

3 November 2019

TO: Members, Oregon Board of Forestry
cc: Peter Daugherty, State Forester
Liz Dent, State Forests Division Chief

FROM: Ernie Niemi

SUBJECT: CLIMATE COSTS AND RISKS OF LOGGING ON STATE LANDS

I urge you to weigh, communicate to the public, and mitigate the climate-related economic costs and financial risks that accompany any decision to proceed with logging on state lands. The following pages describe some of these costs and risks:

- A. *BoF/ODF should anticipate that logging-related emissions of CO₂ result in climate damages that may exceed stumpage revenues by more than 10 – 80 times; climate damages from 2018 logging may exceed \$1.7 – \$13.5 bil.*
- B. *Continuation of the logging program will increase the likelihood of legal action seeking compensation for the harm state-forest logging has imposed on society. The Oregon Attorney General has supported legal arguments that highlight the risks.*

If you have any questions regarding these costs and risks, please let me know.

A. Climate costs from logging-related emissions of CO₂

BoF/ODF should anticipate that logging-related emissions of CO₂ result in climate damages that may exceed stumpage revenues by more than 10 – 80 times; climate damages from 2018 logging may exceed \$1.7 – \$13.5 bil.

Logging imposes economic damages on society by increasing atmospheric CO₂. Increases occur as activities (logging, transportation, processing, and disposition of wood products) release carbon currently stored in trees. Additional increases occur as logging kills trees, preventing them from sequestering carbon in the future.

Estimates of the economic damages come from multiplying the increase in atmospheric CO₂ times the social cost of carbon dioxide (SCCO_{2e}), i.e., the costs to society from one metric ton of carbon dioxide-equivalent (MtCO_{2e}). Research typically yields two relevant estimates of the SCCO_{2e}. One represents the costs *expected* to result from an atmospheric increase of one MtCO_{2e}. The other shows the potential costs *if climate change proves to be more harmful than expected*. BoF/ODF should use the latter to evaluate the climate-related risks from logging. The most recent research estimates this value to be \$800/MtCO_{2e}.¹

Three recent analyses have calculated carbon-related emissions from logging in Oregon. They indicate BoF/ODF should anticipate that the climate-related damages from logging will be at least more than 10 times and perhaps more than 80 times stumpage revenues:

Calculation of Logging-Related Carbon Emissions ²	Climate Costs–to–Stumpage Revenue ³
Oregon State University (2018)	> 10–to–1
Center for Sustainable Economy (2017)	> 10–to–1
Bureau of Land Management (2016)	> 80–to–1

Furthermore, these analyses provide the basis for estimating the potential climate-related damages from BoF/ODF logging. For example, in 2018:

2018 Stumpage Revenues ⁴	Climate Damages
\$169 mil.	>\$1.7 bil. –to– >\$13.5 bil.

Recent research strongly indicates that BoF/ODF should anticipate the climate-related risks from logging will be *even higher than indicated in the table*.⁵

B. Risks to BoF/ODF revenues and the General Fund

Continuation of the logging program will increase the likelihood of legal action seeking to cease the program and secure compensation for the harm state-forest logging has imposed on society. The Oregon Attorney General has supported legal arguments that highlight the risks.

Many Oregonians have concluded it is reprehensible for BoF/ODF, in the pursuit of limited revenues, to impose such large costs on society. This behavior also poses risks for BoF/ODF itself, however.

On 15 November, 2018, Oregon's Attorney General illustrated these risks by joining counterparts in other states in submitting a brief supporting the City of New York's efforts to secure compensation from major oil companies for the harm their sale of fossil fuels has imposed on its citizens.⁶ Several statements in the brief indicate that similar reasoning could apply to seek compensation from BoF/ODF for the harm its sale of timber imposes on society:

"[T]he manufacturer or producer of a product may be held liable under the common law for the foreseeable harms caused by the use of their products, even if the manufacturer or producer was not itself directly responsible for that use."

"Everyone who creates a nuisance or participates in the creation or maintenance thereof is liable for it."

"[T]he City seeks only to compel defendants to bear some portion of the costs that have been imposed on the City by the intended and foreseeable use of the products that defendants have sold."

"[T]his suit is based on state common law rather than state legislation or regulation."

The Attorney General's argument indicates it would be prudent for BoF/ODF to openly recognize, and take appropriate action to mitigate, the risks these arguments pose for logging revenues and the General Fund:

→ Plaintiffs may establish that BoF/ODF, in pursuit of revenues and with disregard for the harm to others, sold logging rights despite knowing that doing so would lead to substantial CO₂ emissions that harm plaintiffs and others.

→ The evidence on the preceding page strongly suggests that BoF/ODF liability for this harm likely totals \$13.5 bil. per year or more.

→ BoF/ODF cannot hide behind statutes that authorize the sale of logging rights because plaintiffs may establish liability and pursue compensation relying on common law.

¹ Ricke, K., et al. 2018. [Country-level social cost of carbon](#)

² Law, B.E., et al. 2018. [Land use strategies to mitigate climate change in carbon dense temperate forests](#); CSE. 2017. [Oregon forest carbon policy: scientific and technical brief to guide legislative interventions](#). BLM. 2016. [Resource Management Plan and EIS](#).

³ Climate costs for OSU and CSE come from estimates of total logging-related emissions (34 MtCO₂e per year times high-risk estimate of SCCO₂e from Ricke et al (2018); stumpage price for 2018 comes from ODF. 2019. [Council of forest trust land counties annual report](#). Ratio for BLM results from adjusting BLM's original estimate (> 4-to-1) to reflect Ricke et al. (2018).

⁴ ODF. 2019. [Council of forest trust land counties annual report](#): timber harvest = 315,224 mbf; average stumpage price = \$536/mbf.

⁵ See, e.g., DeFries, R., et al. 2019. [The missing economic links in assessments of climate change impacts](#); Howard, P. 2014. [Omitted damages: what's missing from the social cost of carbon](#); Oreskes, N., and N. Stern. 2019. [Climate change will cost us even more than we think](#); and Muehe, E.M., T. Wang, C.F. Kerl, B. Planer-Friedrich, and S. Fendorf. 2019. [Rice production threatened by coupled stresses of climate and soil arsenic](#).

⁶ Brief for amici curiae states of New York, California, Maryland, New Jersey, Oregon, Rhode Island, Vermont, and Washington and the District of Columbia in support of appellant, City of New York v. Chevron Corp, Conoco Phillips, Exxon Mobil Corp., Royal Dutch Shell PLC, BP P.L.C., U.S. District Court, Southern District of New York.