January 26, 2021

Subject: SUPPORT for SB 0414 Climate Solutions Now Act of 2021

To: Chairman Pinsky and Honorable Members of the Senate Education, Health, and Environmental Affairs Committee

CC: Bill sponsors: Senators Pinsky, Augustine, Kelley, Hettleman, Ellis, Smith, Zucker, Kagan, Patterson, Young, Hester, Feldman, Kramer, Lee, Rosapepe, Elfreth, Guzzone, Waldstreicher, Washington, Beidle, and Lam

I'm writing to thank the sponsors for introducing this bill and encourage all members to pass the "Climate Solutions Now Act of 2021" (HB583 / SB414) so Maryland can set greenhouse gas reduction goals (GHG) aligned with IPCC Paris agreements; and, create groups to study, recommend, evaluate and administer specific GHG reduction methods to achieve those goals.

The bill makes sound recommendations and requires "specific estimates" of positive GHG and net economic/employment impacts, using a reasonable Social Cost of Carbon (SCC, @ $50 per ton). The SCC is **the additional economic damage caused by one ton of carbon dioxide equivalents (CO2E),** or, the benefit of avoiding a ton of CO2E. This concept was initiated by the Reagan administration, its use continuing until the most recent administration.

Since 2000 I've owned and occupied 35 acres of woodland adjacent to the Appalachian Trail on South Mountain, near Middletown in Frederick County. The property was acquired by my mother in 1953. Long time taxpayer and state citizen. In 1995 I entered into a Forest Conservation Management agreement with the state, which froze the land value at a low rate in exchange for following the plan. With the help of the DNR Forest Service, a consulting forester, loggers, trucking companies, and sawmills, a timber stand improvement harvest was done in 2016, promoting forest health and generating income for all in this local supply chain.

I'm also chair of a local environmental group and have led the Ag, Forestry, & Land Use subgroup of the Frederick County Climate Emergency Working Group since August. My focus has been researching ways to optimize CO2E removed by forests and measuring benefits forests provide.

It's the economic benefits of the planting of 5M trees I'll try to help quantify. Sources are below my signature.

Quantifying SCC of CO2E avoided by planting 4.5M trees in "rural" NE US + 500k trees in urban settings, @ $50 per ton, using 1.1 to adjust MT to Tons.

The Carbon estimator from the World Economic Forum, found at us.1t.org gives a more conservative "Carbon benefit" from planting than Conserving the same amount of acreage, and uses higher values for urban plantings, all stated in Metric Tons (MT CO2E) annually. For simplicity, plantings are combined, no discounting is attempted.

After 30 years = 983,301 MT CO2E + 243,629 MT CO2E = 1.2 M MT X 50= $61.3M

After 50 years = 1,638,384 MT CO2E + 406,047 MT CO2E = 2.04 M MT X $50 = $102.2 M x 1.1 = $112.42M

After 100 years = 3,276,767 MT CO2E + 812,094 MT CO2E = 4.09 M MT x $50 = $204.4M x 1.1 = $224.84M

If the above is the only payback, does it justify a $16.25M annual investment for 9 years ($146.25M)? I think, yes! Monies will be spent (and re-spent) in Maryland. Employing Marylanders in urban and rural locations where green jobs - any jobs - will have large impact, helping fuel the state forestry industry, and providing incentive payments to farmers for riparian plantings. After 50 years, planting cost plus SCC is $258M for Maryland.

"A study referenced below found each $1 million invested in forest restoration can support as many as 40 direct, indirect and induced jobs. Far and away the most jobs per million spent, second being rail/transit at 22 jobs, road/bridge repair and conservation/parks employing 20 per million. Many of the new employment opportunities generated will benefit urban and rural communities hardest hit by COVID-related job losses."(4).

Maryland forest industry economic contribution to state economy

"The fifth largest industry in the State, the forest industry had a value of about $4 billion in 2019. In western Maryland, the industry is the largest employer in Allegany and Garrett counties and on the Eastern Shore, it is the second largest. In 2019, the industry generated 5,150 forestry-related jobs, with a payroll of $292 million. Production of lumber and building materials in Fiscal Year 2019 generated $418 million, and supplied 8.52% of Maryland's overall tax receipts." (2) Further, "It is estimated that more than 18,000 people depend on the forest products industry for their livelihood."(3)

Natural climate solutions (forestry, healthy soils, composting, lawns to forests or natives) can absorb up to 30% of fossil fuel emissions. Forests are the best natural climate solution, removing 15% of CO2E from the atmosphere. These activities deserve more consideration for investment and implementation as they're comparatively inexpensive, and dollars spent stay home.

This is a fantastic start, but there's more to be done. USDA's 2019 survey of Maryland forests (5) reports an annual net loss of 8789 acres of forest. 8789 acres lost requires the planting of 2.6m trees, ar 300 per acre, annually, to break even. And carbon benefits from new plantings, we've seen, don't really start to payback for 30 years. Further action should be considered to reduce the rate of loss to zero, given the value of the climate service forests provide.

Thank you for considering these facts in making your decision. I hope it helps you decide to make an affirmative vote on the "Climate Solutions Now Act of 2021".

Sincerely,

R. Paul Walker

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Sources:

(1.0). "Forest carbon. An essential natural solution for climate change" Authors Paul Catanzaro, University of Massachusetts Amherst; Anthony D'Amato, University of Vermont. © 2019 University of Massachusetts Amherst

(1). Carbon estimator: us.1t.org Copyright to World Economic Forum, 2021. Terms of Service. Privacy Policy.

(2). Maryland State Archives. Maryland Manual On-Line, "Maryland at a Glance, Forests", © Copyright November 20, 2020 Maryland State Archives
https://msa.maryland.gov/msa/mdmanual/01glance/html/forests.html

(3) The Maryland Department of Natural Resources Forest Service, Forests of Maryland, 2016, Forestry Facts https://dnr.maryland.gov/forests/Pages/mdfacts.aspx

(4). Heidi Garrett-Peltier, The Political Economy Research Institute, University of Massachusetts, Amherst, 2009

(5). USDA Forest Service. 2020. Forests of Maryland, 2019. Resource Update FS-246. Madison, WI: U.S. Department of Agriculture, Forest Service. 2p. https://doi.org/10.2737/FS-RU-246