

Oregon Department of Forestry's  
Annotated History of Climate Change- Related Policy in Oregon  
And the Board of Forestry

- A Decadal Overview -

Last updated March, 2019

Andrew Yost

## 1990

*Oregon Task Force on Global Warming Report to the Governor and Legislature.* Three Department of Forestry employees contributed to this project: LeRoy Kline, Alan Kanaskie, and Mike Ziolko.

Part One: possible impacts on Oregon from global warming included the features:

- Greenhouse gases (GHG) and the greenhouse effect
- Emission sources in Oregon
- Oregon's climate, water supply and sea level
- Fisheries, land plants and animals; forests and agriculture
- Energy sources
- Air quality
- Regional economic effects, demographics and infrastructure
- Emergency management
- Challenges to the global warming concept

Part two: state agency recommendations and proposed actions provided general recommendations and agency proposed actions.

## 1995

The Oregon **Department of Energy** releases a *Report on Reducing Oregon's greenhouse gas emissions*. Major features of the report included:

- a climate change strategy five-year plan,
- a chapter on Oregon's greenhouse gas inventory and forecast including CO<sub>2</sub>, methane, nitrous oxide, perfluorocarbons,
- an appendix on greenhouse gas stabilization scenario,
- and another appendix with carbon data.

## 1997

The **Oregon Legislature** passes **HB 3283** regulating carbon dioxide emissions from baseload gas plants, non-baseload, fossil fuel powered plants, and non-generating facilities that emit carbon dioxide. HB 3283-A proposes two primary changes to the Energy Facility Siting Act.

- First, to eliminate the “need-for-power” standard, thereby letting the wholesale market determine the need for new power plants.

- Second, to adopt a new siting standard to reduce carbon dioxide emissions.

The measure establishes three statutory means by which an applicant may comply with the applicable carbon dioxide standard:

- 1) demonstration of carbon dioxide reductions from cogeneration;
- 2) demonstration of carbon dioxide reductions from offset projects selected by the applicant (performance path); and
- 3) provision of funds deemed sufficient to purchase the offsets needed to meet the standard (monetary path).

Provisions would apply only to new energy facilities. Complete task force findings are available in the Report of the Oregon Energy Facility Siting Task Force dated October 21, 1996.

#### 1997

**The Climate Trust** was founded as a 501(c)(3) nonprofit organization to acquire carbon offsets on behalf of new fossil-fueled power plants regulated by the Oregon Carbon Dioxide Standard, the nation's first legislation to curb emissions of carbon dioxide. The Climate Trust was the first institutional buyer of carbon offsets at the beginning of the U.S. carbon market and created a process for a supply of offsets, protocols, and quality standards that did not exist. The Climate Trust is focused on evaluating and comparing projects; quantifying, verifying and registering offsets; signing contracts and funding projects.

#### 1999

**Forest Resource Trust** – Forest Establishment Program receives \$1.5 million in carbon dioxide emission offset funding from the Klamath Co-Generation Project in south central Oregon. The \$1.5 million payment meets, in part, requirements of the co-generation project's site certificate as issued by the Oregon Energy Facility Siting Council. The offset practice is forestation on non-industrial private lands. Forestation is converting lands that once were forested, but currently in agricultural, range or poorly stocked forest use, back into healthy, productive forests through the establishment of new forests. The offsets are measured and reported by the Oregon Department of Forestry and then retired by the Oregon Energy Facility Siting Council per the requirements of the site certificate.

#### 2001

**House Bill 2200** is passed by the 2001 Oregon State Legislature and signed into law. This Bill provides the State Forester authority 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.

- Requires the State Forester to develop an accounting system for measuring and reporting forest carbon offsets.

- Sets up the Oregon Department of Forestry as a potential aggregator of forestry carbon offsets
- Affirms the role of the Oregon Board of Forestry with respect to developing voluntary principles and standards for the accounting of forest carbon offsets.
- Establishes an advisory committee to assist the Board in developing principles and standards for carbon accounting.

## 2003

The **Board of Forestry** releases the 2003 Forestry Program for Oregon, which contains **Strategy G**. Enhance carbon storage in Oregon's forests and forest products. The Board identified the following seven actions to achieve the strategy:

- G.1. The board will encourage maintaining and increasing Oregon's forestland base and promoting urban forests to enhance carbon storage and reduce greenhouse gases.
- G.2. The board will encourage development of tools to predict how forest management and wildfire affect carbon pools and calculate the amount of carbon stored in these pools.
- G.3. The board will promote increased public and forest landowner understanding of the potential contributions of trees and forests in storing carbon.
- G.4. The board will promote the development of forestry carbon-offset markets, and provide landowners information about the market rules for the sale or exchange of carbon offsets.
- G.5. The board will promote the use and reuse of Oregon forest resources, avoiding the higher level of carbon dioxide emissions resulting from the manufacture of many wood product substitutes.
- G.6. The board will work with forest landowners and encourage other organizations to work with wood products manufacturers and retailers to develop local markets for wood products from Oregon forests.
- G.7. The board will encourage greater consumer awareness of the environmental advantages of using renewable and recyclable Oregon forest products.

## 2003

**West Coast Regional Carbon Sequestration Partnership** (WESTCARB) was established as one of seven regional carbon sequestration partnerships funded by the U.S. Department of Energy. WESTCARB was led by the California Energy Commission with a terrestrial component in Arizona, California, Oregon and Washington. Research was conducted in Oregon (the ArcFuels project of the USDA Forest Service Western Environmental Wildland Threat Assessment Center of the Pacific Northwest Research Station) to model the feasibility (and developing accounting protocols) of forest fuel treatments to reduce wildfire severity and extent as a carbon offset opportunity.

## 2004

The **Governor's Advisory Group on Global Warming** issues a report on *Oregon Strategy for Greenhouse Gas Reductions*. The Advisory Group was composed of co-chairs Mark Dodson (NW

Natural) and Jane Lubchenco (OSU), 26 high profile members representing a variety of interests. The report was organized by the topics:

- Introduction to Oregon's vision of acting on global warming and context
- Recommended actions and next steps
- Six appendices: member biographies, Oregon's GHG inventory and forecast, consensus statement on impacts of climate change on PNW, materials and GHG's, recommendations to West Coast Governors, and glossary.

## 2005

**Forest Biomass Working Group** was established to help accomplish the State's biomass energy and utilization of forest biomass goals. Reducing fuel loads through the utilization of forest biomass from overstocked forests would improve overall forest health, diversity, resiliency, and reduce carbon dioxide pollution from wildfires and prescribed burns.

## 2006

**Oregon Forest Resources Institute** publishes their report titled *Forests, Carbon and Climate Change, a Synthesis of Science Findings*. This was a cooperative project between OFRI, OSU College of Forestry, and the Department of Forestry. This report contained ten chapters that covered the topics:

- The many possibilities of climate change, forests, and carbon
- Atmospheric carbon dioxide
- Climate change at multiple scales
- A skeptics view of global warming
- Forest management strategies for carbon storage
- Keeping land in forest
- Using wood products to reduce global warming
- Emerging markets for carbon stored by NW forests
- Carbon accounting: determining carbon offsets from forest projects
- Governor's global warming initiative

## 2007

**HB 3543** is signed into law. Establishes the *Global Warming Commission* and the *Climate Change Research Institute*; identifies the State Forester as an ex-officio member of the Commission. The Commission mission is to recommend ways to coordinate state and local efforts to reduce Oregon's greenhouse gas emissions, and to help the state, local governments, businesses, and Oregonians prepare for the effects of climate change. The Commission may recommend statutory and administrative changes, policy measures, and other actions to be carried out by state and local governments, businesses, nonprofit organizations, and residents.

The vision of the Oregon Climate Change Research Institute (OCCRI) is: to achieve a climate-prepared Northwest by

- building a climate knowledge network
- cultivating climate-informed communities
- advancing the understanding of regional climate, impacts, and adaptations.

OCCRI is a network of over 150 researchers at Oregon State University (OSU), the University of Oregon, Portland State University, Southern Oregon University, and affiliated federal and state labs. OCCRI is administered by OSU and resides in the College of Earth, Ocean, and Atmospheric Sciences

## 2008

The Governor's **Climate Change Integration Group** (CCIG) releases a final report to the Governor titled: *A Framework for Addressing Rapid Climate Change*. The CCIG, chaired by Dr. Mark Abbot and Ned Dempsey had 22 high-profile members, two ex officio members, a Governor's representative and 12 state agency liaisons. The report consisted of consistently organized sections on:

- Preparation and adaptation
- Mitigation
- Education and outreach
- Research
- Seven appendices: GHG inventory and forecast, interim CCIG report, CCIG progress, status of advisory group's deferred measures, strategy principles for GHG reductions, survey of coastal governments on climate change related needs, and CCIG charter.

## 2008

The **Global Warming Commission's** subcommittee on fish, wildlife and habitat adaptation issues their report titled: *Preparing Oregon's Fish, Wildlife, and Habitats for Future Climate Change: A Guide for State Adaptation Efforts*. The report featured the topic sections:

- Problem statement
- Guiding principles for fish and wildlife adaptation
- Policy recommendations
- Research and monitoring needs

## 2008, July 7.

The **Department of Forestry** hosts a meeting to fulfill a request by the Global Warming Commission's Natural Resource subcommittee to engage stakeholders in dialogue, to gain a broad perspective on the issues of forests and their relationship to global warming, and solicit input on recommendations to the Commission. Several speakers were asked to address what efforts are occurring that involve forests in global warming issues, where are there gaps, what are the priority recommendations. Subcommittee co-chair Greg Miller from Weyerhaeuser Corporation moderated the meeting, and co-chair Marvin Brown developed the meeting summary and draft recommendations. Speakers and topics included:

- Dr. Hal Salwasser and Dr. Edie Sonne Hall, The big picture relationship between forests and climate change
- Dr. Elaine Oneal, review of research conducted by the Consortium for Research on Renewable Industrial Materials (CORRIM)
- Scott Fogarty, role of urban forests and green space in mitigation
- Findings from the Department of Forestry's Biomass Working Group
- Dr. Andrew Yost, changes in plant and animal species and habitat distributions

The summary report concludes with a final set of additional recommendations on improving federal forest management, adaptive management, reducing risk of fire.

## 2009

The Oregon **Global Warming Commission** submits their Report to the Legislature. This report included three major sections:

- How far has Oregon come in achieving its climate change goals
- OGWC: pushing for progress toward Oregon's climate change goals.
- Recommendations from the agriculture, energy efficiency, renewable energy, transportation, and natural resources subcommittees.
- Two appendices: OGWC committees and update to Oregon's GHG inventory

## 2010, April 23.

The **Board of Forestry** hears presentations on climate change policy, science, and agency contributions within Oregon from:

- Angus Duncan the Chair of the OGWC, requesting agency leadership in forming the Climate Change Working Group and drafting Forestry Roadmap document.
- Phil Mote, Director of OCCRI, who presented recent evidence of changes in climate from industrial emissions and how modeling of average temperatures is consistent with observations.
- Andrew Yost, Forest Ecologist with ODF, presented a spectrum issues with respect to climate change that the agency has worked on and made contributions to.

## 2010

The Oregon **Greenhouse Gas Reporting Advisory Committee** issues a report to serve as a record of the committee's recommendations on the initial set of greenhouse gas reporting rules. This report included:

- Introduction and background
- Advisory committee stakeholder involvement process
- Summary of recommendations
- Fiscal impact review
- Five appendices of GHG reporting advisory committee notes.

**2010**

Oregon **Parks and Recreation Department** releases their Climate Change Response Preparedness and Action Plan. The Plan consisted of:

- Background, purpose, and characteristics of climate change
- Impacts of climate change on natural and human systems
- Recommendations including guiding principles, footprint reduction, adaptation
- Implementation: adaptive management and recommended actions

**2010, Sept 8**

The **Board of Forestry** receives update on the forest climate change workgroup responsible for developing recommendations for the contributions that the forest sector could make to greenhouse gas reductions, listed in HB 3543 and potential research to address predictions that have been made by climatologists.

**2010**

The **Global Warming Commission** releases the *Interim Roadmap to 2020*. This project offered recommendations for how Oregon can meet its 2020 greenhouse gas reduction goals (10% below 1990 levels), get a head start toward its 2050 goal (75% below 1990 levels), and build a clean-energy-based economy. Six technical committees described scenarios and developed recommendations. The report was organized around the topics:

- Energy roadmap to 2020
- Transportation and land use roadmap to 2020
- Industrial use roadmap to 2020
- Agriculture roadmap to 2020
- Forestry roadmap to 2020
- Materials management roadmap to 2020

**2010, Nov 5.**

The **Board of Forestry** receives a presentation from Dr. Andrew Yost on the final draft of the OGWC Roadmap to 2020 and:

- Endorsed the recommendations it provided.
- Agreed that a work plan to address the issue of climate change was not needed at the time.

**2010**

The Oregon **Climate Change Research Institute** releases the Oregon Climate Assessment Report requested by the Oregon Legislature via HB 3543. The report assesses the state of climate

change science including biological, physical, and social science as it relates to Oregon and likely effects on the state. The report was structured with chapters addressing:

- Climate change in Oregon's land and marine environments
- Climate change in Oregon-defining the problem and its causes
- Climate change and freshwater resources
- Climate change and agriculture in Oregon
- Potential effects of climate change on Oregon's vegetation
- Impacts of climate change on Oregon's coasts and estuaries
- Fish and wildlife in a changing climate
- Toward assessing the economic impacts of climate change in Oregon
- Human dimensions of climate change: public knowledge, attitudes, barriers to change, impacts on cultural and built environment, and potential impacts on public health.

## 2010

The **State of Oregon** issues the *Climate Change Adaptation Framework*. This effort was initiated by Governor Kulongoski's request to Directors of several state agencies, universities, research institutions, and extension services to develop an adaptation plan. The Adaptation Framework includes:

- Introduction and Background
- Short-term priority actions
- 11 sections on climate risks, state capacity and needed actions
- Implementing the framework
- References, gaps and agency actions, work group members.

## 2011

The Oregon **Global Warming Commission** issues its *Report to the Legislature Including Key Actions and Results from the Commissions Interim Roadmap to 2020*.

## 2011

The Oregon **Board of Forestry** releases the *2011 Forestry Program for Oregon*, which included **Goal G**. Improve carbon sequestration and storage and reduce carbon emissions in Oregon's forests and forest products. The Board stated that they will work to achieve the following Forestry Program for Oregon Objectives for Goal G:

1. Encourage maintaining and increasing Oregon's forestland base and promote the maintenance and expansion of urban forests.
2. Promote increased public and forest landowner understanding of the potential contributions of trees, forests, and forest products in sequestering and storing carbon.
3. Ensure that carbon-offset markets as well as emerging markets for other ecosystem services provide easily accessible sources of revenues and do not discriminate against forest landowner participation based on regulatory requirements exceeding those for other land uses.

4. Encourage greater consumer awareness of the environmental advantages of using Oregon forest products and their use as substitutes for more energy intensive building materials.
5. Advocate for public and private forestland biomass to be considered on an equal basis with other renewable energy sources and as key component of Oregon's strategy for meeting state greenhouse gas reduction and renewable energy portfolio standard policy goals.
6. Continue to support research and develop policies and incentives that will drive the growth of the biomass/ bioenergy/ bio-based products industry in the state.
7. Promote research and innovation towards increasing energy efficiency and reducing the use of fossil fuels in the Oregon forest sector.

The Board also added a climate change adaptation and mitigation objective under **Goal C**: Protect and improve the productive capacity of Oregon's forests;

6. Promote consideration of alternate climate change adaptation and mitigation scenarios when planning reforestation and vegetation management, particularly when managing plant species of specific climate and fire regimes.

And **Goal F**: Protect and improve the health and resiliency of Oregon's dynamic forest ecosystems, watersheds, and airsheds.

6. Promote integration of climate change assessment, mitigation and adaptation strategies into planning, decision-making, management, restoration, and public information efforts.

## 2011

The Oregon **Department of Environmental Quality** issues a Summary Report titled: *Consumption-Based Greenhouse Gas Emissions Inventory for Oregon – 2005*. This report consists of:

- Introduction
- Background and methodology
- Study findings
- Discussion of results
- Recommendations
- References

Methods to estimate greenhouse gas emissions originating within a community are well established, as are methods for assessing the “life-cycle” environmental impacts of household consumption (e.g., the “carbon footprint” or “ecological footprint”). What’s been less clear is how to combine the two approaches to quantify the greenhouse gas emissions associated with all consumption activities of a state or region. This report presents results of efforts to develop

such a method for Oregon and provides a new view of the link between greenhouse gas emissions and consumption.

#### 2011

The Oregon **Department of Environmental Quality** issues a final report titled: Oregon Low Carbon Fuel Standards Advisory Committee Process and Program Design. Contents of the report included:

- Oregon's low carbon fuel program at a glance
- House bill 2186 roadmap
- Background on standards and fuels
- Low carbon fuel standards development process
- Low carbon fuel standards program design
- Calculating carbon intensities for transportation fuels
- Compliance scenarios and economic analysis
- Potential impacts to public health and the environment
- Eleven appendices

#### 2012, September 5.

The Oregon **Board of Forestry** is presented with research targeted for the climate change section of the 2015 Forest Assessment. Dr. H. Lintz with the Climate Change Research Institute presented preliminary results from research on developing a sustainability indicator based on basal area and mortality measurements from using Continuous Vegetation Survey inventory data which is characterized by plot re-measurements at two or more time intervals.

#### 2012

The **Public Utilities Commission** presents its report titled *Electric and Natural Gas Company Rate Impacts to Meet 2020 Greenhouse Gas Emission Reduction Goals* to the Senate Environment and Natural Resources Committee.

In 2007, the Oregon Legislature passed HB 3543 which establishes greenhouse gas emission reduction goals for the state including greenhouse gas levels that are 10 percent less than 1990 levels by the year 2020. In 2009, the Legislature passed SB 101 which requires the Public Utility Commission of Oregon to report to the Legislature before November 1 of each even-numbered year on the estimated rate impacts for Oregon's regulated electric and natural gas companies from meeting greenhouse gas emission reduction goals in 2020. The emission reduction goals are:

- Reduce greenhouse gas emissions 10 percent below 1990 levels by 2020
- Reduce greenhouse gas emissions 15 percent below 2005 levels by 2020

The report explains how electric and gas power generating companies would have to reduce greenhouse gas emissions to meet reduction goals and the impacts on current electricity rates.

**2013, March 6.**

The **Board of Forestry** approves the Climate Change section of its exploratory Emerging Issues work plan.

The work plan directs staff to:

1. Organize and present information to the Board describing the history of climate change policy efforts in Oregon.
2. Organize and schedule a panel of experts to discuss climate change adaptation issues and policy alternatives that the Board of Forestry might pursue.
3. Develop analyses and indicators of change in the geography of forest species from the effects of climate change.
4. Organize a committee to explore the usefulness of a workshop to learn how researchers from universities and natural resource management agencies might integrate resources and efforts to monitor and analyze changes in species distributions predicted to occur from changes in climate.

**2013**

The Oregon **Global Warming Commission** issues the 2013 Biennial Report to the Legislature.

The Report provided estimates on how Oregon was meeting greenhouse gas emissions reductions goals and showed the growth of emissions leveled off. The report included an assessment of how Oregon is doing on implementing recommendations from the Roadmap to 2020. A consumption-based inventory was included that tracked GHG emissions from consumer-based goods purchased in Oregon.

**2015, March 4.**

The Oregon **Board of Forestry**, at the March 2015 meeting, heard from Andrew Yost, Forest Ecologist, and Kevin Birch, Forest Resources Planning Director, on the work completed on the Climate Change topic in Emerging Issues work plan. They discussed an Annotated History of Climate Change – Related Policy in Oregon and a set of recommendations for an overall approach to adapting to the effects of climate change through consideration of climate change issues in the context of the Board and regular agency business, planning, and budgeting.

Recommendations included when updating the current *Forestry Program for Oregon*, or developing a new policy document, the Board should consider whether

- Objective s that mention climate change should remain as is or if they should be modified.
- The issue of climate change and forest policy should be expanded.

The Board adopted the climate change recommendations, closing out the Climate Change Adaptation issue in the Emerging and Overarching Issues work plan, and directed staff to begin the process of integrating recommendations regarding climate change adaptation into regular

agency work. The recommendations were organized by the Forestry Program for Oregon and each of the agency's divisions including Protection, Private Forests, State Forests, and Resources Planning.

## 2015

The Oregon **Global Warming Commission** issues the 2015 Biennial Report to the Legislature.

The 2015 Report described two years' worth of data from GHG-emitting facilities and energy suppliers. Emissions levels were close to 1990 levels with real reductions in emissions per capita and per dollar of state GDP. Projections showed emissions were unlikely to reach Oregon's 2020 goal of 10 percent below this 1990 mark. The Commission adopted a new intermediate 2035 level.

The report included a "wedge analysis" based on (1) energetic implementation of existing program measures such as energy efficiency and clean vehicle fuels, and (2) a carbon tax (or cap) that can make up the difference between programmatic gains and fully achieving the state's emissions reduction goals. It suggests that a carbon tax beginning at \$10/ton and leveling out at \$60/ton would accomplish emissions reduction goals.

The report updated the consumption-based greenhouse gas estimates and showed a rise since 2005.

## 2017

The Oregon Global Warming Commission issues the 2017 Biennial Report to the Legislature.

Key Takeaways from the report:

- Rising transportation emissions are driving increases in statewide emissions.
- Oregon's GHG goals are not likely to be met with existing and planned actions.
- The Commission recommended the Legislature defer enacting new forest management policies until the Commission's Forest Carbon Accounting Project is complete and can inform such policies
- The State's climate policymaking machinery is not measuring up to the task of achieving GHG reduction goals and preparing the state for the effects of climate change.
- Oregon is warming and the consequences are/will be notable. Adaptation is necessary, as mitigation alone will not prevent serious impacts and Oregon must do more to adapt to climate changes already underway

## 2018

The **Oregon Legislature** created the Carbon Policy Office in 2018 (**HB 5201**).

The Carbon Policy Office (CPO) was created to conduct research, analysis, and stakeholder engagement to inform a statewide policy framework to grow Oregon's economy while achieving Oregon's greenhouse gas reduction goals.

Funding was made available through the CPO for Oregon Department of Forestry to contract with USDA Forest Service Forest Inventory and Analysis Program to produce:

1. The Oregon Forest Ecosystems Carbon Report by May 2019
2. The Oregon Harvested Wood Products Carbon Report by October 2019
3. The Oregon Sawmill Energy Report by October 2020

The Forest Ecosystem Carbon Report will provide estimates of carbon storage and flux for the 2016 inventory period in Oregon's forests by ecoregion, owner, and forest type. The Harvested Wood Products Carbon Report and the Sawmill Energy Report will be produced through a partnership with FIA and the Bureau of Business and Economic Research at University of MT.

#### 2018, June 6.

The Oregon **Board of Forestry**, at the June 2018 meeting, presentation from Angus Duncan, Chair of the Oregon Global Warming Commission, on preliminary estimates of carbon stored in Oregon's forests provided by members of the Forest Carbon Task Force. Dr. Andrew Yost presented upcoming work with the Forest Inventory and Analysis (FIA) Program of the United States Forest Service, Pacific Northwest Research Station to produce an Oregon forest ecosystems carbon report.

#### 2018

The Oregon **Department of Forestry** presented preliminary estimates of carbon stored in Oregon's forests to the Oregon Legislature, Joint Interim Committee on Carbon Reduction. The presentation also described the work with the Office of Carbon Policy and Forest Inventory and Analysis (FIA) Program of the United States Forest Service, Pacific Northwest Research Station to produce an Oregon forest ecosystems carbon report.

#### 2018

The Oregon **Global Warming Commission** issues the 2018 Biennial Report to the Legislature.

The report described how climate change has been affecting Oregon in various ways, provided an update on the emissions inventories by sector, consumption, intensity, utilities, and projected GHG emissions from the transportation sector.

The report concluded that i) the consequences of a warming climate was already challenging Oregon and adaptation actions are necessary because mitigation alone will not prevent serious impacts, ii) Oregon's GHG emissions goals were not likely to be met with existing planned actions, iii) transportation emissions increased the statewide sector-based emissions, iv)

electric utilities emissions were on a reduction trajectory consistent with 2050 goals, v) household demand increased the consumption-based emissions estimates.

## 2018

The Oregon **Global Warming Commission** submitted a report titled “Forest Carbon Accounting Project Report 2018” to the Oregon Department of Forestry as part of the Departments public process to continue assessing forest carbon topics.

The Commission assembled a Forest Carbon Taskforce in 2016 to deliver a report to the State of Oregon that provides: (1) a baseline estimate of carbon in Oregon’s forests; (2) a quantitative description of carbon flows among forest pools; (3) projections of how these quantities and flows may be affected by anticipated climate change; and (4) a quantitative description of carbon flows into and out of the forest from natural and human interventions

The Task Force met three times in 2017 with the FIA representatives providing preliminary estimates of carbon in live and dead trees, forest floor, and soil in Oregon’s forests. Subsequent analysis to approximate the amount of carbon in other forest pools based on the preliminary FIA carbon estimates was conducted by an Oregon State University representative on the Task Force, Dr. Mark Harmon. Angus Duncan’s presentation will focus on the major features of this analysis. Analyses in the report were based on preliminary forest carbon inventory data supplied to the OGWC’s Forest Carbon Taskforce by Dr. Jeremy Fried and other analyses contributed by Dr. Mark Harmon and Dr. Bev Law.

The final report asserted that significant increases in carbon could be stored in Oregon’s forests while recognizing the variability among different forest types and ownerships, the importance of tracking carbon in harvested wood products and aligning fire policies with forest restoration and increased carbon storage. The report included five recommendations for accounting of carbon in wood products.

<https://static1.squarespace.com/static/59c554e0f09ca40655ea6eb0/t/5c094beaaa4a99fa6ad4dcde/1544113138067/2018-OGWC-Forest-Carbon-Accounting-Report.pdf>

## 2019

The Oregon **Department of Forestry** used draft tables from the Oregon Forest Ecosystems Carbon Report to present preliminary results to the 2019 Oregon Legislature, Joint Committee on Carbon Reduction. The Forest Ecosystems Carbon Report will provide current statewide estimates of carbon stocks and annual flux by seven major ecoregions and ownership groups. These results are calculated from field measurements taken on 9 per 483 permanent plots on both public and private forest land at regular grid spacing across the state. The FIA data supports a long-term, forest monitoring system for evaluating forest change over time. The report will be released June 2019.

Oregon Department of Forestry is also producing a Harvested Wood Products Carbon report in collaboration with the FIA Program and data collection and modeling analysis performed by the Bureau of Business and Economic Research at the University of Montana. This report will provide estimates for the amount of carbon stored in harvested wood products manufactured from historical timber harvests in Oregon. This report will be available by October 2019. A companion sawmill energy report will be released in 2020.