

December 20, 2022

Re NRCS-2022-0015

Thank you for the opportunity to provide comments regarding how the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) will utilize approximately \$20 billion in funds appropriated for natural climate solutions via the Inflation Reduction Act of 2022 (IRA).¹

These funds include \$8.45 billion allocated for the environmental quality incentives program (EQIP), \$3.25 billion for the conservation stewardship program (CSP), \$1.4 billion for the agricultural conservation easement program (ACEP) and \$4.95 billion for the regional conservation partnership program (RCP) through fiscal year 2026.

The IRA states that USDA should prioritize funding through EQIP and CSP for projects that the Secretary of Agriculture (Secretary) determines “directly improve soil carbon, reduce nitrogen losses, or reduce, capture, avoid, or sequester carbon dioxide, methane, or nitrous oxide emissions, associated with agricultural production.”

The IRA funding for ACEP is intended “for easements or interests in land that will most reduce, capture, avoid, or sequester carbon dioxide, methane, or nitrous oxide emissions associated with land eligible for the program.”

The IRA states that the Secretary should prioritize funding partnership agreements through RCP that “support the implementation of conservation projects that assist agricultural producers and nonindustrial private forestland owners in directly improving soil carbon, reducing nitrogen losses, or reducing, capturing, avoiding, or sequestering carbon dioxide, methane, or nitrous oxide emissions, associated with agricultural production.”¹

Identifying natural climate solutions with the greatest carbon sequestration potential

Fargione *et al.* (2018)² assessed the carbon sequestration capacity of natural climate solutions in the United States and identified a maximum 1,200 million metric tons (or megatonnes [Mt], or teragrams) of additional potential. Fully realizing this potential would represent an approximately 150% increase over the current ~800 Mt of annual natural carbon sequestration in the United States today (which

¹ Inflation Reduction Act of 2022, Pub. L. No. 117-19, 136 stat. 1818 (2022).
<https://www.congress.gov/117/plaws/publ169/PLAW-117publ169.pdf>

² Fargione, J. E., Bassett, S., Boucher, T., Bridgham, S. D., Conant, R. T., Cook-Patton, S. C., ... & Griscom, B. W. (2018). Natural climate solutions for the United States. *Science Advances*, 4(11), eaat1869. [doi: 10.1126/sciadv.aat1869](https://doi.org/10.1126/sciadv.aat1869)

offsets approximately 12% of annual domestic greenhouse gas emissions), the vast majority of which is provided by forests.³

Approximately 30% of the added potential identified in this study (well over 300 Mt) stems from reforestation opportunities on 146 million acres of land. Roughly half of that reforestation carbon sequestration potential (184 Mt) stems from silvopasture (the integration of trees and grazing livestock on the same land) on 65 million acres of pastureland.⁴ Most of that land is in the southeastern United States,⁵ where more frequent and intense extreme heat events are among the primary threats posed by ongoing climate change.⁶ Silvopasture projects would thus also provide a measure of resilience to those extreme heat impacts via shade and associated cooling co-benefits for livestock.

The next-largest potential for domestic natural carbon sequestration solutions are forest management (267 Mt), cover cropping, and avoided grassland conversion (approximately 100 Mt each).²

Current Conservation Program Allocations

Of these highest-potential natural carbon sequestration solutions, only cover cropping projects receive a substantial proportion of grants from the subject conservation programs.⁷ For example, silvopasture establishment and forest management plans received 0.02% and 0.25% of EQIP obligations in fiscal years 2009 through 2015, respectively.⁸

Of the top 15 most common practices funded by each program in recent years, cover cropping accounts for 27% of projects in EQIP, 3% in CSP, and 36% in RCPP.⁷ Reduced tillage farming practices also receive a substantial proportion of grants from these three conservation programs. However, recent scientific

³ U.S. Environmental Protection Agency. "Inventory of U.S. Greenhouse Gas Emissions and Sinks." <https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks>

⁴ Cook-Patton, S. C., Gopalakrishna, T., Daigneault, A., Leavitt, S. M., Platt, J., Scull, S. M., ... & Fargione, J. E. (2020). Lower cost and more feasible options to restore forest cover in the contiguous United States for climate mitigation. *One Earth*, 3(6), 739-752. [doi: 10.1016/j.oneear.2020.11.013](https://doi.org/10.1016/j.oneear.2020.11.013)

⁵ The Nature Conservancy and American Forests. "The Reforestation Hub." <https://www.reforestationhub.org/>

⁶ Carter, L., A. Terando, K. Dow, K. Hiers, K.E. Kunkel, A. Lascurain, D. Marcy, M. Osland, and P. Schramm, 2018: Southeast. In *Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment, Volume II* [Reidmiller, D.R., C.W. Avery, D.R. Easterling, K.E. Kunkel, K.L.M. Lewis, T.K. Maycock, and B.C. Stewart (eds.)]. U.S. Global Change Research Program, Washington, DC, USA, pp. 743–808. [doi: 10.7930/NCA4.2018.CH19](https://doi.org/10.7930/NCA4.2018.CH19)

⁷ USDA NRCS. "Soil and Water Resources Conservation Act (RCA) Data Viewer." <https://www.nrcs.usda.gov/resources/data-and-reports/rca-data-viewer>

⁸ United States Government Accountability Office. "USDA's Environmental Quality Incentives Program Could Be Improved to Optimize Benefits." GAO-17-225. April 2017. <https://www.gao.gov/assets/gao-17-225.pdf>

research has identified uncertainty regarding the carbon sequestration efficiency⁹ of cover cropping¹⁰ and reduced tillage¹¹ practices in isolation.

Recommendations for NRCS to Meet IRA Requirements

In order to achieve the IRA directives to prioritize project funding, easements, and partnership agreements that sequester carbon, we recommend that NRCS prioritize the types of projects with the greatest and most certain such potential – silvopasture and other agroforestry practices such as alley cropping, and forest management. Practices whose carbon sequestration efficacy is less certain such as cover cropping and reduced tillage farming might be given a secondary prioritization as research in these areas progresses.

This could be accomplished by amending the NRCS Program Ranking through Conservation Assessment Ranking Tool (CART)¹² to incorporate carbon sequestration and other climate metrics into its ranking criteria. For example, soil organic content could be added to the table of NRCS resource concerns¹³ in the soil category, and woody biomass added to the plant category. Similar metrics could be added to the “list of resource concern categories and associated concerns and components” in Table 1 of the CART National Instruction guidance document and other relevant documents, such as the EQIP General National Ranking Template.

Thank you for your consideration of these comments.

Sincerely,

Citizens' Climate Lobby

⁹ Popkin, Gabriel. “A pillar of the climate-smart agriculture movement is on shaky ground.” Food & Environment Reporting Network. <https://thefern.org/2022/12/a-pillar-of-the-climate-smart-agriculture-movement-is-on-shaky-ground/>

¹⁰ Blanco-Canqui, H. (2022). Cover crops and carbon sequestration: Lessons from US studies. *Soil Science Society of America Journal*, 86(3), 501-519. [doi: 10.1002/saj2.20378](https://doi.org/10.1002/saj2.20378)

¹¹ Cai, A., Han, T., Ren, T., Sanderman, J., Rui, Y., Wang, B., ... & Xu, M. (2022). Declines in soil carbon storage under no tillage can be alleviated in the long run. *Geoderma*, 425, 116028. [doi: 10.1016/j.geoderma.2022.116028](https://doi.org/10.1016/j.geoderma.2022.116028)

¹² USDA NRCS. “Program Ranking through Conservation Assessment Ranking Tool (CART).” NI 440-310. <https://directives.sc.egov.usda.gov/viewerFS.aspx?hid=46372>

¹³ *ibid* Exhibit A. <https://directives.sc.egov.usda.gov/OpenNonWebContent.aspx?content=48723.wba>