

Climate Action Reserve  
Re: Soil Enrichment Protocol Public Comments

May 18, 2020

Dear Climate Action Reserve,

Thank you for taking leadership to develop a soil carbon accounting protocol. As a soil scientist, I appreciate that you wove in flexibility for measurement protocol and model development, as our methods continue to improve along with our scientific understanding.

I have two main comments on Version 1 of the Soil Enrichment Protocol (SEP): one is the lack of involvement from land managers and producers from a public perspective and two is the low level of detail on the soil organic carbon measurement, particularly the sampling scheme.

In my experience, the stakeholders need to be directly involved in development of broad protocols such as the SEP, as these methods may expand beyond use in the US and set an example for future programs. After listening to the Webinars posted online, it is unclear to me how any agricultural land managers were involved in the creation of this protocol. I am uncertain how much time a producer would have to read such a protocol during the month of public comment, which in many regions coincides with the start of the cropping season in the US. I think their involvement is paramount to launching a successful, fair program. I specifically think that the protocol must be more clear about the benefits, and potential profits of the aggregators. I appreciate that the CAR acknowledges that farmers often operate on thin margins. Before adoption of this protocol, producers should have a longer opportunity to read this protocol, ask questions, and received specific answers on how aspects of this protocol, specifically aggregation of projects, will alter the economic outcome of enrolling in the program.

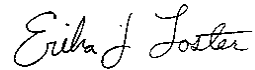
To provide an accurate baseline for each reporting period, and improve utility of the soil organic carbon data for future modeling, I expected a more detailed list of the number of samples required per land area for soil organic carbon measurements. I think that we need to require the farmers sample as deep as possible, perhaps for feasibility set a bottom limit (1.0 m), because new research shows that many practices, such as no-till or perennial crops can have major consequences for soil C deeper in the profile. We need to account for those changes, whether it is crediting the producer or negating the surface effects. Even if the models will not run now on deeper soil C, this will be a critical component in the future, and the only way to truly account for soil C sequestration. I also think that bulk density should be a required measurement for each reporting period, and as far as I read it is an optional measurement. We cannot simply use changes in concentration when assessing global impacts of the program, we need the change in stock. This is the best way we can account for changes over time is to start with sound measurement via a specific protocol. This may be set up as a flow chart for farmers, for example the amount of stones in the field will then dictate which protocol should be used for bulk density.

To conclude, I think that there needs to be more time and education of producers to provide their feedback on this protocol. The producers have critical, specific experiences and can offer insight on specific concerns and barriers to adoption of these practices. Ideally this protocol could offer credit for the producers who have already adopted climate-smart practices, but I understand the difficulties due to additionality. Aside from opening time for comments from producers, the process for writing this protocol could also be more open by providing transcripts of the questions that all of the working group and listeners asked during the webinars. I was only able to listen far past the actual date, and I think I missed a large amount of content because I did not have access to the question box or chat.

Of course as a soil scientist I view the huge potential of this protocol to generate a massive national dataset. If there is any way to remove specific identifying information and give producers an opportunity to opt into sharing their soil measurements into an open access database, this network of climate-smart agricultural managers can advance the field even further.

Thank you very much for your time. I look forward to see if this protocol can lead the agricultural sector toward a more sustainable future. Please do not hesitate to contact me for further clarification or references.

Sincerely,



Erika J. Foster, PhD

Soil Biogeochemist & Postdoctoral Researcher

Purdue University

[Ejfooster7@gmail.com](mailto:Ejfooster7@gmail.com)

503-913-4532