SB 5539 MARCH 28 ASTORIA HEARING COMMENTS
(please note SB 5539 is bill addressed, not HB 5006)

Co-chairs, committee members,
I'm Fergus Mclean, retired forester from Dexter, speaking in favor of SB 5539's Elliott Research Forest funding in the Department of State Lands budget item.

DSL Director Walker deserves recognition for her success in getting the research forest up and running despite the collapse of planning and administration when OSU abruptly withdrew, leaving the whole project in DSL's hands. OSU's withdrawal leaves many questions about the research forest's direction; a vacuum yet to be filled, compounded by Director Walker's impending July 1 retirement.

Forestry and science have an uneasy relationship in Oregon. Many significant uncertainties about forest processes and the impacts of management remain.

Financially-driven logging models as proposed in HB 3103 contrast with emerging models of forest management which view forestry in the context of ecological processes, and the market value of stored forest carbon.

This conflict often plays out in the form of personal attacks from the forest industry on scientists, resulting in what Dr. Beverly Law has described as "a climate of fear" among OSU researchers risking loss of funding or worse for research results which raise questions about industry priorities.

Oregon deserves better, and the Elliott Research Forest is our best hope for development of science-based answers to questions of forestry policy most important to Oregonians, principally through long-term study of the comparative financial, social and ecological outcomes from industrial vs ecological forestry practices.

Director Walker's most lasting legacy may well be the remarkably talented and capable Board of Directors she has assembled for the research forest. All they are lacking is adequate funding- and the authority to command it. For that reason I suggest the Committee consider designating 5% of biennial Elliott funding specifically for research and carbon management, authorized to be used at the sole discretion of the Elliott Research Forest Board of Directors.

GENERAL COMMENTS ON THE ELLIOTT AND SB 5539

Disruption of long-term research plans for Oregon's new Elliott Research Forest resulting from Oregon State University's withdrawal from their previously planned virtual control of the entire project raises questions about the capacity of the new research forest to formulate and execute a plan for research commensurate with the forest's unique scale, among many other management objectives, including those identified in the five years research planning was led by OSU.

The Elliott- now the nation's largest research forest- holds enormous potential to advance the science and practice of forestry in ways that can bring significant benefit to Oregon's landscape and economy. But in order to succeed, the Land Board, Department of State Lands, new research forest staff and the research forest's advisory board must not be so distracted by day-to-day competing uses of the forest as to fail to always keep their focus on the big picture kinds of research that can bring transformational change to forest management for Oregon and the world.

FOREST CARBON

I. Carbon Offsets sales by Anew

DSL recently inked an agreement with consulting firm Anew exploring the potential for around $10 million in carbon credit sales from the Elliott over the next decade- based solely on future accumulation of new carbon, excluding any revenue from the millions of tons of carbon the forest presently stores. Anew has offered to continue to investigate additional potential for Elliott carbon sales- an offer which has apparently been rejected by the Governor's office. This could be a mistake. The potential value of the Elliott's carbon runs into the hundreds of millions. Now is the time to fully explore the full monetary potential of Elliott carbon sales. If this involves revisiting some of OSU's now outdated preliminary background work on the forest it could be a sound investment. The collective wisdom on the forest's new Board of Directors might well choose to pursue Anew's offer to explore questions of Additionality which could qualify some of the Elliott's stored carbon for offset trading, with a significant potential for boosting the research forest's revenue stream.

COP29 took significant steps toward creation of a global UN-managed carbon offset market (https://www.reuters.com/legal/legalindustry/global-carbon-market-taking-shape-through-approval-standards-cop29-2024-12-02/) to supplement the existing, voluntary carbon market. Airlines industry plans for offsetting carbon produced for air travel boost the potential for global carbon offset market growth.

Our new Commerce Secretary is a major investor in long-term carbon offset market development; prospects for expanding those markets under the Trump Administration are surprisingly strong: https://unlimitedhangout.com/2024/11/investigative-reports/get-ready-for-the-republican-carbon-market/

II. Integrity Council for Voluntary Carbon Markets

A UN-backed program for upgrading the durability and validity of voluntary carbon offsets measurement and accounting standards established in 2023, which applies its Core Carbon Principles (CCP) to evaluate voluntary carbon offset programs. A few systems have been validated among many others which have not. There exists a fierce global competition for scientifically valid offset standards, which is a major focus at the UN and the COP.

Since now-retired OSU forest scientists are widely recognized as scientific pioneers in the science of carbon measurement, Oregon is established as a leader in forest carbon science. In developing their research program, the Elliott Board could choose to build on this reputation by setting the goal of building a program in the Elliott which leads the world in setting the highest possible bar for scientifically valid carbon measurement techniques. Carbon offsets are valued in the voluntary market not only in quantity but also quality; attendant ecological and social outcomes play a major role in some higher value carbon registries. Elliott offset sales could fetch a higher price marketed as supporting an ambitious program to set the world's standard for quality carbon offsets. The forest's iconic eagles, salmon, owls and murrelets already make a compelling and attractive narrative for carbon offset sales which should bring Elliott offsets top value in the voluntary market. Many other positive outcomes can flow from the Elliott focusing on the development of forest carbon basic science and markets. The Oregon State Grange has proposed an Elliott Forestry Academy to allow Oregon schoolchildren to benefit from cutting edge work in the ESRF, with a campus based at the roomy Shutter Creek facility.

III. Valuing carbon offsets

Federal Forest Inventory Analysis data released in 2015 revealed that- far from being carbon neutral as was previously assumed- the forests of the Pacific Northwest are among the world's greatest terrestrial storehouses of carbon.

Once the immense scale of Oregon's stored forest carbon was recognized I assumed that the value of our forests' carbon would quickly become part of standard forest management financial analyses, being compared with the competing value of logging the same forest stands, once we understood how much carbon was contained in a thousand board feet of timber. And I assumed that the Elliott Research Forest Advisory Committee would likewise explore comparisons between the value of carbon offsets and logging. But those comparisons have never occurred, and the calculation of the value of forest carbon also has yet to appear. As a result, I've done the calculations, based on a conversion factor contained in an appendix to BLM's 2016 Western Oregon Resource Management Plan. It's not complicated. There are about five tons of carbon offsets contained in every 1000 board feet of timber for western Oregon forests.

Using this conversion factor of 5 tons carbon offsets/thousand board feet of timber, I calculate the carbon price needed to equal logging revenue from the Elliott's current proposed Biennial Operations Plan at about $36/ton of carbon.

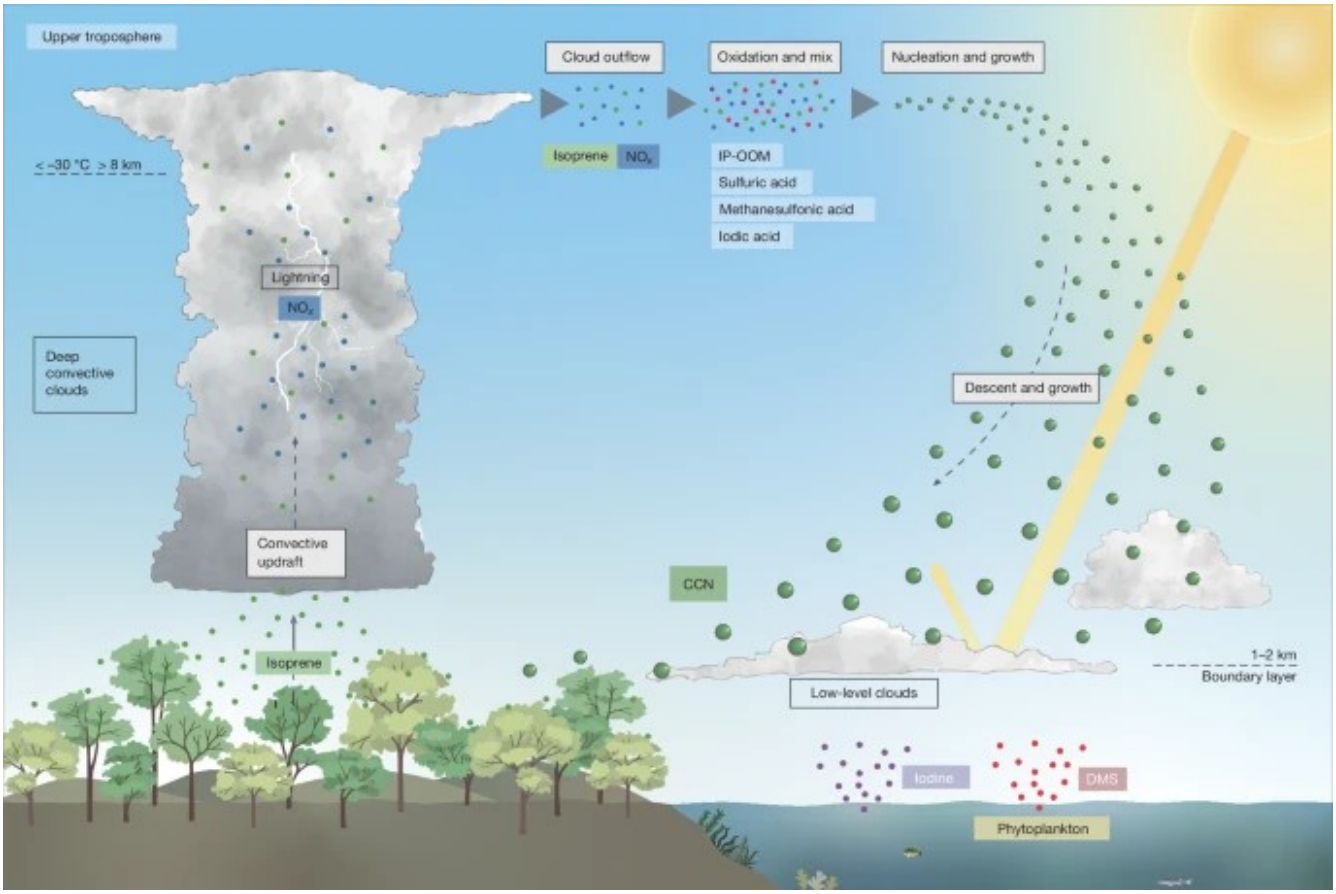
This price is well above the average price per ton in the Voluntary Carbon Offset Market, but a recent Weyerhaeuser voluntary offset sale described on the Anew website fetched $29/ton offset value- not far from the Elliott BOP's $36/ton value. With dropping timber prices and possible OSU overestimates of revenue and underestimates of costs detailed in DSL's Newton Report, it is simply irresponsible for Elliott management to continue to ignore the competing value of carbon offsets compared to that from logging revenue. According to the Newton Report, a drop in timber prices below $460- not at all out of the realm of possibility- will have Elliott logging losing money, while carbon offset prices are legally binding and enduring.

Despite receiving over $5 million for their five years of consulting work OSU was somehow unable to come up with this simple cost calculation of forest carbon volume in terms of logging volume.

FOREST ISOPRENE

A recent article in Nature (https://www.nature.com/articles/s41586-024-08196-0) finds that the most common biogenic hydrocarbon aerosol, a terpene compound called isoprene, has the previously unrecognized capacity to form Cloud Condensation Nuclei (CCN) in the upper atmosphere in sufficient quantities to significantly decrease atmospheric temperatures through cooling cloud formation. All clouds form around cloud condensation nuclei, and half of the CCN in earth's atmosphere are generated by forests.

This newly recognized mechanism reveals a secondary temperature-reducing effect of forest aerosols, in addition to the direct reflection of sunlight from aerosols like those which give the Smoky Mountains their name. This discovery provides the possibility of directly measurable forest atmospheric cooling mechanisms not presently included in global warming models, and could be a productive area of research particularly for the Elliott, whose huge scale can provide large study areas for the effects of forest management activities on atmospheric temperature. The graphic below describes the process by which isoprene is funneled high into troposphere where it condenses into CCN particles which form clouds as they descend. But developing research into this newly discovered but critically important cooling mechanism of forests will require an entrepreneurial orientation and long-term research forest management stability and focus.



CONCLUSION

The present Elliott management structure left behind by OSU is split among DSL staff, the Land Board, new Elliott Research Forest personnel, a Science Advisory Committee, an Implementation and Adaptive Management Committee (to administer the HCP, costed at $2.8 million/biennium) and the Board of Directors. This distribution of authority without a clear chain of command is a formula for bureaucratic gridlock, dysfunctional management and organizational crisis.

The legislature has ultimate oversight authority for Elliott Research Forest management, as our Supreme Court has recently found the Land Board to operate “at the pleasure of the legislature.” It is ultimately up to the legislature to resolve the organizational conundrum the ESRF finds itself in.

Empowering and directly funding the Board of Directors appears to be the most efficient and effective path to nurturing the kind of flexible, mission-driven managerial excellence needed to lead the ESRF to innovative and

relevant research programs, operational efficiency and long-term financial stability.

OTHER REFERENCES

Isoprene:
https://www.washington.edu/news/2014/02/26/pine-forest-particles-appear-out-of-thin-air-influence-climate/

Carbon:
https://icvcm.org/core-carbon-principles/

https://unlimitedhangout.com/2024/11/investigative-reports/get-ready-for-the-republican-carbon-market/