



November 30, 2021

Secretary Anson Tebbetts
Vermont Agency of Agriculture, Food & Markets
116 State Street
Montpelier, VT 05620

Dear Secretary Tebbetts,

The undersigned organizations respectfully request that the Vermont Agency of Agriculture, Food & Markets (AAFM) review the Required Agricultural Practices (RAPs) in their entirety to determine whether specific required practices are adequate to protect Vermont's water quality and soil health from climate change-induced weather patterns.

Vermont is becoming warmer and wetter due to climate change.¹ Specifically, the Vermont Climate Assessment 2021 notes that both summer and spring precipitation have increased in the Green Mountain State.² The Assessment cautions that "[t]his spring precipitation . . . can make farm operations difficult." A sentence pulled straight from the study's Executive Summary warns: "Heavier rainstorms will impact farm and forestry operations."³ Accordingly, AAFM should examine the RAPs to determine if they are adequate in the face of these present and foreseeable climate-change induced precipitation increases to protect the farm's soil resources and prevent harmful and inefficient runoff of nutrient pollution into surface waters.

Due to heavier and localized precipitation, it is more likely that manure applied to farmland will be washed into surface waters rather than absorbed into the ground. As the 2021 State of the Lake and Ecosystem Indicators Report notes, "[w]hile management practices may help to reduce inputs, the increasingly intense rainstorms associated with climate change may release more phosphorus, possibly canceling out gains made through pollution-reduction efforts."⁴ Further, these heavy precipitation events could result in an increased discharge of phosphorus and nutrient pollution from tile drains.⁵

¹ See generally Vermont Climate Assessment 2021, Gund Institute for the Environment, University of Vermont (Nov. 8, 2021) Executive Summary, Full Report can be found at <https://www.uvm.edu/news/gund/vermont-getting-warmer-and-wetter-climate-change-study>.

² *Id.*

³ *Id.*

⁴ 2021 Lake Champlain State of the Lake and Ecosystem indicators Report, Lake Champlain Basin Program (pg. 12).

⁵ *Supra Note 1* at Section 5.3.2.2. (pg. 241).

These precipitation changes and increased runoff will in turn impact water quality: “[i]ncreases in heavy precipitation jeopardize water quality in Vermont. Storms produce large runoff events that contribute to erosion and nutrient loading. Combined with warm temperature, this creates favorable conditions for cyanobacteria blooms.”⁶ Moreover, this increase of nutrient runoff from farm fields is likely to undercut the efforts of the agricultural sector to meet the Lake Champlain Total Maximum Daily Load (TMDL) goals and reduce nutrient pollution statewide. Because of this, it is likely the RAPs need to be updated and the regulation amended to address these weather changes and reduce this risk of nutrient runoff.

The RAPs also note that soil health is key to the success of agriculture: “Soil quality and soil health are critical elements of an overall agricultural non-point source pollution reduction program. Agricultural soils are recognized as a critical resource for the overall prosperity of Vermont’s agricultural community and for the public at large.”⁷ Because of this, AAFM should include in its examination whether the RAPs adequately prevent erosion and soil loss from these heavy precipitation events and more frequent flooding events. “Greater amounts of runoff not only lead to higher streamflows; it also drives erosion and carries pollutants and sediments into Vermont’s waterways.”⁸ Not only will this result in the loss of a precious commodity for the farmer, but erosion and sedimentation further contribute to nutrient pollution impacts.

It is our understanding that AAFM is currently considering amendments to the RAPs. While the regulation is under this consideration, it provides the opportunity for AAFM to review the RAPs in their entirety to ensure the requirements account for the changing weather patterns and more frequent flooding associated with climate change. More specifically, we ask the Agency to consider the following questions related to specific sections of the RAPs:

Section 3: RAPs Activities and Applicability

- Whether farms that are currently exempt from the RAPs, particularly those with adult livestock, should be included due to heavier and more localized weather events that can cause an outsized impact. (Sec 3.1)

Section 4: Small Farm Certification

- Whether the threshold for qualifying as a Certified Small Farm should be amended to include a smaller number of livestock, for example, less than 50 mature dairy cows or less than 750 swine. (Sec 4.1)

Section 5: Agricultural Water Quality Training

- Whether the water quality training currently received by farmers adequately addresses process and procedure of manure application that focusses on more frequent, intense heavy participation events.

⁶ *Id*, Executive Summary 3.3.

⁷ Vermont Required Agricultural Practices Rule for the Agricultural Nonpoint Source Pollution Control Program, Vermont Agency of Agriculture, Food & Market (Nov. 23, 2018), §1.1, pg. 2.

⁸ *Supra Note 1* at Section 3.5.1 (pg. 142).

- The education processes and procedures of particular concern include (1) the prevention of discharges, (2) mitigation and management of stormwater runoff, (4) the mechanical application of manure or nutrients and methods or techniques used to minimize the runoff of applied manure or nutrients to waters of the State, and (5) weather and soil conditions that increase the risk of runoff of manure or nutrients to waters of the State.

Section 6: Required Agricultural Practices

- Whether intense precipitation events have resulted in more frequent and a higher volume of discharge, even if the current RAPs are adequately implemented on a farm field. (Sec 6.01)
- Whether requirements regarding the storage of manure and other agricultural wastes needs to be adjusted to take these weather events into account. (Sec 6.02)
- Whether Nutrient Management Planning, particularly nutrient application, needs to be adjusted to address changes in precipitation. (Sec 6.03)
- Whether soil management activities and retention practices should be altered due to heavy precipitation events to ensure soil health and limit erosion (Sec 6.04 (b), (c))
- Whether requirements for the use of cover crops are stringent enough to protect soils from erosion due to more frequent and intense flooding events. (Sec 6.04(d))
- Whether standards and restrictions for manure application are adequate, particularly focusing on the following subsections of Sec. 6.05: (a) is the seasonal ban adequate or should it be expanded?, (b) should more stringent measures be employed to address frequent flooding events from adjacent surface waters?, (d) are the standards used to prevent application on lands subject to flooding, ponding and other conditions adequate? and (g) are the application limits of 100 feet from a private water supply and 200 feet from a public water supply adequate to protect drinking water and public health from nutrient infiltration due to heavy precipitation and more frequent flooding? (Sec 6.05)
- Whether the criteria and review process for seasonal and emergency spreading exemptions are adequate and being followed rigorously by the Agency. (Sec 6.06)
- Whether the required buffers are adequate to protect waters from increased surface runoff and whether a 25-foot buffer of perennial vegetation that can be harvested provides adequate protection for adjacent surface waters. (Sec 6.07)
- Whether efforts and standards to stabilize the banks of surface waters are adequate to account for more frequent and higher flooding events. (Sec 6.10)

Section 9: Construction of Farm Structures

- Whether current requirements are adequate to protect farm structures from flood damage and protect private property downstream in case of destructive flood events.

Section 12: Tile Drain Discharge

- Whether the ban on new installations of surface inlets is abided by and whether this should be broadened to require removal of surface inlets, as well. (Sec 12.2)

- Whether the requirements for pattern tile drains that were in the initial February 2018 draft of the proposed RAPs for tile drains should be reconsidered, particularly Sec 12.4 Requirements for Subsurface Pattern Tile Drainage.⁹ These requirements were removed from the draft rule before it was presented to the Interagency Committee on Administrative Rules (ICAR) and the start of the public comment process. This proposed Sec 12.4 contained requirements for nutrient management plans, the identification of cropland with tiles, and rules for manure application on tiled fields. The most applicable subsection that warrants reconsideration is:

“(e) Manure or other agricultural wastes shall not be applied when field conditions are conducive to flooding, runoff, ponding, or other off-site movement, or can reasonably be anticipated to result in flooding, runoff, ponding, or other off-site movement, regardless of NMP recommendations.”

The revisiting of this subsection could have important implications for the reduction of discharge from tile drains.

- Finally, significant research on tile discharge and Best Management Practices has occurred since the RAPs were first implemented. We urge AAFM to begin applying these findings to tile drains to reduce impacts on surface waters.

We thank you in advance for this consideration.

Sincerely,



Lori Fisher
Executive Director
Lake Champlain Committee



Elena Mihaly
Vice President and Director
Conservation Law Foundation



Jon Groveman
Policy and Water Program Director
Vermont Natural Resources Council

cc: Alyson Eastman, Deputy Secretary
Laura DiPietro, Water Quality Director
Julie Moore, Secretary, Agency of Natural Resources
Peter Walke, Commissioner, Dept. of Environmental Conservation

⁹ PDF file named ‘Annotated-Text-RAP-Rule-Subsurface-Tile-Drainage-02152018,’ on file with undersigned organizations.

Sen. Robert Starr, Chair, Senate Committee on Agriculture
Sen. Chris Bray, Chair, Senate Committee on Natural Resources & Energy
Sen. Chris Pearson, Vice Chair, Senate Committee on Agriculture
Sen. Richard Westman, Vice Chair, Senate Committee on Natural Resources & Energy
Rep. Carolyn Partridge, Chair, House Committee on Agriculture & Forestry
Rep. Amy Sheldon, Chair, House Committee on Natural Resources, Fish & Wildlife
Rep. Rodney Graham, Vice Chair, House Committee on Agriculture & Forestry
Rep. James McCullough, Vice Chair, House Comm. on Natural Resources, Fish & Wildlife