18	5,171.40
State and local government:														
Local	6,969.36	1,495.43	1,574.50	647.36	8,543.86	1,645.34	894.08	540.59	--	--	894.08	540.59	9,437.94	1,729.50
State	54,629.88	3,412.75	3,281.48	984.57	57,911.35	3,549.82	3,066.42	1,051.84	274.54	250.31	3,340.96	1,081.22	61,252.31	3,633.11
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	61,599.24	3,715.04	4,855.97	1,178.32	66,455.21	3,900.46	3,960.50	1,182.63	274.54	250.31	4,235.04	1,208.83	70,690.25	4,010.49
Private:														
Corporate	314,707.16	7,346.22	9,787.31	1,639.71	324,494.46	7,401.37	--	--	--	--	--	--	324,494.46	7,401.37
Noncorporate private:														
Total, noncorporate private	183,011.53	6,391.25	59,927.20	3,864.04	242,938.74	7,135.83	--	--	--	--	--	--	242,938.74	7,135.83
All private	497,718.69	6,653.34	69,714.51	4,145.34	567,433.20	6,894.79	--	--	--	--	--	--	567,433.20	6,894.79
All owners	1,281,535.18	9,426.21	161,949.55	6,230.93	1,443,484.74	9,870.13	127,317.98	5,815.89	12,652.57	1,963.58	139,970.55	6,055.87	1,583,455.28	8,311.79

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C61.1: Soil Organic Carbon by Owner Group and Forest Land Status, All Oregon (10 year averages): 2003 - 2012

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	585,572.28	2,975.04	28,970.38	1,573.91	614,542.66	2,768.99	122,101.51	2,960.38	10,681.12	1,788.03	132,782.62	2,661.51	747,325.28	2,697.54
National Grasslands	--	--	738.63	242.97	738.63	242.97	--	--	--	--	--	--	738.63	242.97
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	585,572.28	2,975.04	29,709.01	1,578.42	615,281.29	2,769.04	122,101.51	2,960.38	10,681.12	1,788.03	132,782.62	2,661.51	748,063.91	2,697.59
Other federal government:														
Bureau of Land Management	118,813.49	3,222.53	61,864.30	3,697.78	180,677.79	4,460.48	4,415.95	1,200.62	2,211.15	838.51	6,627.10	1,461.38	187,304.89	4,331.86
Department of Defense and Energy	3.77	3.60	--	--	3.77	3.60	--	--	--	--	--	--	3.77	3.60
National Park Service	--	--	--	--	--	--	7,914.33	1,507.56	745.88	470.01	8,660.21	1,572.73	8,660.21	1,572.73
U.S. Fish and Wildlife Service	--	--	--	--	--	--	501.24	365.17	605.97	459.66	1,107.21	586.81	1,107.21	586.81
Other federal	528.98	375.30	--	--	528.98	375.30	416.80	414.40	--	--	416.80	414.40	945.78	559.09
Total	119,346.24	3,225.09	61,864.30	3,697.78	181,210.54	4,462.19	13,248.32	1,961.53	3,563.00	1,055.56	16,811.32	2,204.43	198,021.86	4,129.03
State and local government:														
Local	7,304.86	1,537.88	1,709.24	669.76	9,014.09	1,695.00	829.80	523.76	--	--	829.80	523.76	9,843.89	1,772.54
State	50,562.54	2,168.93	3,392.65	986.32	53,955.19	2,325.05	2,262.14	903.63	345.48	264.89	2,607.62	931.88	56,562.81	2,322.11
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	57,867.40	2,420.14	5,101.88	1,192.23	62,969.28	2,647.74	3,091.94	1,042.27	345.48	264.89	3,437.41	1,066.86	66,406.69	2,605.03
Private:														
Corporate	326,072.21	7,187.13	10,626.99	1,735.06	336,699.20	7,297.26	--	--	--	--	--	--	336,699.20	7,297.26
Noncorporate private:														
Total, noncorporate private	176,641.41	6,229.35	57,604.62	3,902.59	234,246.03	7,058.74	--	--	--	--	--	--	234,246.03	7,058.74
All private	502,713.62	6,158.06	68,231.61	4,228.66	570,945.23	6,412.64	--	--	--	--	--	--	570,945.23	6,412.64
All owners	1,265,499.54	7,204.71	164,906.80	5,944.55	1,430,406.34	7,914.27	138,441.77	3,700.96	14,589.59	2,093.19	153,031.36	3,616.71	1,583,437.70	7,574.03

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C61.1: Soil Organic Carbon by Owner Group and Forest Land Status, All Oregon (10 year averages): 2004 - 2013

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	585,567.00	2,976.62	28,287.05	1,556.54	613,854.05	2,772.48	123,292.50	2,957.56	10,409.79	1,771.72	133,702.29	2,669.02	747,556.34	2,704.58
National Grasslands	--	--	742.68	244.48	742.68	244.48	--	--	--	--	--	--	742.68	244.48
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	585,567.00	2,976.62	29,029.73	1,561.32	614,596.73	2,772.64	123,292.50	2,957.56	10,409.79	1,771.72	133,702.29	2,669.02	748,299.02	2,704.74
Other federal government:														
Bureau of Land Management	118,797.00	3,202.43	59,777.94	3,616.81	178,574.94	4,392.28	4,427.88	1,201.17	2,218.64	839.77	6,646.52	1,462.55	185,221.46	4,264.46
Department of Defense and Energy	3.72	3.58	--	--	3.72	3.58	--	--	--	--	--	--	3.72	3.58
National Park Service	--	--	--	--	--	--	8,052.19	1,515.96	745.88	470.01	8,798.07	1,580.78	8,798.07	1,580.78
U.S. Fish and Wildlife Service	--	--	--	--	--	--	501.24	365.17	606.14	459.73	1,107.38	586.86	1,107.38	586.86
Other federal	528.98	375.30	--	--	528.98	375.30	553.79	436.85	--	--	553.79	436.85	1,082.77	575.92
Total	119,329.70	3,204.95	59,777.94	3,616.81	179,107.64	4,393.97	13,535.10	1,971.91	3,570.65	1,056.59	17,105.75	2,214.05	196,213.39	4,065.28
State and local government:														
Local	7,308.38	1,538.57	1,769.61	690.99	9,077.99	1,707.34	831.48	524.81	--	--	831.48	524.81	9,909.47	1,784.64
State	50,598.73	2,176.11	3,211.23	948.90	53,809.96	2,316.07	2,256.01	901.46	352.27	267.23	2,608.29	930.50	56,418.25	2,312.70
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	57,907.11	2,428.77	4,980.84	1,173.71	62,887.95	2,649.05	3,087.49	1,040.91	352.27	267.23	3,439.76	1,066.16	66,327.72	2,605.92
Private:														
Corporate	328,023.83	7,170.66	12,394.39	1,859.70	340,418.22	7,302.70	--	--	--	--	--	--	340,418.22	7,302.70
Noncorporate private:														
Total, noncorporate private	173,669.07	6,211.80	53,477.66	3,765.22	227,146.73	6,977.10	--	--	--	--	--	--	227,146.73	6,977.10
All private	501,692.90	6,162.38	65,872.05	4,151.93	567,564.95	6,378.44	--	--	--	--	--	--	567,564.95	6,378.44
All owners	1,264,496.71	7,211.45	159,660.56	5,829.53	1,424,157.27	7,853.32	139,915.09	3,703.78	14,332.71	2,080.09	154,247.81	3,627.84	1,578,405.08	7,516.23

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C61.1: Soil Organic Carbon by Owner Group and Forest Land Status, All Oregon (10 year averages): 2005 - 2014

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	585,825.96	2,953.64	27,642.49	1,545.95	613,468.45	2,750.53	124,588.47	2,921.23	9,877.37	1,738.47	134,465.84	2,627.45	747,934.29	2,694.41
National Grasslands	--	--	745.71	245.55	745.71	245.55	--	--	--	--	--	--	745.71	245.55
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	585,825.96	2,953.64	28,388.20	1,551.43	614,214.16	2,751.36	124,588.47	2,921.23	9,877.37	1,738.47	134,465.84	2,627.45	748,680.00	2,695.25
Other federal government:														
Bureau of Land Management	119,314.11	3,136.68	58,913.26	3,590.35	178,227.36	4,342.70	4,461.01	1,206.57	2,218.64	839.82	6,679.65	1,466.87	184,907.01	4,213.18
Department of Defense and Energy	3.87	3.65	--	--	3.87	3.65	--	--	--	--	--	--	3.87	3.65
National Park Service	--	--	--	--	--	--	7,645.17	1,475.65	760.90	475.92	8,406.07	1,543.01	8,406.07	1,543.01
U.S. Fish and Wildlife Service	--	--	--	--	--	--	501.24	365.20	606.26	459.79	1,107.50	586.93	1,107.50	586.93
Other federal	320.47	326.10	--	--	320.47	326.10	553.79	436.88	--	--	553.79	436.88	874.27	545.16
Total	119,638.45	3,153.58	58,913.26	3,590.35	178,551.71	4,354.92	13,161.22	1,945.71	3,585.80	1,059.31	16,747.02	2,191.26	195,298.72	4,001.86
State and local government:														
Local	7,092.26	1,514.47	2,002.20	711.58	9,094.46	1,693.40	837.58	526.86	--	--	837.58	526.86	9,932.04	1,771.87
State	51,132.37	2,210.99	3,495.66	992.32	54,628.04	2,365.23	2,262.73	902.95	352.27	267.25	2,615.00	931.94	57,243.04	2,355.79
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	58,224.63	2,445.00	5,497.86	1,220.93	63,722.49	2,684.53	3,100.31	1,043.15	352.27	267.25	3,452.58	1,068.35	67,175.08	2,641.41
Private:														
Corporate	333,070.33	7,170.14	13,033.23	1,914.49	346,103.56	7,305.80	--	--	--	--	--	--	346,103.56	7,305.80
Noncorporate private:														
Total, noncorporate private	168,361.52	6,149.41	51,328.25	3,682.92	219,689.77	6,907.36	--	--	--	--	--	--	219,689.77	6,907.36
All private	501,431.85	6,176.70	64,361.48	4,096.71	565,793.33	6,375.20	--	--	--	--	--	--	565,793.33	6,375.20
All owners	1,265,120.89	7,211.27	157,160.79	5,780.54	1,422,281.68	7,847.30	140,850.00	3,661.48	13,815.44	2,053.25	154,665.44	3,584.05	1,576,947.12	7,507.32

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C61.1: Soil Organic Carbon by Owner Group and Forest Land Status, All Oregon (10 year averages): 2006 - 2015

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	585,473.94	2,974.51	27,502.85	1,543.92	612,976.79	2,777.10	124,860.82	2,925.05	9,891.68	1,730.53	134,752.50	2,625.85	747,729.29	2,698.84
National Grasslands	--	--	662.33	232.43	662.33	232.43	--	--	--	--	--	--	662.33	232.43
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	585,473.94	2,974.51	28,165.18	1,549.71	613,639.12	2,778.25	124,860.82	2,925.05	9,891.68	1,730.53	134,752.50	2,625.85	748,391.62	2,700.03
Other federal government:														
Bureau of Land Management	120,206.35	3,124.76	58,630.76	3,615.34	178,837.11	4,334.08	4,441.75	1,203.14	2,200.80	831.59	6,642.54	1,459.34	185,479.65	4,202.03
Department of Defense and Energy	3.86	3.64	--	--	3.86	3.64	--	--	--	--	--	--	3.86	3.64
National Park Service	--	--	--	--	--	--	7,515.58	1,460.83	656.08	463.74	8,171.66	1,520.49	8,171.66	1,520.49
U.S. Fish and Wildlife Service	--	--	--	--	--	--	509.35	371.77	257.81	292.01	767.16	472.44	767.16	472.44
Other federal	320.47	326.01	--	--	320.47	326.01	552.59	436.21	--	--	552.59	436.21	873.06	544.57
Total	120,530.69	3,141.72	58,630.76	3,615.34	179,161.45	4,346.32	13,019.26	1,934.26	3,114.69	985.99	16,133.95	2,144.57	195,295.40	3,980.99
State and local government:														
Local	7,093.65	1,508.65	2,010.31	713.09	9,103.96	1,689.23	836.75	526.50	--	--	836.75	526.50	9,940.70	1,767.77
State	50,849.99	2,232.62	4,101.78	1,076.50	54,951.77	2,421.48	2,281.18	909.00	396.88	309.93	2,678.06	948.21	57,629.82	2,417.32
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	57,943.64	2,463.57	6,112.08	1,290.79	64,055.72	2,733.61	3,117.92	1,048.22	396.88	309.93	3,514.80	1,082.39	67,570.52	2,696.19
Private:														
Corporate	337,107.52	7,150.99	13,409.69	1,942.56	350,517.20	7,299.95	--	--	--	--	--	--	350,517.20	7,299.95
Noncorporate private:														
Total, noncorporate private	163,669.55	6,044.08	49,985.92	3,622.37	213,655.47	6,803.35	--	--	--	--	--	--	213,655.47	6,803.35
All private	500,777.07	6,136.67	63,395.61	4,057.05	564,172.67	6,369.02	--	--	--	--	--	--	564,172.67	6,369.02
All owners	1,264,725.33	7,207.81	156,303.63	5,775.12	1,421,028.96	7,874.75	140,998.01	3,659.91	13,403.25	2,015.68	154,401.26	3,558.75	1,575,430.22	7,525.24

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C61.1: Soil Organic Carbon by Owner Group and Forest Land Status, All Oregon (10 year averages): 2007 - 2016

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	583,782.99	2,873.69	26,833.09	1,522.97	610,616.09	2,666.40	125,466.86	2,920.34	10,491.79	1,806.33	135,958.65	2,605.35	746,574.73	2,715.00
National Grasslands	--	--	665.54	232.14	665.54	232.14	--	--	--	--	--	--	665.54	232.14
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	583,782.99	2,873.69	27,498.64	1,528.87	611,281.63	2,667.63	125,466.86	2,920.34	10,491.79	1,806.33	135,958.65	2,605.35	747,240.28	2,716.21
Other federal government:														
Bureau of Land Management	120,276.85	3,125.75	57,743.03	3,623.11	178,019.88	4,342.16	4,441.76	1,203.87	2,513.13	880.13	6,954.89	1,487.96	184,974.77	4,207.75
Department of Defense and Energy	3.86	3.64	--	--	3.86	3.64	--	--	--	--	--	--	3.86	3.64
National Park Service	--	--	--	--	--	--	7,528.98	1,464.55	659.24	466.24	8,188.22	1,524.58	8,188.22	1,524.58
U.S. Fish and Wildlife Service	--	--	--	--	--	--	509.35	372.00	331.84	302.01	841.19	478.86	841.19	478.86
Other federal	320.47	326.21	--	--	320.47	326.21	550.98	435.53	--	--	550.98	435.53	871.45	544.15
Total	120,601.18	3,142.72	57,743.03	3,623.11	178,344.21	4,354.40	13,031.08	1,937.35	3,504.20	1,031.25	16,535.28	2,167.96	194,879.49	3,984.81
State and local government:														
Local	7,977.88	1,602.28	2,012.21	714.02	9,990.10	1,773.44	834.49	525.84	--	--	834.49	525.84	10,824.59	1,846.54
State	50,653.26	2,233.21	4,020.96	1,073.32	54,674.22	2,426.23	2,293.09	911.84	632.66	439.74	2,925.75	985.40	57,599.97	2,424.29
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	58,631.14	2,461.19	6,033.17	1,288.65	64,664.32	2,735.24	3,127.58	1,050.34	632.66	439.74	3,760.24	1,114.80	68,424.55	2,697.01
Private:														
Corporate	341,255.03	7,116.00	13,887.63	1,974.49	355,142.67	7,271.93	--	--	--	--	--	--	355,142.67	7,271.93
Noncorporate private:														
Total, noncorporate private	159,126.54	5,977.59	50,459.74	3,648.13	209,586.29	6,745.86	--	--	--	--	--	--	209,586.29	6,745.86
All private	500,381.58	6,134.87	64,347.38	4,090.92	564,728.95	6,356.46	--	--	--	--	--	--	564,728.95	6,356.46
All owners	1,263,396.90	7,189.43	155,622.22	5,801.76	1,419,019.11	7,853.80	141,625.52	3,658.39	14,628.65	2,125.95	156,254.16	3,567.85	1,575,273.28	7,546.54

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C62: Aboveground Carbon Mass of Down Dead Wood, by Owner Group and Forest Land Status, 2007-2016: All Oregon

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	67,611.65	957.17	1,244.43	144.52	68,856.09	955.89	17,031.66	810.31	524.15	127.14	17,555.81	796.33	86,411.89	1,185.63
National Grasslands	--	--	2.44	1.10	2.44	1.10	--	--	--	--	--	--	2.44	1.10
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	67,611.65	957.17	1,246.88	144.52	68,858.53	955.89	17,031.66	810.31	524.15	127.14	17,555.81	796.33	86,414.34	1,185.63
Other federal government:														
Bureau of Land Management	14,249.16	744.13	774.20	109.35	15,023.36	747.23	381.60	156.91	5.05	3.05	386.65	156.93	15,410.01	749.71
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	737.33	177.22	168.15	128.26	905.48	217.41	905.48	217.41
U.S. Fish and Wildlife Service	--	--	--	--	--	--	35.99	30.28	2.28	1.99	38.27	30.35	38.27	30.35
Other federal	11.45	11.65	--	--	11.45	11.65	20.98	14.87	--	--	20.98	14.87	32.42	18.89
Total	14,260.61	744.22	774.20	109.35	15,034.81	747.32	1,175.90	234.57	175.48	128.31	1,351.38	265.91	16,386.19	749.37
State and local government:														
Local	532.44	140.42	11.14	4.47	543.58	140.49	132.01	90.15	--	--	132.01	90.15	675.59	166.52
State	7,792.35	699.59	48.01	30.09	7,840.36	700.01	76.94	39.41	16.86	19.73	93.80	43.25	7,934.16	696.97
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	8,324.80	695.41	59.15	30.42	8,383.95	695.84	208.94	98.29	16.86	19.73	225.80	99.90	8,609.75	690.80
Private:														
Corporate	33,662.45	1,166.53	489.91	141.86	34,152.37	1,171.45	--	--	--	--	--	--	34,152.37	1,171.45
Noncorporate private:														
Total, noncorporate private	10,408.93	622.13	856.53	149.37	11,265.46	635.44	--	--	--	--	--	--	11,265.46	635.44
All private	44,071.39	1,174.95	1,346.44	204.69	45,417.83	1,178.44	--	--	--	--	--	--	45,417.83	1,178.44
All owners	134,268.44	1,794.83	3,426.67	275.01	137,695.11	1,797.21	18,416.50	849.29	716.49	181.71	19,132.99	845.47	156,828.10	1,925.14

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C63: Aboveground Carbon Mass of Down Dead Wood, by Owner Group and Forest Land Status, 2007-2016: Blue Mountains

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	17,811.43	400.65	245.35	45.76	18,056.78	399.64	5,184.00	462.29	97.46	48.18	5,281.46	462.69	23,338.25	597.58
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	17,811.43	400.65	245.35	45.76	18,056.78	399.64	5,184.00	462.29	97.46	48.18	5,281.46	462.69	23,338.25	597.58
Other federal government:														
Bureau of Land Management	225.89	87.77	5.12	4.82	231.01	87.88	--	--	--	--	--	--	231.01	87.88
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
U.S. Fish and Wildlife Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other federal	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	225.89	87.77	5.12	4.82	231.01	87.88	--	--	--	--	--	--	231.01	87.88
State and local government:														
Local	82.13	46.40	--	--	82.13	46.40	--	--	--	--	--	--	82.13	46.40
State	49.68	26.05	--	--	49.68	26.05	--	--	--	--	--	--	49.68	26.05
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	131.81	53.21	--	--	131.81	53.21	--	--	--	--	--	--	131.81	53.21
Private:														
Corporate	1,737.41	219.36	0.56	0.50	1,737.98	219.36	--	--	--	--	--	--	1,737.98	219.36
Noncorporate private:														
Total, noncorporate private	1,330.91	187.24	5.60	3.81	1,336.52	187.34	--	--	--	--	--	--	1,336.52	187.34
All private	3,068.33	283.40	6.17	3.84	3,074.49	283.45	--	--	--	--	--	--	3,074.49	283.45
All owners	21,237.46	500.75	256.64	46.17	21,494.09	499.98	5,184.00	462.29	97.46	48.18	5,281.46	462.69	26,775.56	668.86

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C64: Aboveground Carbon Mass of Down Dead Wood, by Owner Group and Forest Land Status, 2007-2016: East Cascades+Modoc

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	10,832.53	306.97	218.46	56.47	11,050.98	308.77	762.15	153.62	54.68	36.93	816.83	157.06	11,867.81	339.42
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	10,832.53	306.97	218.46	56.47	11,050.98	308.77	762.15	153.62	54.68	36.93	816.83	157.06	11,867.81	339.42
Other federal government:														
Bureau of Land Management	345.93	109.48	105.85	40.73	451.78	116.06	111.06	77.56	4.03	2.96	115.09	77.61	566.86	139.47
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
U.S. Fish and Wildlife Service	--	--	--	--	--	--	35.16	30.27	--	--	35.16	30.27	35.16	30.27
Other federal	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	345.93	109.48	105.85	40.73	451.78	116.06	146.22	83.25	4.03	2.96	150.25	83.30	602.02	142.54
State and local government:														
Local	44.46	37.11	2.52	1.74	46.98	37.15	--	--	--	--	--	--	46.98	37.15
State	311.46	124.05	13.00	18.13	324.45	125.36	--	--	--	--	--	--	324.45	125.36
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	355.92	128.51	15.52	18.22	371.43	129.80	--	--	--	--	--	--	371.43	129.80
Private:														
Corporate	3,100.33	270.05	130.18	60.83	3,230.51	273.63	--	--	--	--	--	--	3,230.51	273.63
Noncorporate private:														
Total, noncorporate private	1,775.90	311.60	167.54	45.07	1,943.44	314.59	--	--	--	--	--	--	1,943.44	314.59
All private	4,876.23	399.91	297.72	75.61	5,173.95	403.27	--	--	--	--	--	--	5,173.95	403.27
All owners	16,410.61	529.41	637.54	104.40	17,048.14	534.55	908.37	174.73	58.71	37.05	967.08	177.78	18,015.22	558.91

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C65: Aboveground Carbon Mass of Down Dead Wood, by Owner Group and Forest Land Status, 2007-2016: Eastern OR Lowlands

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	283.39	60.80	54.35	14.38	337.74	62.38	12.35	11.77	--	--	12.35	11.77	350.10	63.45
National Grasslands	--	--	2.44	1.10	2.44	1.10	--	--	--	--	--	--	2.44	1.10
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	283.39	60.80	56.80	14.39	340.19	62.38	12.35	11.77	--	--	12.35	11.77	352.54	63.45
Other federal government:														
Bureau of Land Management	170.47	67.60	501.99	84.14	672.46	105.77	--	--	1.02	0.74	1.02	0.74	673.48	105.76
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
U.S. Fish and Wildlife Service	--	--	--	--	--	--	--	--	2.28	1.99	2.28	1.99	2.28	1.99
Other federal	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	170.47	67.60	501.99	84.14	672.46	105.77	--	--	3.31	2.12	3.31	2.12	675.76	105.78
State and local government:														
Local	--	--	6.96	3.84	6.96	3.84	--	--	--	--	--	--	6.96	3.84
State	1.42	1.55	12.88	4.44	14.30	4.70	--	--	--	--	--	--	14.30	4.70
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	1.42	1.55	19.84	5.87	21.27	6.07	--	--	--	--	--	--	21.27	6.07
Private:														
Corporate	156.23	52.96	27.38	7.45	183.61	53.48	--	--	--	--	--	--	183.61	53.48
Noncorporate private:														
Total, noncorporate private	406.42	88.82	288.40	55.92	694.82	104.43	--	--	--	--	--	--	694.82	104.43
All private	562.65	102.88	315.77	56.37	878.42	116.61	--	--	--	--	--	--	878.42	116.61
All owners	1,017.94	140.00	894.40	102.41	1,912.34	171.59	12.35	11.77	3.31	2.12	15.66	11.96	1,927.99	171.99

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C66: Aboveground Carbon Mass of Down Dead Wood, by Owner Group and Forest Land Status, 2007-2016: Klamath Mountains

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	4,020.62	248.19	175.34	29.55	4,195.96	246.73	1,055.19	182.64	55.01	29.99	1,110.20	180.48	5,306.17	302.96
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	4,020.62	248.19	175.34	29.55	4,195.96	246.73	1,055.19	182.64	55.01	29.99	1,110.20	180.48	5,306.17	302.96
Other federal government:														
Bureau of Land Management	3,576.19	446.74	110.05	38.87	3,686.24	447.51	51.94	25.15	--	--	51.94	25.15	3,738.18	447.14
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
U.S. Fish and Wildlife Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other federal	11.45	11.65	--	--	11.45	11.65	9.61	9.61	--	--	9.61	9.61	21.05	15.10
Total	3,587.63	446.89	110.05	38.87	3,697.69	447.66	61.55	26.92	--	--	61.55	26.92	3,759.23	447.39
State and local government:														
Local	115.78	45.56	--	--	115.78	45.56	--	--	--	--	--	--	115.78	45.56
State	186.41	111.47	0.18	0.18	186.58	111.56	--	--	--	--	--	--	186.58	111.56
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	302.19	120.42	0.18	0.18	302.36	120.50	--	--	--	--	--	--	302.36	120.50
Private:														
Corporate	2,969.67	391.60	211.33	105.35	3,181.00	407.04	--	--	--	--	--	--	3,181.00	407.04
Noncorporate private:														
Total, noncorporate private	1,146.75	173.90	122.52	32.88	1,269.28	177.32	--	--	--	--	--	--	1,269.28	177.32
All private	4,116.43	424.01	333.85	110.18	4,450.28	439.38	--	--	--	--	--	--	4,450.28	439.38
All owners	12,026.87	676.23	619.43	120.51	12,646.29	685.91	1,116.74	184.62	55.01	29.99	1,171.75	182.48	13,818.04	707.84

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C67: Aboveground Carbon Mass of Down Dead Wood, by Owner Group and Forest Land Status, 2007-2016: Oregon Coast Range

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	5,959.91	330.18	52.01	27.18	6,011.93	329.83	485.46	169.88	9.42	5.83	494.88	169.98	6,506.81	366.36
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	5,959.91	330.18	52.01	27.18	6,011.93	329.83	485.46	169.88	9.42	5.83	494.88	169.98	6,506.81	366.36
Other federal government:														
Bureau of Land Management	6,355.90	670.84	51.20	42.61	6,407.10	672.17	--	--	--	--	--	--	6,407.10	672.17
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
U.S. Fish and Wildlife Service	--	--	--	--	--	--	0.83	0.94	--	--	0.83	0.94	0.83	0.94
Other federal	--	--	--	--	--	--	11.37	11.34	--	--	11.37	11.34	11.37	11.34
Total	6,355.90	670.84	51.20	42.61	6,407.10	672.17	12.20	11.38	--	--	12.20	11.38	6,419.31	672.26
State and local government:														
Local	218.71	94.98	--	--	218.71	94.98	83.71	76.19	--	--	83.71	76.19	302.41	121.20
State	6,491.54	669.03	--	--	6,491.54	669.03	62.47	36.76	2.72	2.46	65.19	36.75	6,556.73	667.30
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	6,710.24	666.21	--	--	6,710.24	666.21	146.18	84.49	2.72	2.46	148.90	84.49	6,859.14	662.61
Private:														
Corporate	16,406.15	1,027.13	1.32	1.19	16,407.47	1,027.13	--	--	--	--	--	--	16,407.47	1,027.13
Noncorporate private:														
Total, noncorporate private	2,441.10	320.72	23.63	16.66	2,464.73	321.15	--	--	--	--	--	--	2,464.73	321.15
All private	18,847.25	1,052.31	24.95	16.70	18,872.20	1,052.19	--	--	--	--	--	--	18,872.20	1,052.19
All owners	37,873.31	1,435.99	128.16	53.23	38,001.47	1,436.43	643.85	190.07	12.14	6.32	655.99	190.16	38,657.46	1,443.19

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C68: Aboveground Carbon Mass of Down Dead Wood, by Owner Group and Forest Land Status, 2007-2016: Western Cascades

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	28,703.77	758.71	498.92	117.59	29,202.69	760.27	9,532.50	698.94	307.58	108.16	9,840.07	691.48	39,042.76	982.32
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	28,703.77	758.71	498.92	117.59	29,202.69	760.27	9,532.50	698.94	307.58	108.16	9,840.07	691.48	39,042.76	982.32
Other federal government:														
Bureau of Land Management	3,148.15	411.50	--	--	3,148.15	411.50	218.60	134.68	--	--	218.60	134.68	3,366.75	428.92
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	737.33	177.22	168.15	128.26	905.48	217.41	905.48	217.41
U.S. Fish and Wildlife Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other federal	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	3,148.15	411.50	--	--	3,148.15	411.50	955.93	218.36	168.15	128.26	1,124.08	251.86	4,272.23	468.65
State and local government:														
Local	71.37	73.02	--	--	71.37	73.02	--	--	--	--	--	--	71.37	73.02
State	636.89	327.75	--	--	636.89	327.75	14.35	14.68	--	--	14.35	14.68	651.24	328.08
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	708.26	335.78	--	--	708.26	335.78	14.35	14.68	--	--	14.35	14.68	722.61	336.04
Private:														
Corporate	8,021.45	652.85	35.33	25.79	8,056.78	653.00	--	--	--	--	--	--	8,056.78	653.00
Noncorporate private:														
Total, noncorporate private	2,100.39	360.47	222.79	125.07	2,323.18	380.86	--	--	--	--	--	--	2,323.18	380.86
All private	10,121.84	731.24	258.12	127.70	10,379.96	740.93	--	--	--	--	--	--	10,379.96	740.93
All owners	42,682.02	1,183.37	757.04	173.59	43,439.06	1,190.35	10,502.78	732.40	475.72	167.78	10,978.50	736.07	54,417.56	1,361.48

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C69: Aboveground Carbon Mass of Down Dead Wood, by Owner Group and Forest Land Status, 2007-2016: Willamette Valley

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other federal government:														
Bureau of Land Management	426.62	149.48	--	--	426.62	149.48	--	--	--	--	--	--	426.62	149.48
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
U.S. Fish and Wildlife Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other federal	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	426.62	149.48	--	--	426.62	149.48	--	--	--	--	--	--	426.62	149.48
State and local government:														
Local	--	--	1.66	1.47	1.66	1.47	48.30	48.18	--	--	48.30	48.18	49.96	48.21
State	114.96	64.92	21.95	23.66	136.91	69.10	0.11	0.16	14.14	19.72	14.25	19.71	151.16	71.86
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	114.96	64.92	23.61	23.71	138.57	69.12	48.41	48.18	14.14	19.72	62.55	52.06	201.12	86.53
Private:														
Corporate	1,271.21	217.75	83.82	69.54	1,355.03	228.58	--	--	--	--	--	--	1,355.03	228.58
Noncorporate private:														
Total, noncorporate private	1,207.45	175.26	26.04	17.42	1,233.49	176.08	--	--	--	--	--	--	1,233.49	176.08
All private	2,478.67	274.78	109.86	71.69	2,588.52	283.11	--	--	--	--	--	--	2,588.52	283.11
All owners	3,020.25	319.53	133.47	75.51	3,153.72	327.58	48.41	48.18	14.14	19.72	62.55	52.06	3,216.27	331.25

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C70.1: Aboveground Carbon Mass of Down Dead Wood, by Owner Group and Forest Land Status, All Oregon (10 year averages): 2001 - 2010

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	71,736.61	1,672.15	1,303.01	222.32	73,039.62	1,667.64	13,856.40	949.80	441.44	109.09	14,297.85	953.61	87,337.47	1,666.41
National Grasslands	--	--	10.69	4.35	10.69	4.35	--	--	--	--	--	--	10.69	4.35
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	71,736.61	1,672.15	1,313.70	222.34	73,050.31	1,667.56	13,856.40	949.80	441.44	109.09	14,297.85	953.61	87,348.16	1,666.32
Other federal government:														
Bureau of Land Management	15,466.04	850.70	1,102.66	235.82	16,568.70	872.33	456.26	158.67	34.60	17.48	490.86	159.61	17,059.56	864.98
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	804.84	147.94	121.10	120.72	925.93	175.61	925.93	175.61
U.S. Fish and Wildlife Service	--	--	--	--	--	--	21.77	18.69	9.69	9.73	31.46	21.07	31.46	21.07
Other federal	37.15	24.05	--	--	37.15	24.05	10.42	10.97	--	--	10.42	10.97	47.57	26.43
Total	15,503.18	851.02	1,102.66	235.82	16,605.84	872.64	1,293.29	218.02	165.39	122.36	1,458.68	238.44	18,064.52	872.65
State and local government:														
Local	568.09	158.18	13.09	8.79	581.18	158.42	80.32	52.76	--	--	80.32	52.76	661.50	166.89
State	8,714.62	831.46	48.16	27.29	8,762.77	831.91	240.98	109.42	8.71	9.09	249.69	109.79	9,012.46	832.53
Other public	6.99	7.19	--	--	6.99	7.19	--	--	--	--	--	--	6.99	7.19
Total	9,289.70	846.16	61.25	28.67	9,350.95	846.62	321.30	121.47	8.71	9.09	330.01	121.81	9,680.95	848.66
Private:														
Corporate	35,695.22	1,268.03	438.27	117.98	36,133.49	1,267.05	--	--	--	--	--	--	36,133.49	1,267.05
Noncorporate private:														
Total, noncorporate private	13,890.53	769.81	881.69	141.90	14,772.23	777.08	--	--	--	--	--	--	14,772.23	777.08
All private	49,585.75	1,302.57	1,319.96	183.92	50,905.71	1,298.28	--	--	--	--	--	--	50,905.71	1,298.28
All owners	146,115.24	2,320.90	3,797.57	373.70	149,912.81	2,321.14	15,471.00	981.99	615.54	164.18	16,086.54	990.43	165,999.35	2,313.94

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C70.1: Aboveground Carbon Mass of Down Dead Wood, by Owner Group and Forest Land Status, All Oregon (10 year averages): 2002 - 2011

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	70,572.33	1,690.55	1,260.39	219.31	71,832.73	1,686.81	14,192.81	985.75	411.83	99.72	14,604.64	988.54	86,437.36	1,703.91
National Grasslands	--	--	8.89	4.05	8.89	4.05	--	--	--	--	--	--	8.89	4.05
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	70,572.33	1,690.55	1,269.28	219.33	71,841.61	1,686.74	14,192.81	985.75	411.83	99.72	14,604.64	988.54	86,446.25	1,703.84
Other federal government:														
Bureau of Land Management	15,393.84	862.33	1,067.13	224.37	16,460.97	882.01	440.76	156.92	28.35	16.51	469.11	157.78	16,930.08	875.63
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	729.05	145.42	165.27	126.60	894.32	173.89	894.32	173.89
U.S. Fish and Wildlife Service	--	--	--	--	--	--	30.29	26.67	9.05	9.36	39.34	28.27	39.34	28.27
Other federal	28.70	18.12	--	--	28.70	18.12	10.63	11.06	--	--	10.63	11.06	39.33	21.23
Total	15,422.54	862.50	1,067.13	224.37	16,489.67	882.18	1,210.73	215.88	202.67	128.01	1,413.40	236.71	17,903.07	882.14
State and local government:														
Local	560.45	157.70	15.34	9.16	575.79	157.97	78.11	51.76	--	--	78.11	51.76	653.90	166.16
State	8,468.38	827.11	47.31	26.99	8,515.69	827.55	239.88	108.60	8.71	9.07	248.59	108.97	8,764.28	828.21
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	9,028.83	841.80	62.65	28.50	9,091.48	842.25	317.99	120.30	8.71	9.07	326.70	120.64	9,418.18	844.28
Private:														
Corporate	34,489.25	1,216.74	420.39	116.51	34,909.64	1,216.22	--	--	--	--	--	--	34,909.64	1,216.22
Noncorporate private:														
Total, noncorporate private	13,588.38	749.69	896.67	149.04	14,485.05	758.14	--	--	--	--	--	--	14,485.05	758.14
All private	48,077.63	1,254.65	1,317.07	188.42	49,394.69	1,251.64	--	--	--	--	--	--	49,394.69	1,251.64
All owners	143,101.33	2,318.59	3,716.13	367.00	146,817.46	2,319.53	15,721.53	1,016.21	623.21	162.52	16,344.74	1,023.57	163,162.19	2,326.06

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C70.1: Aboveground Carbon Mass of Down Dead Wood, by Owner Group and Forest Land Status, All Oregon (10 year averages): 2003 - 2012

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	69,102.77	927.50	1,268.75	125.49	70,371.52	925.19	15,813.16	731.07	492.20	109.90	16,305.36	716.86	86,676.88	1,105.39
National Grasslands	--	--	3.23	1.38	3.23	1.38	--	--	--	--	--	--	3.23	1.38
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	69,102.77	927.50	1,271.97	125.49	70,374.75	925.19	15,813.16	731.07	492.20	109.90	16,305.36	716.86	86,680.11	1,105.38
Other federal government:														
Bureau of Land Management	15,412.62	751.83	961.74	175.77	16,374.36	766.81	389.86	156.97	12.24	10.13	402.10	157.28	16,776.46	767.15
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	834.34	185.83	168.25	127.99	1,002.59	224.23	1,002.59	224.23
U.S. Fish and Wildlife Service	--	--	--	--	--	--	35.30	29.67	9.75	9.51	45.05	31.16	45.05	31.16
Other federal	24.86	16.65	--	--	24.86	16.65	11.43	11.36	--	--	11.43	11.36	36.29	20.16
Total	15,437.49	751.19	961.74	175.77	16,399.22	766.18	1,270.93	240.85	190.24	128.75	1,461.16	271.28	17,860.39	764.25
State and local government:														
Local	565.66	159.54	9.11	3.77	574.76	159.58	80.24	54.27	--	--	80.24	54.27	655.00	168.46
State	7,718.73	683.34	36.22	21.44	7,754.95	683.30	170.54	89.82	6.24	7.29	176.78	89.98	7,931.73	677.28
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	8,284.39	685.67	45.33	21.77	8,329.71	685.57	250.78	104.52	6.24	7.29	257.01	104.66	8,586.73	676.02
Private:														
Corporate	34,581.73	1,190.21	466.67	128.45	35,048.40	1,193.36	--	--	--	--	--	--	35,048.40	1,193.36
Noncorporate private:														
Total, noncorporate private	12,641.88	708.98	876.81	144.89	13,518.69	719.49	--	--	--	--	--	--	13,518.69	719.49
All private	47,223.61	1,200.75	1,343.48	192.38	48,567.09	1,201.49	--	--	--	--	--	--	48,567.09	1,201.49
All owners	140,048.25	1,793.40	3,622.52	290.08	143,670.77	1,798.28	17,334.87	776.79	688.67	169.43	18,023.54	773.58	161,694.31	1,890.24

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C70.1: Aboveground Carbon Mass of Down Dead Wood, by Owner Group and Forest Land Status, All Oregon (10 year averages): 2004 - 2013

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	68,218.42	935.01	1,355.41	146.37	69,573.83	934.12	16,453.77	781.98	507.88	112.18	16,961.65	768.20	86,535.48	1,144.05
National Grasslands	--	--	3.56	1.42	3.56	1.42	--	--	--	--	--	--	3.56	1.42
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	68,218.42	935.01	1,358.96	146.37	69,577.39	934.12	16,453.77	781.98	507.88	112.18	16,961.65	768.20	86,539.04	1,144.05
Other federal government:														
Bureau of Land Management	15,104.94	759.00	969.79	177.43	16,074.73	774.39	390.21	156.97	5.06	3.20	395.27	157.00	16,470.00	774.88
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	831.18	185.58	168.25	127.99	999.43	224.00	999.43	224.00
U.S. Fish and Wildlife Service	--	--	--	--	--	--	35.30	29.67	9.75	9.51	45.05	31.16	45.05	31.16
Other federal	24.86	16.65	--	--	24.86	16.65	21.05	14.89	--	--	21.05	14.89	45.92	22.34
Total	15,129.80	758.39	969.79	177.43	16,099.59	773.80	1,277.74	240.84	183.07	128.39	1,460.81	271.28	17,560.40	772.51
State and local government:														
Local	594.97	169.48	7.57	3.48	602.54	169.52	107.83	79.61	--	--	107.83	79.61	710.37	187.14
State	7,930.08	708.15	52.83	31.18	7,982.91	708.47	169.96	89.98	6.27	7.28	176.23	90.15	8,159.15	702.02
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	8,525.05	709.75	60.40	31.37	8,585.45	710.01	277.79	119.56	6.27	7.28	284.06	119.69	8,869.51	699.92
Private:														
Corporate	34,064.81	1,160.08	490.07	130.76	34,554.88	1,163.40	--	--	--	--	--	--	34,554.88	1,163.40
Noncorporate private:														
Total, noncorporate private	12,396.40	708.26	845.48	144.37	13,241.88	718.63	--	--	--	--	--	--	13,241.88	718.63
All private	46,461.22	1,177.12	1,335.55	193.39	47,796.76	1,178.14	--	--	--	--	--	--	47,796.76	1,178.14
All owners	138,334.49	1,793.70	3,724.70	302.11	142,059.19	1,799.88	18,009.31	826.91	697.22	170.65	18,706.53	823.43	160,765.72	1,910.06

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C70.1: Aboveground Carbon Mass of Down Dead Wood, by Owner Group and Forest Land Status, All Oregon (10 year averages): 2005 - 2014

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	67,892.43	945.03	1,278.09	142.98	69,170.51	943.34	16,881.54	783.89	489.08	110.73	17,370.62	769.10	86,541.14	1,152.19
National Grasslands	--	--	3.57	1.42	3.57	1.42	--	--	--	--	--	--	3.57	1.42
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	67,892.43	945.03	1,281.65	142.98	69,174.08	943.34	16,881.54	783.89	489.08	110.73	17,370.62	769.10	86,544.70	1,152.19
Other federal government:														
Bureau of Land Management	14,428.46	732.44	815.62	105.81	15,244.08	736.69	400.41	157.55	5.06	3.20	405.48	157.58	15,649.56	737.85
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	764.78	180.39	170.96	129.05	935.74	220.29	935.74	220.29
U.S. Fish and Wildlife Service	--	--	--	--	--	--	35.30	29.68	9.76	9.51	45.06	31.16	45.06	31.16
Other federal	11.45	11.65	--	--	11.45	11.65	21.05	14.89	--	--	21.05	14.89	32.50	18.91
Total	14,439.90	732.54	815.62	105.81	15,255.53	736.78	1,221.55	237.21	185.78	129.44	1,407.33	268.52	16,662.85	737.45
State and local government:														
Local	530.59	142.37	9.25	3.79	539.84	142.41	109.18	80.27	--	--	109.18	80.27	649.02	163.28
State	7,943.18	713.75	55.15	31.26	7,998.33	714.05	170.90	90.27	6.27	7.28	177.17	90.44	8,175.50	707.65
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	8,473.77	712.20	64.40	31.49	8,538.17	712.46	280.08	120.19	6.27	7.28	286.35	120.31	8,824.51	702.45
Private:														
Corporate	33,904.42	1,156.50	486.11	130.67	34,390.52	1,159.83	--	--	--	--	--	--	34,390.52	1,159.83
Noncorporate private:														
Total, noncorporate private	11,931.52	705.00	792.93	139.71	12,724.45	714.91	--	--	--	--	--	--	12,724.45	714.91
All private	45,835.94	1,180.16	1,279.03	189.97	47,114.98	1,180.79	--	--	--	--	--	--	47,114.98	1,180.79
All owners	136,642.04	1,795.22	3,440.71	262.04	140,082.75	1,795.89	18,383.17	827.76	681.13	170.50	19,064.30	823.46	159,147.05	1,907.77

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C70.1: Aboveground Carbon Mass of Down Dead Wood, by Owner Group and Forest Land Status, All Oregon (10 year averages): 2006 - 2015

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	67,839.83	954.93	1,208.15	138.46	69,047.98	953.49	16,673.41	784.22	468.41	107.26	17,141.82	770.61	86,189.80	1,161.88
National Grasslands	--	--	2.98	1.32	2.98	1.32	--	--	--	--	--	--	2.98	1.32
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	67,839.83	954.93	1,211.13	138.46	69,050.96	953.49	16,673.41	784.22	468.41	107.26	17,141.82	770.61	86,192.77	1,161.88
Other federal government:														
Bureau of Land Management	14,364.91	741.69	805.77	111.87	15,170.68	745.78	397.51	159.20	4.39	2.98	401.90	159.23	15,572.58	747.78
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	733.52	176.99	167.66	128.00	901.18	217.00	901.18	217.00
U.S. Fish and Wildlife Service	--	--	--	--	--	--	35.99	30.26	0.43	0.52	36.43	30.27	36.43	30.27
Other federal	11.45	11.64	--	--	11.45	11.64	21.02	14.88	--	--	21.02	14.88	32.47	18.89
Total	14,376.36	741.78	805.77	111.87	15,182.13	745.87	1,188.04	235.88	172.49	128.03	1,360.53	266.81	16,542.66	746.52
State and local government:														
Local	540.54	143.40	9.27	3.79	549.81	143.45	109.11	80.24	--	--	109.11	80.24	658.93	164.17
State	7,856.16	722.04	57.57	31.49	7,913.73	722.35	171.69	90.57	15.29	19.74	186.98	92.35	8,100.71	716.11
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	8,396.70	720.74	66.84	31.72	8,463.54	721.00	280.81	120.39	15.29	19.74	296.10	121.74	8,759.64	711.31
Private:														
Corporate	33,687.52	1,153.84	451.14	127.75	34,138.66	1,157.20	--	--	--	--	--	--	34,138.66	1,157.20
Noncorporate private:														
Total, noncorporate private	11,127.32	657.53	783.47	139.96	11,910.79	668.57	--	--	--	--	--	--	11,910.79	668.57
All private	44,814.85	1,167.36	1,234.61	188.44	46,049.45	1,168.92	--	--	--	--	--	--	46,049.45	1,168.92
All owners	135,427.73	1,796.38	3,318.35	261.04	138,746.08	1,797.76	18,142.26	827.73	656.19	168.19	18,798.45	824.53	157,544.53	1,910.44

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C70.1: Aboveground Carbon Mass of Down Dead Wood, by Owner Group and Forest Land Status, All Oregon (10 year averages): 2007 - 2016

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	67,611.65	957.17	1,244.43	144.52	68,856.09	955.89	17,031.66	810.31	524.15	127.14	17,555.81	796.33	86,411.89	1,185.63
National Grasslands	--	--	2.44	1.10	2.44	1.10	--	--	--	--	--	--	2.44	1.10
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	67,611.65	957.17	1,246.88	144.52	68,858.53	955.89	17,031.66	810.31	524.15	127.14	17,555.81	796.33	86,414.34	1,185.63
Other federal government:														
Bureau of Land Management	14,249.16	744.13	774.20	109.35	15,023.36	747.23	381.60	156.91	5.05	3.05	386.65	156.93	15,410.01	749.71
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	737.33	177.22	168.15	128.26	905.48	217.41	905.48	217.41
U.S. Fish and Wildlife Service	--	--	--	--	--	--	35.99	30.28	2.28	1.99	38.27	30.35	38.27	30.35
Other federal	11.45	11.65	--	--	11.45	11.65	20.98	14.87	--	--	20.98	14.87	32.42	18.89
Total	14,260.61	744.22	774.20	109.35	15,034.81	747.32	1,175.90	234.57	175.48	128.31	1,351.38	265.91	16,386.19	749.37
State and local government:														
Local	532.44	140.42	11.14	4.47	543.58	140.49	132.01	90.15	--	--	132.01	90.15	675.59	166.52
State	7,792.35	699.59	48.01	30.09	7,840.36	700.01	76.94	39.41	16.86	19.73	93.80	43.25	7,934.16	696.97
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	8,324.80	695.41	59.15	30.42	8,383.95	695.84	208.94	98.29	16.86	19.73	225.80	99.90	8,609.75	690.80
Private:														
Corporate	33,662.45	1,166.53	489.91	141.86	34,152.37	1,171.45	--	--	--	--	--	--	34,152.37	1,171.45
Noncorporate private:														
Total, noncorporate private	10,408.93	622.13	856.53	149.37	11,265.46	635.44	--	--	--	--	--	--	11,265.46	635.44
All private	44,071.39	1,174.95	1,346.44	204.69	45,417.83	1,178.44	--	--	--	--	--	--	45,417.83	1,178.44
All owners	134,268.44	1,794.83	3,426.67	275.01	137,695.11	1,797.21	18,416.50	849.29	716.49	181.71	19,132.99	845.47	156,828.10	1,925.14

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C71: Forest Floor by Owner Group and Forest Land Status, 2007-2016: All Oregon

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE		
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	49,646.52	272.62	1,585.53	97.89	51,232.05	257.45	11,068.54	269.23	841.92	149.33	11,910.46	244.72	63,142.51	266.94
National Grasslands	--	--	18.83	6.66	18.83	6.66	--	--	--	--	--	--	18.83	6.66
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	49,646.52	272.62	1,604.36	97.93	51,250.88	257.42	11,068.54	269.23	841.92	149.33	11,910.46	244.72	63,161.34	266.91
Other federal government:														
Bureau of Land Management	8,823.30	246.66	1,952.91	139.95	10,776.21	260.78	360.11	98.87	97.81	35.85	457.92	105.03	11,234.13	250.75
Department of Defense and Energy	0.31	0.30	--	--	0.31	0.30	--	--	--	--	--	--	0.31	0.30
National Park Service	--	--	--	--	--	--	797.22	155.98	68.46	48.45	865.68	162.08	865.68	162.08
U.S. Fish and Wildlife Service	--	--	--	--	--	--	53.86	40.14	14.54	13.48	68.40	42.31	68.40	42.31
Other federal	15.16	15.43	--	--	15.16	15.43	80.57	69.69	--	--	80.57	69.69	95.73	71.38
Total	8,838.77	247.14	1,952.91	139.95	10,791.68	261.23	1,291.77	197.70	180.81	61.50	1,472.58	205.11	12,264.26	248.26
State and local government:														
Local	534.46	108.34	86.41	31.14	620.87	113.65	54.68	35.08	--	--	54.68	35.08	675.55	118.75
State	3,259.29	151.26	122.39	33.84	3,381.68	153.67	254.42	114.25	56.47	36.51	310.89	118.15	3,692.57	177.59
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	3,793.75	167.33	208.80	45.97	4,002.55	172.78	309.10	119.44	56.47	36.51	365.57	123.18	4,368.12	192.93
Private:														
Corporate	23,352.42	506.15	613.27	92.76	23,965.69	508.86	--	--	--	--	--	--	23,965.69	508.86
Noncorporate private:														
Total, noncorporate private	11,348.47	453.56	2,083.81	159.68	13,432.27	469.86	--	--	--	--	--	--	13,432.27	469.86
All private	34,700.88	457.85	2,697.08	181.96	37,397.96	447.29	--	--	--	--	--	--	37,397.96	447.29
All owners	96,979.93	567.63	6,463.15	253.73	103,443.07	554.83	12,669.42	354.71	1,079.19	165.58	13,748.60	342.23	117,191.68	548.35

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C72: Forest Floor by Owner Group and Forest Land Status, 2007-2016: Blue Mountains

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	15,840.81	158.93	454.71	50.48	16,295.52	154.39	3,672.08	184.83	202.63	72.96	3,874.71	185.95	20,170.23	216.77
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	15,840.81	158.93	454.71	50.48	16,295.52	154.39	3,672.08	184.83	202.63	72.96	3,874.71	185.95	20,170.23	216.77
Other federal government:														
Bureau of Land Management	310.55	91.65	11.37	10.70	321.92	92.25	--	--	--	--	--	--	321.92	92.25
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
U.S. Fish and Wildlife Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other federal	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	310.55	91.65	11.37	10.70	321.92	92.25	--	--	--	--	--	--	321.92	92.25
State and local government:														
Local	91.72	45.06	--	--	91.72	45.06	--	--	--	--	--	--	91.72	45.06
State	108.80	56.33	--	--	108.80	56.33	--	--	--	--	--	--	108.80	56.33
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	200.52	72.13	--	--	200.52	72.13	--	--	--	--	--	--	200.52	72.13
Private:														
Corporate	2,249.75	231.94	27.72	19.29	2,277.46	232.71	--	--	--	--	--	--	2,277.46	232.71
Noncorporate private:														
Total, noncorporate private	2,242.30	227.51	60.79	31.89	2,303.10	230.05	--	--	--	--	--	--	2,303.10	230.05
All private	4,492.05	315.70	88.51	37.25	4,580.56	317.96	--	--	--	--	--	--	4,580.56	317.96
All owners	20,843.93	371.83	554.60	63.65	21,398.53	371.99	3,672.08	184.83	202.63	72.96	3,874.71	185.95	25,273.24	401.91

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C73: Forest Floor by Owner Group and Forest Land Status, 2007-2016: East Cascades+Modoc

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE		
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	12,355.77	166.51	306.93	43.21	12,662.70	162.89	644.38	104.46	84.38	45.36	728.76	111.64	13,391.46	184.44
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	12,355.77	166.51	306.93	43.21	12,662.70	162.89	644.38	104.46	84.38	45.36	728.76	111.64	13,391.46	184.44
Other federal government:														
Bureau of Land Management	503.45	115.68	173.71	46.42	677.16	122.34	90.06	57.15	30.86	22.55	120.92	61.44	798.08	136.54
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
U.S. Fish and Wildlife Service	--	--	--	--	--	--	45.25	38.95	--	--	45.25	38.95	45.25	38.95
Other federal	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	503.45	115.68	173.71	46.42	677.16	122.34	135.31	69.17	30.86	22.55	166.17	72.75	843.33	141.16
State and local government:														
Local	59.93	32.79	37.78	22.82	97.72	42.58	--	--	--	--	--	--	97.72	42.58
State	287.11	83.85	9.56	13.34	296.67	84.91	--	--	--	--	--	--	296.67	84.91
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	347.04	87.81	47.35	26.43	394.38	92.88	--	--	--	--	--	--	394.38	92.88
Private:														
Corporate	4,160.61	280.94	133.87	49.04	4,294.48	282.23	--	--	--	--	--	--	4,294.48	282.23
Noncorporate private:														
Total, noncorporate private	1,797.63	209.82	410.12	71.73	2,207.75	221.16	--	--	--	--	--	--	2,207.75	221.16
All private	5,958.24	326.80	543.99	86.71	6,502.23	331.42	--	--	--	--	--	--	6,502.23	331.42
All owners	19,164.50	391.31	1,071.98	111.60	20,236.47	395.70	779.69	125.28	115.24	50.66	894.93	133.25	21,131.40	411.27

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C74: Forest Floor by Owner Group and Forest Land Status, 2007-2016: Eastern OR Lowlands

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	434.79	55.78	183.14	25.81	617.93	61.58	13.55	9.22	3.64	3.96	17.19	10.04	635.12	62.22
National Grasslands	--	--	18.83	6.66	18.83	6.66	--	--	--	--	--	--	18.83	6.66
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	434.79	55.78	201.97	26.11	636.76	61.67	13.55	9.22	3.64	3.96	17.19	10.04	653.96	62.31
Other federal government:														
Bureau of Land Management	265.09	84.61	1,508.14	112.27	1,773.24	135.89	--	--	66.95	27.86	66.95	27.86	1,840.18	137.10
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
U.S. Fish and Wildlife Service	--	--	--	--	--	--	--	--	13.47	13.42	13.47	13.42	13.47	13.42
Other federal	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	265.09	84.61	1,508.14	112.27	1,773.24	135.89	--	--	80.42	30.40	80.42	30.40	1,853.65	137.51
State and local government:														
Local	0.77	0.77	34.17	18.73	34.94	18.75	--	--	--	--	--	--	34.94	18.75
State	12.31	13.40	102.52	29.95	114.83	32.81	--	--	--	--	--	--	114.83	32.81
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	13.08	13.42	136.69	35.32	149.77	37.78	--	--	--	--	--	--	149.77	37.78
Private:														
Corporate	307.38	84.84	236.92	52.68	544.30	99.57	--	--	--	--	--	--	544.30	99.57
Noncorporate private:														
Total, noncorporate private	819.89	136.48	1,028.50	106.15	1,848.39	170.48	--	--	--	--	--	--	1,848.39	170.48
All private	1,127.27	159.25	1,265.42	117.68	2,392.69	194.74	--	--	--	--	--	--	2,392.69	194.74
All owners	1,840.23	191.23	3,112.22	168.49	4,952.45	249.72	13.55	9.22	84.06	30.65	97.61	32.01	5,050.06	250.76

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C75: Forest Floor by Owner Group and Forest Land Status, 2007-2016: Klamath Mountains

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE		
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	2,923.34	112.30	299.12	41.25	3,222.46	109.69	672.34	92.42	80.89	39.70	753.23	91.40	3,975.69	141.26
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	2,923.34	112.30	299.12	41.25	3,222.46	109.69	672.34	92.42	80.89	39.70	753.23	91.40	3,975.69	141.26
Other federal government:														
Bureau of Land Management	2,914.37	236.83	210.42	67.40	3,124.78	242.15	109.84	48.23	--	--	109.84	48.23	3,234.62	243.51
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
U.S. Fish and Wildlife Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other federal	15.16	15.43	--	--	15.16	15.43	11.71	11.71	--	--	11.71	11.71	26.87	19.37
Total	2,929.53	237.33	210.42	67.40	3,139.94	242.64	121.55	49.63	--	--	121.55	49.63	3,261.49	244.28
State and local government:														
Local	172.43	58.77	--	--	172.43	58.77	--	--	--	--	--	--	172.43	58.77
State	101.60	54.25	0.40	0.40	102.00	54.44	--	--	--	--	--	--	102.00	54.44
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	274.03	79.98	0.40	0.40	274.43	80.11	--	--	--	--	--	--	274.43	80.11
Private:														
Corporate	2,058.09	208.90	75.26	33.52	2,133.35	212.33	--	--	--	--	--	--	2,133.35	212.33
Noncorporate private:														
Total, noncorporate private	1,401.69	164.75	338.10	70.04	1,739.80	180.89	--	--	--	--	--	--	1,739.80	180.89
All private	3,459.79	260.88	413.36	77.37	3,873.15	273.28	--	--	--	--	--	--	3,873.15	273.28
All owners	9,586.68	377.58	923.29	110.57	10,509.98	388.63	793.89	104.90	80.89	39.70	874.78	104.01	11,384.75	399.77

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C76: Forest Floor by Owner Group and Forest Land Status, 2007-2016: Oregon Coast Range

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE		
	<i>thousand metric tons C</i>													
USDA Forest Service:														
National Forest	2,781.74	94.12	24.40	12.85	2,806.14	93.88	259.19	71.41	43.61	19.09	302.79	73.86	3,108.94	113.02
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	2,781.74	94.12	24.40	12.85	2,806.14	93.88	259.19	71.41	43.61	19.09	302.79	73.86	3,108.94	113.02
Other federal government:														
Bureau of Land Management	2,854.20	217.18	49.27	39.13	2,903.47	220.61	--	--	--	--	--	--	2,903.47	220.61
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
U.S. Fish and Wildlife Service	--	--	--	--	--	--	8.61	9.67	1.07	1.20	9.68	9.63	9.68	9.63
Other federal	--	--	--	--	--	--	68.87	68.70	--	--	68.87	68.70	68.87	68.70
Total	2,854.20	217.18	49.27	39.13	2,903.47	220.61	77.48	69.38	1.07	1.20	78.55	69.37	2,982.02	231.16
State and local government:														
Local	176.91	66.59	--	--	176.91	66.59	27.22	21.91	--	--	27.22	21.91	204.14	69.81
State	2,505.29	155.13	--	--	2,505.29	155.13	223.63	111.14	46.91	34.53	270.55	115.32	2,775.84	183.82
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	2,682.21	158.40	--	--	2,682.21	158.40	250.86	113.21	46.91	34.53	297.77	117.31	2,979.98	184.44
Private:														
Corporate	8,447.66	388.40	41.89	28.60	8,489.55	389.56	--	--	--	--	--	--	8,489.55	389.56
Noncorporate private:														
Total, noncorporate private	2,239.64	239.14	26.73	19.53	2,266.37	240.36	--	--	--	--	--	--	2,266.37	240.36
All private	10,687.30	431.52	68.62	34.63	10,755.92	432.86	--	--	--	--	--	--	10,755.92	432.86
All owners	19,005.46	510.91	142.29	53.82	19,147.75	513.43	587.52	150.76	91.59	39.48	679.11	155.01	19,826.86	528.40

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C77: Forest Floor by Owner Group and Forest Land Status, 2007-2016: Western Cascades

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE		
	<i>thousand metric tons C</i>													
USDA Forest Service:														
National Forest	15,310.07	225.82	317.23	52.79	15,627.29	225.45	5,807.00	248.49	426.77	116.39	6,233.77	237.91	21,861.07	284.90
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	15,310.07	225.82	317.23	52.79	15,627.29	225.45	5,807.00	248.49	426.77	116.39	6,233.77	237.91	21,861.07	284.90
Other federal government:														
Bureau of Land Management	1,739.15	195.63	--	--	1,739.15	195.63	160.21	66.02	--	--	160.21	66.02	1,899.36	204.02
Department of Defense and Energy	0.31	0.30	--	--	0.31	0.30	--	--	--	--	--	--	0.31	0.30
National Park Service	--	--	--	--	--	--	797.22	155.98	68.46	48.45	865.68	162.08	865.68	162.08
U.S. Fish and Wildlife Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other federal	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	1,739.46	195.63	--	--	1,739.46	195.63	957.43	166.51	68.46	48.45	1,025.89	172.09	2,765.35	249.86
State and local government:														
Local	29.24	29.92	--	--	29.24	29.92	--	--	--	--	--	--	29.24	29.92
State	152.20	59.78	--	--	152.20	59.78	27.61	28.24	--	--	27.61	28.24	179.80	66.11
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	181.44	66.84	--	--	181.44	66.84	27.61	28.24	--	--	27.61	28.24	209.05	72.35
Private:														
Corporate	5,069.94	321.93	51.82	23.65	5,121.76	322.57	--	--	--	--	--	--	5,121.76	322.57
Noncorporate private:														
Total, noncorporate private	1,424.56	193.59	130.93	54.68	1,555.49	200.81	--	--	--	--	--	--	1,555.49	200.81
All private	6,494.50	363.92	182.75	59.55	6,677.25	367.75	--	--	--	--	--	--	6,677.25	367.75
All owners	23,725.46	476.25	499.97	79.58	24,225.44	479.00	6,792.04	300.45	495.23	126.07	7,287.27	294.98	31,512.71	532.68

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C78: Forest Floor by Owner Group and Forest Land Status, 2007-2016: Willamette Valley

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE		
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Grasslands	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other federal government:														
Bureau of Land Management	236.49	69.51	--	--	236.49	69.51	--	--	--	--	--	--	236.49	69.51
Department of Defense and Energy	--	--	--	--	--	--	--	--	--	--	--	--	--	--
National Park Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
U.S. Fish and Wildlife Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other federal	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	236.49	69.51	--	--	236.49	69.51	--	--	--	--	--	--	236.49	69.51
State and local government:														
Local	3.46	3.50	14.45	9.89	17.91	10.49	27.46	27.39	--	--	27.46	27.39	45.37	29.33
State	91.98	38.54	9.92	8.89	101.90	39.55	3.18	4.44	9.55	13.32	12.73	13.76	114.63	41.55
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	95.44	38.70	24.37	13.30	119.81	40.92	30.64	27.75	9.55	13.32	40.19	30.65	160.00	50.85
Private:														
Corporate	1,058.99	133.77	45.79	24.97	1,104.78	136.13	--	--	--	--	--	--	1,104.78	136.13
Noncorporate private:														
Total, noncorporate private	1,422.74	154.04	88.64	31.51	1,511.38	156.52	--	--	--	--	--	--	1,511.38	156.52
All private	2,481.73	200.57	134.43	40.20	2,616.16	203.45	--	--	--	--	--	--	2,616.16	203.45
All owners	2,813.67	216.12	158.79	42.75	2,972.46	219.27	30.64	27.75	9.55	13.32	40.19	30.65	3,012.65	221.07

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C79.1: Forest Floor by Owner Group and Forest Land Status, All Oregon (10 year averages): 2001 - 2010

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	50,360.85	619.03	1,598.71	177.98	51,959.55	606.96	9,875.68	501.27	668.93	131.91	10,544.60	513.44	62,504.16	454.51
National Grasslands	--	--	55.17	18.78	55.17	18.78	--	--	--	--	--	--	55.17	18.78
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	50,360.85	619.03	1,653.87	178.39	52,014.72	606.12	9,875.68	501.27	668.93	131.91	10,544.60	513.44	62,559.32	453.31
Other federal government:														
Bureau of Land Management	8,411.46	315.59	2,260.89	154.75	10,672.35	333.63	428.75	107.49	108.90	37.86	537.66	113.83	11,210.01	327.26
Department of Defense and Energy	0.25	0.27	--	--	0.25	0.27	--	--	--	--	--	--	0.25	0.27
National Park Service	--	--	--	--	--	--	808.88	118.57	39.77	36.56	848.64	117.37	848.64	117.37
U.S. Fish and Wildlife Service	--	--	--	--	--	--	40.50	28.81	35.29	26.23	75.79	38.96	75.79	38.96
Other federal	35.85	22.51	--	--	35.85	22.51	63.20	66.51	--	--	63.20	66.51	99.05	70.21
Total	8,447.57	316.35	2,260.89	154.75	10,708.46	334.36	1,341.32	175.67	183.96	58.81	1,525.29	180.60	12,233.75	331.30
State and local government:														
Local	455.34	99.48	67.96	33.00	523.31	105.50	55.44	34.08	--	--	55.44	34.08	578.74	110.72
State	3,587.10	237.97	135.88	38.31	3,722.97	240.97	345.64	133.49	12.79	13.35	358.43	134.16	4,081.40	270.64
Other public	17.12	17.62	--	--	17.12	17.62	--	--	--	--	--	--	17.12	17.62
Total	4,059.56	257.97	203.84	50.57	4,263.40	263.00	401.08	137.77	12.79	13.35	413.87	138.42	4,677.27	292.27
Private:														
Corporate	21,693.67	540.98	541.62	88.12	22,235.29	541.10	--	--	--	--	--	--	22,235.29	541.10
Noncorporate private:														
Total, noncorporate private	12,729.70	465.90	2,472.22	171.30	15,201.92	480.66	--	--	--	--	--	--	15,201.92	480.66
All private	34,423.38	510.31	3,013.84	189.73	37,437.21	497.87	--	--	--	--	--	--	37,437.21	497.87
All owners	97,291.35	816.03	7,132.44	305.84	104,423.79	800.16	11,618.08	548.54	865.68	145.04	12,483.76	561.29	116,907.55	684.27

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C79.1: Forest Floor by Owner Group and Forest Land Status, All Oregon (10 year averages): 2002 - 2011

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	50,774.41	624.69	1,527.45	174.29	52,301.86	612.86	9,816.71	499.72	681.65	132.99	10,498.36	512.19	62,800.22	462.71
National Grasslands	--	--	50.36	18.45	50.36	18.45	--	--	--	--	--	--	50.36	18.45
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	50,774.41	624.69	1,577.80	174.78	52,352.22	611.94	9,816.71	499.72	681.65	132.99	10,498.36	512.19	62,850.57	461.40
Other federal government:														
Bureau of Land Management	8,511.40	311.29	2,137.24	151.18	10,648.65	328.36	409.28	105.03	96.11	34.47	505.39	110.50	11,154.04	322.78
Department of Defense and Energy	0.27	0.27	--	--	0.27	0.27	--	--	--	--	--	--	0.27	0.27
National Park Service	--	--	--	--	--	--	740.57	118.08	70.65	47.33	811.21	116.01	811.21	116.01
U.S. Fish and Wildlife Service	--	--	--	--	--	--	47.43	35.66	33.79	25.48	81.21	43.82	81.21	43.82
Other federal	37.24	23.54	--	--	37.24	23.54	64.43	67.06	--	--	64.43	67.06	101.67	71.07
Total	8,548.91	312.14	2,137.24	151.18	10,686.15	329.17	1,261.70	175.33	200.54	63.85	1,462.25	178.97	12,148.40	327.17
State and local government:														
Local	450.58	98.73	76.05	34.15	526.63	105.17	54.26	33.58	--	--	54.26	33.58	580.89	110.26
State	3,470.78	227.75	114.66	35.29	3,585.44	230.43	352.16	135.99	17.26	14.06	369.42	136.72	3,954.86	262.79
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	3,921.35	247.70	190.71	49.10	4,112.07	252.68	406.42	140.08	17.26	14.06	423.68	140.78	4,535.74	284.35
Private:														
Corporate	21,630.23	532.31	469.42	82.46	22,099.65	532.15	--	--	--	--	--	--	22,099.65	532.15
Noncorporate private:														
Total, noncorporate private	12,720.43	464.65	2,396.06	167.73	15,116.49	478.71	--	--	--	--	--	--	15,116.49	478.71
All private	34,350.65	503.19	2,865.48	184.59	37,216.14	491.81	--	--	--	--	--	--	37,216.14	491.81
All owners	97,595.33	815.51	6,771.24	298.28	104,366.57	799.26	11,484.83	547.61	899.45	148.20	12,384.28	560.30	116,750.85	683.92

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C79.1: Forest Floor by Owner Group and Forest Land Status, All Oregon (10 year averages): 2003 - 2012

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	49,334.46	278.63	1,700.78	100.76	51,035.23	264.68	10,759.26	279.64	841.71	147.14	11,600.97	256.87	62,636.21	274.63
National Grasslands	--	--	19.40	6.47	19.40	6.47	--	--	--	--	--	--	19.40	6.47
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	49,334.46	278.63	1,720.18	100.75	51,054.63	264.62	10,759.26	279.64	841.71	147.14	11,600.97	256.87	62,655.61	274.57
Other federal government:														
Bureau of Land Management	8,630.68	254.96	2,128.17	150.06	10,758.85	274.10	364.55	100.57	89.73	35.71	454.29	106.59	11,213.14	265.43
Department of Defense and Energy	0.31	0.29	--	--	0.31	0.29	--	--	--	--	--	--	0.31	0.29
National Park Service	--	--	--	--	--	--	830.07	158.35	74.10	48.47	904.17	164.80	904.17	164.80
U.S. Fish and Wildlife Service	--	--	--	--	--	--	52.98	39.38	33.46	25.59	86.43	46.94	86.43	46.94
Other federal	32.16	21.57	--	--	32.16	21.57	69.23	68.83	--	--	69.23	68.83	101.39	72.13
Total	8,663.15	254.47	2,128.17	150.06	10,791.32	273.63	1,316.83	199.74	197.29	65.10	1,514.12	208.46	12,305.44	264.78
State and local government:														
Local	471.26	101.54	80.87	34.79	552.13	108.02	53.30	34.16	--	--	53.30	34.16	605.43	113.20
State	3,215.42	147.63	108.71	32.49	3,324.12	149.94	256.41	115.25	37.59	28.62	294.00	118.19	3,618.12	175.14
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	3,686.68	163.25	189.58	47.61	3,876.25	169.16	309.71	120.13	37.59	28.62	347.30	122.95	4,223.56	189.91
Private:														
Corporate	22,404.63	518.86	521.46	89.01	22,926.10	521.31	--	--	--	--	--	--	22,926.10	521.31
Noncorporate private:														
Total, noncorporate private	12,371.59	463.23	2,279.36	164.47	14,650.95	479.81	--	--	--	--	--	--	14,650.95	479.81
All private	34,776.22	468.13	2,800.82	184.85	37,577.04	458.67	--	--	--	--	--	--	37,577.04	458.67
All owners	96,460.50	576.31	6,838.75	262.71	103,299.25	567.57	12,385.81	364.03	1,076.59	163.42	13,462.40	352.91	116,761.65	562.83

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C79.1: Forest Floor by Owner Group and Forest Land Status, All Oregon (10 year averages): 2004 - 2013

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	49,473.09	278.10	1,663.25	99.88	51,136.34	263.47	10,878.75	280.50	835.37	148.59	11,714.12	257.83	62,850.46	273.99
National Grasslands	--	--	19.71	6.60	19.71	6.60	--	--	--	--	--	--	19.71	6.60
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	49,473.09	278.10	1,682.96	99.87	51,156.05	263.42	10,878.75	280.50	835.37	148.59	11,714.12	257.83	62,870.17	273.93
Other federal government:														
Bureau of Land Management	8,635.63	253.68	2,058.29	146.96	10,693.92	271.85	365.66	100.63	90.17	35.84	455.83	106.69	11,149.76	263.16
Department of Defense and Energy	0.30	0.29	--	--	0.30	0.29	--	--	--	--	--	--	0.30	0.29
National Park Service	--	--	--	--	--	--	842.96	158.93	74.10	48.47	917.06	165.36	917.06	165.36
U.S. Fish and Wildlife Service	--	--	--	--	--	--	52.98	39.38	33.47	25.60	86.44	46.94	86.44	46.94
Other federal	32.16	21.57	--	--	32.16	21.57	81.04	69.92	--	--	81.04	69.92	113.20	73.17
Total	8,668.09	253.19	2,058.29	146.96	10,726.39	271.38	1,342.64	200.50	197.74	65.17	1,540.38	209.19	12,266.77	262.78
State and local government:														
Local	469.07	100.87	87.88	37.05	556.95	108.44	53.58	34.31	--	--	53.58	34.31	610.53	113.65
State	3,208.34	147.80	101.55	30.42	3,309.89	149.67	254.43	113.90	38.61	29.10	293.04	117.00	3,602.93	174.25
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	3,677.41	163.47	189.43	47.93	3,866.84	169.64	308.01	118.88	38.61	29.10	346.62	121.85	4,213.46	189.74
Private:														
Corporate	22,586.10	516.87	578.48	92.07	23,164.58	519.63	--	--	--	--	--	--	23,164.58	519.63
Noncorporate private:														
Total, noncorporate private	12,106.93	458.77	2,149.32	160.85	14,256.26	474.46	--	--	--	--	--	--	14,256.26	474.46
All private	34,693.03	465.04	2,727.80	183.07	37,420.83	455.01	--	--	--	--	--	--	37,420.83	455.01
All owners	96,511.63	573.51	6,658.49	259.34	103,170.11	563.30	12,529.40	364.69	1,071.72	164.85	13,601.12	353.66	116,771.23	558.70

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C79.1: Forest Floor by Owner Group and Forest Land Status, All Oregon (10 year averages): 2005 - 2014

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	49,668.24	277.89	1,605.17	97.38	51,273.41	263.30	11,000.39	277.06	798.38	146.21	11,798.78	254.24	63,072.18	272.96
National Grasslands	--	--	19.79	6.62	19.79	6.62	--	--	--	--	--	--	19.79	6.62
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	49,668.24	277.89	1,624.96	97.39	51,293.20	263.25	11,000.39	277.06	798.38	146.21	11,798.78	254.24	63,091.98	272.91
Other federal government:														
Bureau of Land Management	8,702.79	249.44	2,024.37	145.23	10,727.16	268.24	360.49	98.91	90.17	35.84	450.67	105.06	11,177.83	259.22
Department of Defense and Energy	0.31	0.30	--	--	0.31	0.30	--	--	--	--	--	--	0.31	0.30
National Park Service	--	--	--	--	--	--	814.57	157.54	75.62	49.07	890.19	164.09	890.19	164.09
U.S. Fish and Wildlife Service	--	--	--	--	--	--	52.98	39.38	33.47	25.60	86.45	46.95	86.45	46.95
Other federal	15.16	15.43	--	--	15.16	15.43	81.04	69.93	--	--	81.04	69.93	96.20	71.61
Total	8,718.26	249.92	2,024.37	145.23	10,742.64	268.68	1,309.08	198.79	199.27	65.62	1,508.35	207.61	12,250.99	257.78
State and local government:														
Local	458.81	100.37	100.97	38.24	559.78	108.35	53.90	34.40	--	--	53.90	34.40	613.68	113.57
State	3,267.38	150.07	110.08	31.62	3,377.46	152.04	254.92	113.97	38.61	29.10	293.53	117.07	3,671.00	175.64
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	3,726.20	164.55	211.05	49.61	3,937.25	171.11	308.82	118.97	38.61	29.10	347.43	121.94	4,284.68	190.93
Private:														
Corporate	22,905.82	516.22	604.97	94.41	23,510.79	518.99	--	--	--	--	--	--	23,510.79	518.99
Noncorporate private:														
Total, noncorporate private	11,794.70	455.37	2,071.95	157.53	13,866.64	471.08	--	--	--	--	--	--	13,866.64	471.08
All private	34,700.52	463.80	2,676.92	181.09	37,377.43	453.30	--	--	--	--	--	--	37,377.43	453.30
All owners	96,813.22	572.17	6,537.30	256.30	103,350.52	561.88	12,618.29	361.14	1,036.26	162.88	13,654.55	350.14	117,005.07	556.13

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C79.1: Forest Floor by Owner Group and Forest Land Status, All Oregon (10 year averages): 2006 - 2015

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	49,671.76	279.48	1,609.00	98.03	51,280.76	265.08	10,998.00	271.16	808.01	146.61	11,806.01	248.49	63,086.77	267.29
National Grasslands	--	--	18.47	6.59	18.47	6.59	--	--	--	--	--	--	18.47	6.59
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	49,671.76	279.48	1,627.47	98.07	51,299.23	265.04	10,998.00	271.16	808.01	146.61	11,806.01	248.49	63,105.24	267.25
Other federal government:														
Bureau of Land Management	8,818.88	249.94	2,033.34	147.79	10,852.22	267.85	359.81	98.72	87.01	34.43	446.83	104.42	11,299.05	258.14
Department of Defense and Energy	0.31	0.30	--	--	0.31	0.30	--	--	--	--	--	--	0.31	0.30
National Park Service	--	--	--	--	--	--	802.51	156.44	68.14	48.21	870.65	162.49	870.65	162.49
U.S. Fish and Wildlife Service	--	--	--	--	--	--	53.86	40.11	11.65	12.67	65.51	42.04	65.51	42.04
Other federal	15.16	15.42	--	--	15.16	15.42	80.84	69.81	--	--	80.84	69.81	96.00	71.50
Total	8,834.35	250.42	2,033.34	147.79	10,867.69	268.30	1,297.03	198.01	166.81	60.33	1,463.83	205.10	12,331.52	255.98
State and local government:														
Local	468.72	101.80	101.47	38.34	570.19	109.74	53.82	34.36	--	--	53.82	34.36	624.01	114.88
State	3,251.36	151.07	127.12	33.99	3,378.49	153.53	256.93	114.88	41.60	30.64	298.53	118.19	3,677.02	177.70
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	3,720.08	166.51	228.59	51.23	3,948.67	173.46	310.75	119.83	41.60	30.64	352.35	123.01	4,301.02	193.76
Private:														
Corporate	23,132.59	512.46	608.70	93.83	23,741.29	515.33	--	--	--	--	--	--	23,741.29	515.33
Noncorporate private:														
Total, noncorporate private	11,687.97	456.76	2,025.43	155.66	13,713.41	472.51	--	--	--	--	--	--	13,713.41	472.51
All private	34,820.56	461.20	2,634.13	179.26	37,454.70	451.78	--	--	--	--	--	--	37,454.70	451.78
All owners	97,046.76	572.15	6,523.54	256.96	103,570.29	562.47	12,605.78	356.48	1,016.41	161.47	13,622.19	344.86	117,192.49	552.84

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table C79.1: Forest Floor by Owner Group and Forest Land Status, All Oregon (10 year averages): 2007 - 2016

Ownership group	Unreserved forests						Reserved forests						All forest land	
	Timberland		Other forest		Total		Productive		Other forest		Total		Total	SE
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons C</i>														
USDA Forest Service:														
National Forest	49,646.52	272.62	1,585.53	97.89	51,232.05	257.45	11,068.54	269.23	841.92	149.33	11,910.46	244.72	63,142.51	266.94
National Grasslands	--	--	18.83	6.66	18.83	6.66	--	--	--	--	--	--	18.83	6.66
Other Forest Service	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	49,646.52	272.62	1,604.36	97.93	51,250.88	257.42	11,068.54	269.23	841.92	149.33	11,910.46	244.72	63,161.34	266.91
Other federal government:														
Bureau of Land Management	8,823.30	246.66	1,952.91	139.95	10,776.21	260.78	360.11	98.87	97.81	35.85	457.92	105.03	11,234.13	250.75
Department of Defense and Energy	0.31	0.30	--	--	0.31	0.30	--	--	--	--	--	--	0.31	0.30
National Park Service	--	--	--	--	--	--	797.22	155.98	68.46	48.45	865.68	162.08	865.68	162.08
U.S. Fish and Wildlife Service	--	--	--	--	--	--	53.86	40.14	14.54	13.48	68.40	42.31	68.40	42.31
Other federal	15.16	15.43	--	--	15.16	15.43	80.57	69.69	--	--	80.57	69.69	95.73	71.38
Total	8,838.77	247.14	1,952.91	139.95	10,791.68	261.23	1,291.77	197.70	180.81	61.50	1,472.58	205.11	12,264.26	248.26
State and local government:														
Local	534.46	108.34	86.41	31.14	620.87	113.65	54.68	35.08	--	--	54.68	35.08	675.55	118.75
State	3,259.29	151.26	122.39	33.84	3,381.68	153.67	254.42	114.25	56.47	36.51	310.89	118.15	3,692.57	177.59
Other public	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	3,793.75	167.33	208.80	45.97	4,002.55	172.78	309.10	119.44	56.47	36.51	365.57	123.18	4,368.12	192.93
Private:														
Corporate	23,352.42	506.15	613.27	92.76	23,965.69	508.86	--	--	--	--	--	--	23,965.69	508.86
Noncorporate private:														
Total, noncorporate private	11,348.47	453.56	2,083.81	159.68	13,432.27	469.86	--	--	--	--	--	--	13,432.27	469.86
All private	34,700.88	457.85	2,697.08	181.96	37,397.96	447.29	--	--	--	--	--	--	37,397.96	447.29
All owners	96,979.93	567.63	6,463.15	253.73	103,443.07	554.83	12,669.42	354.71	1,079.19	165.58	13,748.60	342.23	117,191.68	548.35

Note: Totals may be off because of rounding

Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table E1: Annual change in forest land area to/from other IPCC landuse classes in Oregon, 2001-6 to 2011-16.

	Timberland ¹		Other forest ²		Reserved		All forest land	
	Total	SE	Total	SE	Total	SE	Total	SE
<i>Acres per year</i>								
Forest to nonforest:								
Cropland	359	284	582	499			942	574
Developed	5,718	931	922	695	21	16	6,660	1,160
Grassland	435	169	9,805	3,023	93	84	10,333	3,029
Other	471	355	22	20	126	130	619	378
Water	596	236	51	46	314	331	961	409
Total	7,579	1,078	11,382	3,150	554	365	19,515	3,345
Nonforest to forest:								
Cropland	2,668	1,402	389	286			3,057	1,431
Developed	8,660	935	381	189	1,198	1,179	10,239	1,512
Grassland	2,852	799	5,613	2,192	473	244	8,938	2,345
Other	160	88	75	79	1,252	1,248	1,486	1,254
Water	301	165	21	18			322	166
Total	14,641	1,850	6,478	2,222	2,923	1,733	24,042	3,368
Net change to forest land:								
Cropland	2,309	1,431	-194	576			2,115	1,542
Developed	2,942	1,310	-541	719	1,177	1,179	3,579	1,901
Grassland	2,417	815	-4,192	3,737	380	261	-1,395	3,837
Other	-311	365	53	82	1,126	1,255	867	1,310
Water	-294	255	-31	27	-314	331	-639	419
Total	7,062	2,130	-4,904	3,857	2,369	1,771	4,527	4,752

Note: Totals may be off because of rounding

¹ Forest land that is capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

² Forest land that is not capable of producing in excess of 20 cubic feet per acre per year of wood at culmination of mean annual increment.

Table E2: Annual change in carbon pools due to change in land use between forest and nonforest in Oregon, 2001-6 to 2011-16

	Forest to nonforest		Nonforest to forest		Net change	
	Total	SE	Total	SE	Total	SE
Carbon pool	<i>Thousand metric tons CO2 equivalent per year</i>					
Live tree	-1,536	300	2,199	318	663	436
Standing dead	-84	21	101	23	17	31
Down wood	-227	36	204	40	-23	54
Understory veg	-203	30	259	35	55	46
Litter	-441	64	651	95	211	114
Soil*	0		0		0	
All pools	-2,491	388	3,414	410	923	563

* No changes in landuse involved cultivated land so soil organic carbon change was assumed to be zero (Ogle et al. 2003)

Table F1: Annual Net Emissions of Non-CO2 Greenhouse Gases from Fire, 2001-2006 to 2011-2016: All Oregon

	Public						Private						Total	
	National Forest		Other Federal		State and local govt.		Corporate		Non Corporate		Total			
	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE	Total	SE
<i>thousand metric tons CO2 equivalent per year</i>														
Cut and Fire														
CO ₂	-412	175	--	--	--	--	-511	315	-398	341	-908	463	-1,320	495
CH ₄	-13	6	--	--	--	--	-16	10	-13	11	-29	15	-42	16
N ₂ O	-9	4	--	--	--	--	-11	7	-8	7	-19	10	-28	10
Fire														
CO ₂	-1,922	358	-211	118	-1	2	-27	22	-141	83	-168	86	-2,302	387
CH ₄	-62	11	-7	4			-1	1	-5	3	-5	3	-74	12
N ₂ O	-41	8	-4	2			-1		-3	2	-4	2	-49	8
Total Fire														
CO ₂	-2,334	397	-211	118	-1	2	-538	316	-539	351	-1,076	470	-3,622	627
CH ₄	-75	13	-7	4			-17	10	-17	11	-34	15	-116	20
N ₂ O	-49	8	-4	2			-11	7	-11	7	-23	10	-76	13