



**Testimony of Rose Paul
Director of Science and Freshwater Programs
The Nature Conservancy in Vermont
Before the House Committee on Agriculture and Forestry**

**Section 3 of S.160- Soil Conservation Practices and Payment for Ecosystem Services
April 11, 2019**

Thank you for inviting me to testify on Section 3 of S.160. I have been following the issue of Payment for Ecosystem Services by listening to farmers at various forums including most recently the Northern Tier Dairy Summit last week and the VT Grass Farmers Association meeting on Monday. And I've been following the discussions of the Dairy and Water Collaborative over the past half year.

You might ask why a conservation organization is interested in paying farmers for ecosystem services? Nationally, the Conservancy is heavily involved in working with farmers and agriculture-related businesses and technical providers to support and incentivize farmers to manage their lands for increased profitability and improved ecosystem service outcomes. The Conservancy has set a national goal of helping to enroll 50 million acres of row crop farmland by 2020 in healthy soils and nutrient management practices (we're currently nearing 30 million acres) because of the multiple benefits that well managed soils can provide—increased profitability for the farmer, less need for expensive soil amendments, improved water quality, reduced stormwater runoff, more soil organic carbon storage which improves soil tilth, increasing soil depths as opposed to soil erosion, and even better wildlife habitat. If we collectively reach this national goal, the Conservancy estimates that we can achieve a 27% reduction in phosphorus runoff in the major watersheds of the U.S. For comparison, the EPA has set a target of 30% reduction of the phosphorus going into Lake Champlain from Vermont.

In Vermont the Conservancy is looking for ways to support farmers to adopt healthy soils practices, and one way to do this is to advocate for, and help to develop, a framework for payments for ecosystem services (PES). This would incentivize farmers for desired outcomes, rather than specific practices, but it is well known that healthy soil practices can result in an increase in crop productivity as well as the multiple environmental outcomes, such as cleaner water and increased soil carbon and floodwater storage. The PES could be just the incentive that some farmers may need to make the transition in their management practices so that their working lands are working on many levels, from crop production to climate mitigation and water purification.

To briefly review some key points in Dr. Eric Roy's testimony earlier this week, the proposed Working Group will need to figure out **what** ecosystem services should be paid for, **how much** to pay for them, **how to measure** them and **how to monitor** them. Will this be available statewide, or only in the watersheds with the biggest water quality challenges?

How will **equity** among landowners be determined? Will some kind of baseline be established, to avoid the situation where farmers who have already done a lot to improve their land management don't realize much economic gain, but those who still have a lot of improvement to do enjoy economic windfalls.

The Conservancy supports the principle of **additionality** which means that any payments for services result in a net increase in desired outcomes. In practical terms, the starting place for this is paying for outcomes that go above and beyond what can be achieved with regulatory compliance.

I would like to speak for a moment specifically to (a) (2) in section 3. This part of the proposed bill specifically mentions financial incentives for the reclamation or preservation of wetlands. We would also like to include floodplains in this language. There is already a program through the Natural Resources Conservation Service that pays for a conservation easement if a farmer allows his/her farmland to be restored to wetland, and NRCS pays for the restoration of the wetland as well. However, the value of this conservation easement on the restored wetland is a one-time payment. A restored wetland produces multiple ecosystem service every year: stormwater storage, carbon storage, phosphorus, nitrogen and sediment filtration, and wildlife habitat. Wetlands offer multiple bangs for the buck, but landowners still have to pay taxes on restored wetlands every year. Offering a payment for ecosystem services for restored wetlands over a term, such as ten years, can help landowners keep their farm intact and the wetland truly becomes a working piece of land that produces services. The ecosystem service payment for wetlands can help offset the annual cost of property taxes and may, over time, help increase the hunting and fishing opportunities on that land, as well as provide many benefits to downstream communities.

The Conservancy has funded and collaborated on research with UVM's Gund Institute showing that restored wetlands in the Lake Champlain Basin could meet 1/4 to 1/3 of Lake Champlain's phosphorus reduction goal set by the EPA (see handout.) Our Gund research also shows that strategically targeted restoration of forests on river floodplains can reduce downstream property damage, and the benefit of avoided damage outweighs the cost of conserving and restoring the floodplains by 5:1.

The Conservancy has also created the [Water Quality Blueprint](#) for the Lake Champlain Basin, an interactive web-based map to help conservation partners prioritize where they can invest in natural resources for clean water outcomes. This tool can be helpful to landowners who are thinking about retiring some of their marginal farmland that might be better suited to the production of ecosystem services.

I'll turn this back over to Phil Huffman for specific comments on the language in Section 3 of S.160. Thank you for the opportunity to testify.

Rose Paul
Director of Science and Freshwater Programs
The Nature Conservancy
rpaul@tnc.org; 229-4425 x108