



VERMONT SOIL CONSERVATION: BENEFITS OF PUBLIC INVESTMENT AND CONSIDERATIONS FOR STATE POLICY

ISSUE

Vermont's history reveals a longstanding commitment to its working lands, natural resources, and resiliency of its communities. State laws further reflect the importance of farming to the lives of Vermonters. The last century's changes in technology, industry, and federal policy have brought dramatic transformation globally, and in unique ways, to Vermont. Along with high levels of productivity and cheap food products, new challenges have arisen for farmers, communities, and natural ecosystems. Federal farm policy, market dynamics, degradation of natural resources, and climate change all threaten the resiliency of Vermont farms, communities, and environment. Faced with these challenges, policymakers have a wide range of options to consider. As Vermont considers policies for improving the resilience of its working and natural lands, it is helpful to contemplate the public values of soil.

that would not have otherwise occurred), but that it provides for the common benefit, whether private benefits result or not. While the question of additionality may indicate a program's efficacy (an ineffective one provides no additionality at all), the provision of collateral private benefit is irrelevant to whether public spending has served a public purpose. Rather, so long as a state law reasonably relates to a legitimate public purpose, the law will be considered a valid enactment under the state's police powers.⁴ Ultimately, spending that results in some private benefit may still be the most economical way to advance the common benefit. In Vermont, while private benefits may accrue from public spending to improve soil quality, they will be more than offset by the reduced public costs of water contamination, soil erosion, and damage from floods and climate change.

(2) Public value of soil conservation

Soil conservation simply means to ensure its functional integrity, so that it is in a state of "vigorous self-renewal."⁵ The public good relies on sustained access to and enjoyment of the benefits of high-functioning soil.

KEY POLICY CONSIDERATIONS

(1) Foundation in Vermont law

According to the Vermont Constitution, state government, laws, and taxes, all serve to promote "the common benefit, protection, and security of the people."¹ Laws are constitutional if they further the "common good," and a tax is valid so long as it provides "greater service to the community than the money would if not collected."² The purpose of state spending, as described by statute, is therefore threefold: (1) to promote a vibrant economy, (2) to meet every person's need for health, food, and a healthy environment, and (3) to uphold the principles of sustainability and stability.³

The goal of government spending, therefore, is not to ensure that it only provides additionality (benefit

Agriculture can enhance the strengths of natural ecosystems, such as efficient energy and water use, diversity of microbial life in the soil and of plants and habitat, strong defense mechanisms to disease and pests, and resiliency to weather.⁶ Building these strengths into farming can reduce dependence on inputs and support crop yield and quality, with minimal harm and maximum environmental benefit. Healthy soil provides benefits like nutrient cycling, crop resilience from pests and weather, erosion control, water purification, nutritious and diverse outputs, and storm protection. Vital to all these processes are soil microorganisms, which store two trillion tons of organic carbon, more than the combined pool of carbon in the atmosphere and vegetation.⁷ While farmers enjoy the benefits of conservation on their farms, the public enjoys the

benefits of a nutritious and diverse food supply, a resilient landscape with reduced damage from floods and severe storms, and clean water and air.

(3) Importance of public investment

Markets and federal policy can distort the value of conservation, and farmers are pressed to respond to demands in ways that conflict with the environment. Public investment is one way to remediate harms caused by market distortion presented by forces outside of state control, like federal policy and global agricultural markets. Examples of effective spending date back to the New Deal, when conservation was more deeply embedded in farm policy, used to maintain the supply of agricultural resources, rather than a retroactive tool to mitigate damage. A great modern example is the Watershed Agricultural Council's near-30-year public-private partnership with New York City to work with private landowners in upstream watersheds to provide water quality to New York City. In 2019, a new \$92 million contract was authorized through 2025.⁸

Market distortions that impact Vermont from different sources should be analyzed, and any loopholes, counterincentives, and ineffective policies, should be identified and revised to promote soil conservation. While not all factors are within state control, a full inventory of obstacles will best result in policy that addresses real challenges.

(4) Reintegrate conservation and farm policy

While there are many good efforts to conserve our soil and water, their positive impact is reduced because they are often applied as a remedy, rather than an insurance measure. A more effective approach would incorporate conservation principles and methods into planning and permitting processes in order to reduce risk to farms and to the public. Agricultural policy reflecting the full value of

conservation would go beyond regulatory compliance to undergird loan policies, permitting, land use planning, and subsidies. Farmers should not only be encouraged to conserve resources, but enabled to reap the full range of benefits when they do, and rewarded for the contributions to the public.

In addition, continued promotion of alternative markets for farmers, including opportunities to market directly to consumers, add value to products, and promote the Vermont brand, provides further opportunity to facilitate soil conservation.

(5) Consider a statewide healthy soils policy

Opportunities exist to promote soil conservation in other areas of state policy as well, including public education, food labeling and marketing, and infrastructure. These can increase the demand for conservation. Examples include expanding composting infrastructure, educating the public about the values and indicators of soil health, and providing incentives to developers and residential property owners to improve soil on private land. Exploring opportunities beyond agriculture to promote soil health can enhance policy impact.

CONCLUSION

A resilient future for Vermont requires public investment in soil conservation. The interests of all Vermonters rely on policies that ensure the long-term provision of high functioning soil by identifying and remediating market distortion and other obstacles to conservation. Reintegrating conservation with agricultural policy and identifying opportunities to promote soil conservation throughout state policy will advance these goals.

REFERENCES

- ¹ VT. CONST. CH. 1, ART. 7.
- ² VT CONST. CH. 1, ART. 9.
- ³ 32 V.S.A. §306a (state budget purpose is common benefit).
- ⁴ *In re One Church Street*, 565 A.2d 1349 (VT 1989).
- ⁵ Aldo Leopold, *Conservation: In Whole or in Part?* (Nov. 1, 1944).
- ⁶ Fred Magdoff, *Ecological agriculture: Principles, practices, and constraints*, *Ren. Agr. & Food Systems*: 22(2), 109-117 (2007).
- ⁷ *Scientists' warning to humanity: microorganisms and climate change*, *Nature Rev.* (2019), <https://www.nature.com/articles/s41579-019-0222-5>.
- ⁸ For more information, visit <https://www.nycwatershed.org/>.

Thank you to the many stakeholders who generously shared their time to participate in interviews for this project. As we continue exploring these issues, we welcome any questions that would be of interest for further inquiry.

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