

Vermont Agriculture & Ecosystems Subcommittee resolution recommending amendments to the State of Vermont  
Green House Gas Inventory protocol

1. Whereas, the agricultural sector accounts for 15.8 percent of Vermont’s greenhouse gas (GHG) emissions;
2. Whereas, the Global Warming Solutions Act (GWSA) directs the Vermont Climate Action Plan at 10 V.S.A. § 592(d)(2) to: ‘Provide for greenhouse gas emissions reductions that reflect the relative contribution of each source or category of source of emissions’;
3. Whereas, the current State of Vermont’s Greenhouse Gas Emissions Inventory methods inadequately account for management and practice changes in agriculture that reduce greenhouse gas emissions;
4. Whereas, the climate co-benefits of over 300,000 acres of conservation practices adopted by Vermont farmers since 2015 cannot be credited to the State’s GHG emission reduction targets based on the State of Vermont’s current emission inventory protocol and tool;
5. Whereas, Vermont farmers are already succeeding in reducing on-farm GHG emissions through the adoption of water-quality farming practices;
6. Whereas, Vermont farmers have a realistic potential to sequester 1 million tons of CO<sub>2</sub> annually – 100% of Vermont agriculture’s 2050 climate goal – by increasing the organic matter content of Vermont’s agricultural soils;
7. Whereas, the 2006 IPCC Guidelines for National Greenhouse Gas Inventories integrates previously separate Agriculture (Chapter 4) and the Land Use, Land-Use Change and Forestry (LULUCF) (Chapter 5) into a single comprehensive guidance section titled Agriculture, Forestry and other Land Use (AFOLU), noting: “This integration recognizes that the processes underlying greenhouse gas emissions and removals, as well as the different forms of terrestrial carbon stocks, can occur across all types of land and that often the same practices influence both Agriculture and Land Use, Land Use Change and Forestry”;
8. Whereas, the 2006 IPCC Guidelines for the National Greenhouse Gas Inventories not only integrates agriculture, land use change, and forestry into one section but includes a principal change where “reporting on all emissions by sources and removals by sinks from managed lands, which are considered to be anthropogenic” is to be completed;<sup>1</sup>
9. Whereas, at 10 V.S.A. § 578(a) the GWSA directs the State of Vermont to measure and inventory GHG emissions pursuant to section 582 of Title 10;
10. Whereas, Section 582 of Title 10 empowers the Secretary of Natural Resource to coordinate with the administration and update the GHG inventory and aggregate all existing statewide data on GHG emissions and GHG sinks;
11. Whereas, the Secretary of Natural Resources is empowered to adopt policy and procedure establishing the standards for quantification of GHG emissions required by Section 582 of title 10;
12. Whereas, the State of Vermont’s Greenhouse Gas Emissions Inventory and Forecast utilizes the EPA State Inventory Tool (SIT) which models gross emissions from Agriculture;

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<sup>1</sup> 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Volume 4, Section 1.1, Page 1.4

13. Whereas the EPA SIT cannot quantify specific land use practices and farmer management in quantifying emissions reduction and sequestration;
14. Whereas, the EPA SIT decouples the analysis of agricultural emissions from agricultural and forestry sinks and prevents a net accounting of agriculture and forestry emissions per the 2019 IPCC Update.
15. Whereas, the “Greenhouse Gas Inventory Review: Vermont’s Current Methods, Comparison with Accepted Practices, and Recommendations” submitted by technical consultant Energy Futures Group (EFG) recommends that the VCC: should “[work] to improve how we track and report net emissions, including emissions sinks. Note that recommendations about the carbon budget and net emissions tracking (inclusive of how to better estimate carbon sinks) will be forthcoming at a later date, as part of the “Task 2” carbon budget effort.”;
16. Whereas, there exist modeling tools – such as EX-Ante Carbon-Balance Tool (EX-ACT) and DeNitrification-DeComposition (DNDC) - that can more accurately quantify both net emissions and agricultural management change;
17. Whereas, the aforementioned technical report recommendations suggest inclusion of net considerations as advisory and supplemental and would not impact the accounting framework for agricultural emissions reduction targets set for the state;
18. Whereas, the aforementioned report repeatedly encourages flexibility and the adoption of new methods, modifications and approaches as new information and data becomes available;
19. Whereas, Vermont farmers steward over 1.06 million terrestrial acres of Vermont’s forest, cropland, and pastureland - and their continued participation in the development and implementation of the CAP is essential to achieving Vermont’s climate action goals;
20. Whereas, the Global Warming Solutions Act (GWSA) directs the Agriculture and Ecosystems Subcommittee at 10 VSA §591 (c)(4) to “...focus on the role Vermont’s natural and working lands play in carbon sequestration and storage...” and “... develop actions and policies that... increase carbon stored on agricultural and forest land ...”
21. Therefore; **The Agriculture and Ecosystems Subcommittee** resolves that the Vermont Climate Council adopt the recommendation that:
  - a. The Vermont Climate Council shall pursue a technical service consultant to research and report on:
    - i. the shortcomings of each of the tools currently used by the State of Vermont to quantify greenhouse gas emissions (SIT, Ex-act, and LEAP) for evaluating changes in the agriculture sector.
    - ii. And recommend options for creating a more accurate and nuanced quantification approach to enable agriculture in Vermont to meet the goals of the GWSA, including consideration of process-based models developed for North America, such as DNDC.
  - b. The State GHG emissions inventory protocol established in 10 VS.A. § 582 shall be amended to include an inventory of GHG emissions that align with the intent and standards of the 2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories that will include a net GHG emission accounting for agriculture and forestry.
  - c. The State GHG emissions inventory protocol established in 10 VS.A. § 582 shall be amended to utilize a protocol that has the capability to account and model for the management changes and conservation practices farms and forests adopt as part of their operations to address climate change.