December 10, 2018

Senator Peter Courtney, Co-Chair
Representative Tina Kotek, Co-Chair
Members of the Joint Interim Committee on Carbon Reduction
Oregon State Legislature
900 Court St NE
Salem, OR 97301

Re: A letter of support for a voluntary carbon sequestration and storage program for private forestland owners

Dear Co-Chair Courtney and Co-Chair Kotek and Members of the Committee:

We are a group of private forestland owners residing in the Estacada and Eagle Creek areas of northwest Oregon, distributed across three state legislative districts. Together, we own over 1,100 acres of productive forestland, including individual land owners ranging from 10 to 440 acres and trees ranging in age from newly planted to well over 100 years old. Some of us have been managing our forestland for over 60 years and derive a significant portion of family income from it. Some of these lands have been in continuous family ownership since 1864. In other words, we are a representative sample of west-side, family-run forests. Currently, we conservatively store at least 350,000 metric tons of carbon dioxide equivalent in our standing timber, and we sequester at least 10,000 metric tons more each year. We present the following information to you to assist with your development and implementation of public policy for an effective, state-wide carbon sequestration and storage program as a component of an overall policy of carbon reduction. Private forestland owners are a key component of this program.

We understand Oregon's legislature is considering new climate change legislation in 2019 that will cap carbon emissions from some emitters of climate change-related gases and invest the revenues generated into efforts to combat climate change. We further understand Oregon state legislators are currently convening stakeholder workgroups to discuss how this legislation would affect agriculture, forests, fisheries, rural communities, tribes and other issues as part of the Joint Interim Committee on Carbon Reduction. However, up to this point, little work appears to have been done on how private forestland owners may become voluntarily involved through some type of carbon sequestration and storage program to help address the climate change issue. Carbon is sequestered by, and stored in, standing live trees and the soil and it continues to be stored in the live and dead standing trees and down logs and the long-lived timber products that are harvested and manufactured from these forests.

This is a very complex issue, many facets of which are beyond the scope of this letter or our direct involvement. We leave these facets to the forestry experts you have retained, and are currently retaining, to lend their expertise to the scientific, forest inventory and economic details of this issue. Despite this complexity, we believe that there is a significant opportunity to develop public policy to allow private forestland owners to participate in a program to help solve climate change problems. It will be Oregon's forests that absorb a significant fraction of the atmosphere's carbon dioxide, and approximately 35% of Oregon's forestlands are in private ownership, and of this percentage, about 43% are owned by families. The majority of family-owned forestland is located at low to mid-elevations (between the valleys and the higher elevation federal forests), making these some of the state's most productive forestland. Therefore, private forestland owners add tremendous value to Oregon's carbon sequestration and storage goals.

We present to you the following suggestions that we hope you will consider when formulating public policy regarding carbon sequestration and storage on private forestlands. Ultimately, we are the ones who will be

managing these private forests, and it will be our physical and intellectual efforts that will help to ensure the program's long-term effectiveness:

1. First and foremost, any carbon sequestration and storage program that affects private forestland owners must be a voluntary program. A program that has not yet been thoroughly tested, even over the course of a single generation, cannot be thrust upon private landowners, many of which have invested heavily in their forestlands. We have talked to a number of forestland owners about this program, and they are very interested in it, provided it remains voluntary.
2. Any rules or policies should be simple and predictable given the variety of forestlands that exist across the state, the differing levels of involvement and education of each forestland owner and the long time frames that must be utilized in the retention of the trees as they store carbon (60 to 100 years or more).
3. Any policy that results in changes to the status quo should be driven by performance goals rather than prescriptive specifications as much as practicable. Given the high probability that as the science behind climate change and carbon sequestration and storage evolves, best forest management practices may change as a result. Further, carbon markets may fluctuate. Therefore, some flexibility should exist within the system to provide the forestland owner with the ability to use whatever accepted means are reasonable to achieve prescribed goals over a defined timeframe that will be most effective.
4. Incentives should be provided to enroll private forestland owners. In exchange for these voluntary carbon sequestration and storage measures, which benefit the public at large, we would expect some type of compensation as a result of the benefit the private forestland owner is providing to the public due to reduced levels of logging. Such incentives could include (singly or in combination):
    a. An appropriate fraction of the revenues generated from the cap and trade program will be distributed on an annual basis as a function of the amount of carbon sequestered and retained.
    b. Tax credits given to the forestland owner
    c. Funds will be provided to private forestland owners by public and/or private entities to offset initial, technical feasibility assessments and other transaction costs (e.g. timber cruising and landscape analysis costs), which can be burdensome. Currently, we understand some assistance is provided by the Natural Resources Conservation Service (NRCS).
5. Any carbon sequestration and storage program should be offered to all private forestland owners, at least down to 5 acres in size. We recognize that it is less economical to enroll smaller parcels given the level of evaluation required and the amount of compensation received as compared to the amount of carbon smaller plots can sequester and store. However, a measurable percentage of private forestland is made up of small tax lots. We suggest you contact either the Oregon Departments of Forestry or Revenue for statistics. Furthermore, the more owners the state is able to enroll, the more public exposure the program will garner. There are small forestland owners out there that want to help with the climate change problem.
6. Flexibility must be built into the system to allow the forestland owner, if they so desire, to undertake some logging operations in the future in accordance with a mutually agreed upon contract created at the beginning of the program.
7. Recognize the overlapping benefits of an effective carbon sequestration program with other goals shared by the landowner and the public at large. These will also ensure the ongoing resiliency and integrity of the forest. Additional financial or other incentives could be created to help promote these added benefits. Possibilities include:

a. Longer standing tree retention times between harvests and greater retention areal extents of trees within riparian zones (that area interface between land and a river or stream). Currently, the Oregon Forest Protection laws address, to some extent, the amount and density of trees that must remain within the riparian area, but a voluntary increase in the rotation timeframe between harvests and an increase in the reduction of the harvest of trees within the riparian zone would provide greater shade cover and increased coniferous large woody debris to enhance stream habitat. At the very least, owners who have streams classified by the Oregon Department of Forestry as F (have Fish) and/or SSBT (specifically have Salmon, Steelhead and Bull Trout) should be offered this benefit.
b. Increase the amount and duration of dead wood (either standing or as down logs) to remain in the forest. Of course, this would need to be balanced by forest fire risk reduction measures. Additional dead wood benefits the soil and wildlife greatly.
c. The creation of areal reserves within the overall forestland holding, where little or no cutting is done (only practicable on larger parcels)
d. Consider a program to increase tree species diversity. For example, in lieu of a Douglas-fir monoculture, encourage providing a mix of species (both coniferous and deciduous) that are native to the landscape. This will also function as a hedge to reduce the risk of damage to a single tree species due to invasive insects and disease as the climate changes and these types of hazards migrate in from warmer climates.

8. Recognize that sequestration and storage of carbon can be accomplished through several means, and these means can be implemented by the forestland owner either singly or jointly, on all or just a fraction of the owner's forestland, depending upon the owner's overall goals:
    a. Implement longer rotations between harvests (currently, many woodland owners harvest trees after 30 to 40 years; however, in the past, rotations of 60 to 100 years were the norm and these durations, or longer, could be considered once again going forward). Consider increased incentives for increased rotation durations.
    b. Convert present land that is not in forests to forestland (incentives could also be provided to help promote this).
    c. Implement intensive forest management techniques to maximize carbon storage on a per acre basis.
    d. Implement various thinning techniques instead of wholesale harvest (e.g. clear-cutting), when the opportunity warrants, to maximize the number of retained, healthy growing trees and to further allow a more diverse forest to grow and thrive.
9. Recognize that some efforts that may be effective on the west side of the Cascades may not be practicable on the east side due to differing tree species, climate and forest fire risk. Therefore, any policy developed should be flexible enough to accommodate differing locales.
10. Future carbon sequestration and storage services provided by private forestland owners should not offset or reduce any compensation or prior agreements for currently in-place ecosystem services.
11. An education program should be developed for forestland owners. An excellent resource would be through the OSU Extension Service. A number of benefits can be conveyed in a class or series of integrated classes:
    a. To explain the benefits and risks of any carbon sequestration and storage program to all private forestland owners,
    b. To assist with any recommended changes to an owner's current forest management plan (or to write a new plan) to incorporate carbon sequestration and storage, and how to become involved. A complete forest management plan should be a prerequisite prior to

enrolling in any program. Planning will now be more important, depending upon the level of logging constraints agreed to up front in the planning phase to retain as many trees for as long as possible.

c. Many current forestland owners are not presently engaged in sustainable forest management; thus, they are not implementing carbon-friendly practices to help mitigate climate change. Education may help to solve this problem.
d. To learn about techniques to minimize carbon emissions during logging operations from cutting, yarding, and hauling to dealing with slash (debris produced during logging operations).

12. Depending upon the amount of forestland statewide that is placed into longer harvest rotations, a gap in log availability may develop. This should be studied by the Oregon Department of Forestry (ODF) to determine if such a gap could exist and if plans would need to be developed to minimize it through an incremental (phased in) increase in the length of recommended harvest rotation cycles.
13. The legislature should develop policy to continue to increase added-value markets for Oregon's manufactured timber products (e.g. glue-laminated products, joists, trusses and cross-laminated timber). Long-lived commercial and industrial buildings will also store carbon for a century or more. The design and construction of taller wood buildings (presumed to have a longer service life given their size and importance) than historically allowed (four to five stories as limited by fire risk concerns) is slowly gaining acceptance. This will help to make wood more competitive with steel and reinforced concrete construction. Additionally, forest products taken from forestlands under a carbon sequestration program should be certified as such, similar to some wood products harvested with currently-defined sustainable forestry practices.
14. Private forestland owners will not be able to do this alone. Oregon forestlands within the ownership of the federal government, in combination with those in state, county and local government ownerships, and those of Native American nations will also need to be included in some similar fashion. An all-encompassing policy of carbon sequestration and storage should take all forms of ownership into account.

To our knowledge, Oregon currently has one case study of the use of a cap and trade system to sequester and store carbon: the Raincloud Tree Farm, near Sandy, Oregon. The owners of this tree farm are the first in Oregon to enroll in the California market for carbon offsets, with program assistance by the Pinchot Institute and others. At 116 acres, this farm is the smallest improved forest management offset project ever registered with the California Air Resources Board. The carbon contract will stay with the property for another 125 years. We trust Oregon will allow even smaller acreage forest ownerships to enroll and consider some flexibility in the duration of the contract. (We can learn from California and improve upon their policies to increase acceptance among private forestland owners.)

We understand that the ODF has been tasked with collecting some necessary data in order to help define the viability of carbon sequestration and storage public policy involving private forest lands. We anticipate examining their results. As we mentioned, currently about 35% of forestland in Oregon is privately owned, and therefore it would appear that significant potential for carbon sequestration and storage exists. We hope that data acquired by the ODF will also include the following:

1. How much carbon is currently sequestered and stored within private forests (not only on industrial forestlands, but on small woodlands as well). It is imperative that small woodland owners also benefit from any public policy in addition to any conveyed to large, private forestland owners.
2. How much carbon could be sequestered and stored on land that is suitable for growing trees but currently is not. We believe that this could be a significant percentage of viable land area, and if

proper public policy were developed to incentivize private land owners to convert lands back to forests, Oregon's contribution to our national carbon sequestration and storage potential will be even more significant.

We consider public policy around carbon sequestration and storage as a potentially very important tool in the tool kit of the forestland owner to evaluate and potentially implement. We enthusiastically support the principle of carbon sequestration and storage public policy, and we are anxious to see where such thoughtful deliberation takes us in helping to solve a critical, worldwide, climate change problem. We are confident many other private forestland owners will embrace this sort of public policy if the basic ideas outlined above are incorporated. Our children deserve to expect that we will do all we can.

We encourage our legislature to develop thoughtful, flexible and predictable carbon sequestration and storage public policy that will ultimately benefit all Oregonians.

We offer our services in any way we can. Please do not hesitate to contact the primary signatory below (David Bugni) if you have any questions.

Sincerely,

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