# Vermont Payment for Ecosystem Services and Soil Health Working Group

DRAFT Summary of Meeting #9: May 12, 2021

More detailed information, including presentation slides, can be found at <https://agriculture.vermont.gov/pes>

## Introduction

The Payment for Ecosystem Services (PES) and Soil Health Working Group held its ninth meeting on May 12, 2021. The purpose of the meeting was for the group to vet key assumptions and address questions from the three Task Groups (focusing on Programs, Soil Health, and Economics/Allocation) and for these subgroups to make progress in their workstreams.

## Summary of discussion

Task groups brought forward questions and issues to test with the full group:

### Economics/Allocation Task Group

The Economics/Allocation Task Group brought forward several assumptions/issues to address with the full group. The following points were raised (top-level numbering is assumptions raised by Economics/Allocation group; alphabetical sub-bullets are Working Group members’ comments):

1. The goal is a statewide program
2. Ecosystem service payments will be made to farmers
   1. It is unclear how to draw the line on “additionality” to earn payments. Should the approach be to combine existing programs, create new ones, or use another model?
   2. Are we also assessing what is being paid already to farmers, to what types of farmers, and for what reasons?
3. Soil health is the overarching metric/unit on which payments are being made
   1. Water Quality is also a significant focus. Need to tease out the relationship between soil health and water quality.
   2. Soil Health is an end unto itself for the producer, not only a vehicle for the provision of ecosystem services.
   3. Soil health can provide a broad range of ecosystem services beyond those named in this discussion.
   4. We need to deal with lessee/landowner dynamics to ensure that the farmer can be paid, not only the landowner.
   5. The legislation mentions soil health first, but calls explicitly for other ecosystem services to be measured and accounted for: “(1) identify agricultural standards or practices that farmers can implement that improve soil health, enhance crop resilience, increase carbon storage and stormwater storage capacity, and reduce agricultural runoff to waters.”
   6. We are not selling soil health, but are selling the benefits it provides. Focusing on the benefits and outlining those would help farmers adjust to maximize the benefits. You can build soil health with a manure pile, but that may or may not enhance the benefits we are looking for.
4. Customers would be states, community, citizens
5. We are focusing on measurement, not modeling, but with flexibility that reasonable measurements may not be available in all cases
   1. We may need heavier reliance on models than we anticipate, or the use of models based on VT-specific data when necessary
   2. Using modeling results is likely the only way to implement this program. It is okay as written to prefer measurements and allow models if needed. My understanding is that nitrogen cap-and-trade program in New Zealand is successful because the models are generally accepted and valued, so we may want to be careful to not downplay the value of models if we want/need buy-in from stakeholders.
6. This concept is distinct from examples in other states
7. We acknowledge that there are multiple groups in Vermont working on soil health and the idea of payments, with different processes, metrics and ideas.

#### Further discussion regarding topics pertaining to all task groups

Regarding establishing the metric of soil health to value:

* We may need different units for different outcomes. We will need to determine at what level to combine and whether to use weighted measurements or to differentiate in some other way.
* On the other hand, if we focus on the value of soil health regardless of how it is "measured" we might be able to make more progress.

***Financing mechanism:*** A significant portion of land in Vermont is forested. There is an opportunity to measure the rate of increase, use models to estimate the carbon sequestered, and use those funds to finance an ecosystem services program for agriculture.

***Programs:***

* The task group has undertaken a quick but thorough review of what practices exist, what they pay for, what they result in, and who is doing what across the state, building on detailed analysis from the Vermont Climate Council. Given what else happening, the group is investigating how a new effort can best fit in programmatically.
* There is a policy decision to make before we develop valuation systems, which is: which ecosystem services, and in what relative proportion to each other, are we interested in valuing and paying for?

***Soil health:***

* The task group is zeroing in on metrics we know are easy to measure, but will need to address the challenge of how to implement programmatically. Turn to empirical information such as the Otter Creek study to help translate how and what qualities of soil provide flood attenuation. The science should drive what indicators of soil health are important for the outcomes we are seeking.
* We need to identify range of measurable or observable benefits to determine whether soil health is increasing. We cannot just use one factor, like soil organic matter, without assessing other indicators like increased biodiversity, water quality measures, aggregate stability, etc.

## Task Group Work

### Economics/Allocation group

* The Economics Task Group brainstormed specific benefits of ecosystem services, including flood mitigation, drought resiliency, regulated surface water flow, infrastructure maintenance reduction, etc.
* The next task – as homework prior to the 5/26 meeting – will be assess the ease of measuring each benefit, accuracy of the measurement (or need for modeling), and feasibility to implement a payment on that value.
* It was proposed for the Task Group to focus on benefits/values that farmers are not currently being compensated for to offer additionality to the current programs available to farmers.
* We discussed that the ecosystem service benefits are of value to the customer/public/community and the benefit to the farmer will be the payment for providing those public good services.
* It was brought up that the marketing and pricing of these ecosystem services will be important so that farmers feel encouraged and inspired to engage.
* The Task Groups hopes to be able to use existing research to begin establishing a range of recommended prices (Charge 2) and will begin these discussions at the next meeting.
* The eligibility criteria (Charge 3) may be better suited with the Program Task Group as they can take on more details around program components.

### Programs group

* The group reviewed a matrix of practices and ecosystem services and made improvements
* The group reviewed a matrix of actors and the services they provide in Vermont
* Both will be sent out to the Task Group
* The group tasked Paul, Ryan, Maddie, and Juan to populate the matrix with NRCS scores and come back to the group with some analysis of gaps r/g practices and ecosystem services
* The group would also like to get the level of effort in VT on various practices as well
* The group explore a possible day long meeting on programs and research in June

### Soil Health group

The soil health group continued to catalogue the dynamic and inherent metrics of soil that relate to each of the ecosystem services desired by the group.

The group identified the following questions/issues to discuss with the full group at some point:

1. What type of biodiversity is sought? E.g., soil biodiversity or landscape-scale biodiversity?
2. Regarding climate mitigation benefits, is carbon storage or climate regulation more broadly sought? What is the time scale of climate mitigation benefits needed to be valued? Is there interest in valuing other on-farm practices for GHG mitigation, or only those flowing from soil health?
3. How should a valuation scheme account for the inherent properties of a field or location?

## Public Comment

* Caroline Gordon, Rural Vermont: We only have one chance to get this right. A more substantial, radical overhaul of programs that is more holistic is needed. Currently, programs are not considered flexible or effective enough. Direct or indirect spending will need to be shown by policymakers to be sustainable. The program group began looking at the legislative charge, and existing programs should be guiding decision-making of the group. The group should seek a more participatory approach, including more diverse farmer perspectives on what solutions would be most helpful.
* Didi Pershouse (Working group alternate member): the question of proposed eligibility criteria for persons participating the program should be under the purview of the Programs Task Group.

The meeting was adjourned at 2 PM.