DEPARTMENT OF ENVIRONMENTAL CONSERVATION LEGISLATIVE REPORT

Report on Act 76 Recommendations Regarding Implementation Of A Market-Based Mechanism that Allows the Purchase Of Water Quality Credits by Permittees Under 10 V.S.A. Chapter 47, and other Entities

Year: 2024

Date reported: February 21, 2024

Authorizing statute: 10 V.S.A. Chapter 47

Committees: Senate Committees on Appropriations, on Natural Resources and Energy, and Finance and the House Committees on Appropriations, on Natural Resources, Fish, and Wildlife Environment, and Energy, and on Ways and Means.

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Introduction

Act 76 of the 2019 legislature directs the Secretary of the Agency of Natural Resources to develop "*recommendations regarding implementation of a market-based mechanism that allows the purchase of water quality credits by permittees under 10 V.S.A. chapter 47, and other entities*." The Act also specified that "These recommendations shall be developed in consultation with the Clean Water Board and shall be submitted to the legislature." This report, presented to the Clean Water Board on February 14, 2024, fulfills this directive by providing the Agency's current recommendations with regard to further implementation of water quality trading.

Background

10 V.S.A. Chapter 47- Water Pollution Control- empowers the Agency of Natural Resources (ANR) to protect water quality in Vermont's surface waters by regulating discharges. Further, the *Phosphorus Total Maximum Daily Loads (TMDLs) for Vermont Segments of Lake Champlain* (i.e., "Lake Champlain TMDLs") sets forth required reductions across the full range of contributors to nutrient loading to the lake. The contributors are grouped by sector, and include wastewater treatment facilities, stormwater runoff from impervious surfaces, and agricultural runoff. Each of these sectors need to reduce existing loads, and ANR achieves this goal primarily through the use of permits containing conditions that specify the both the nature and quantity of pollutants that can be discharged by a permittee such that surface waters still meet Vermont Water Quality Standards. Such permits exist for so-called 'point-sources', discharges that occur through pipes or other discrete conveyances. These include the discharge of wastewater and stormwater, as well as discharges from certain areas of farms regulated by the ANR. A discharge permit for these types of discharges typically includes either numeric or narrative effluent limits that the permittee must meet to ensure protection of the beneficial uses of a waterbody. Numeric limits are often expressed in pounds

of a pollutant the discharger may release per unit of time, such as over a year. The ease and cost of meeting these effluent limits varies both across sectors, and often within a given sector. As such, the legislature directed ANR to evaluate the feasibility of market-based approaches for the sale and purchase (or "trading") of credits that permittees could use in place of directly meeting effluent limits specified within a permit. This concept was previously assessed as part of an ANR-AAFM-sponsored effort in 2015. The 2015 investigation generally assumed that the agricultural sector would be the "seller" of pollutant credits, and that the developed lands stormwater sector would be the "buyers". The final report from that study concluded that some, but not all, conditions necessary to support trading are already in place. The ANR has now further evaluated both the current landscape of water quality crediting within the State as well as the feasibility of standing up an additional trading program and offers its findings in this report.

Current Water Quality Trading Opportunities

ANR currently has the ability to reallocate or 'trade' nutrient discharges through several existing mechanisms. These include:

• Wasteload Allocation transfer between wastewater treatment facilities as set forth in the DEC's 1987 Wasteload Allocation Rule.

Example: Municipality X is achieving greater than their required removal for Total Phosphorus (TP), and "sells" the excess credits to Municipality Y who is not meeting their current limits, rather than Municipality Y embarking on a facility upgrade to increase TP removal.

Integrated permitting for municipalities with wastewater and municipal stormwater permits;

Example: Burlington Wastewater and Stormwater WLAs for TP are combined in a set of integrated permits that require the group of facilities to meet the total WLA for the city, providing flexibility for project implementation.

• Stormwater offset projects and impact fees;

Example: A developer or property owner exceeds treatment standards for their site, creating offset capacity that may be purchased by property owners that are not able to meet treatment standards.

• Site Balancing to meet stormwater treatment requirements

Example: Development sites may treat existing unregulated impervious surfaces in lieu of new regulated surfaces.

Each of these regulatory options currently exist, and therefore are able to be implemented by the ANR for permittees in Vermont. Waste Load allocation transfer between wastewater treatment facilities involves partnering municipal wastewater treatment facilities discharging to the same watershed or segment of Lake Champlain coming to an agreement on the terms of the waste load/financial exchange and then approaching the ANR with concurrent applications for permit amendment to memorialize the exchange through a change to their respective effluent limits. This differs from integrating permitting, which involves the transfer of waste load allocation between sectors within a municipality. To date this is being preliminarily considered as a transfer of pounds of phosphorus to the developed lands (stormwater) sector from the wastewater treatment facility WLA, which would be memorialized in both stormwater and wastewater permits for the municipality.

Additional opportunities in the developed lands sector include stormwater offset projects, which allow for public and private sector permittees to be pay offset fees when they can't meet required treatment standards or be paid offset fee credits when they exceed standards. Stormwater offset projects are those projects that either treat more stormwater or treat it to a higher level than they are required to. This creates capacity that can be purchased by projects that aren't able to meet treatment standards through the payment of offset fees. Another option available to entities requiring a stormwater permit is known as site balancing, which allows property owners to treat existing un-regulated impervious surfaces in lieu of treating new jurisdictional surfaces under certain circumstances. This added flexibility can have significant cost savings without compromising treatment or water quality.

The ANR currently manages all of these mechanisms through existing legal authority and implements these opportunities through existing permitting programs.

Barriers to Establishing Additional Trading Mechanisms

As described, ANR currently has several robust mechanisms for achieving the goals of water quality trading. These opportunities notwithstanding, there has been interest expressed in pursuing additional opportunities for market-based trading, particularly in the developed lands sector. However, there are several significant impediments to instituting more complex trading processes to address regulated stormwater and wastewater discharges in Vermont.

As described above, there are several existing mechanisms that effectively achieve water quality trading within the developed lands (stormwater) and wastewater sectors. Further, the developed lands sector typically must incur the costs of compliance with existing regulations (achieve baseline regulatory requirements) before any additional trading program credits could be established and implemented. There are also legal and policy questions regarding the quantification of "credits". For example, in wastewater discharges, laboratory analyses are used to determine pollutant concentrations released, while in the stormwater sector Best Management Practices (BMPs) are used to reduce the concentration of pollutant by a prescribed amount based on the practice. There is considerable uncertainty in trading "a pound for a pound" between the two types of discharge, requiring trading formulae to include factors accounting for this uncertainty, that must be derived and applied when reallocating the pollutant loads.

In a similar way, there would also need to be additional analysis to determine which practices in the agricultural sector would be available for trading with the developed lands and wastewater sectors, as well as the formula for trading between those sectors, as it would be different from those for trading between stormwater and wastewater treatment. For example, many agricultural practices are annual in nature, which means that they'd need to be re-established each year. This creates uncertainty and risk for credit purchasers who do not have control over whether the farm they purchase credits from consistently adheres to the practices annually. Additionally, in order to overcome the necessary margin of safety to account for this uncertainty, the buyer must generally purchase more credit than the practices purportedly create due to the variability of these practices as installed. This concept of trade ratios works against the less predictable practices typically available from the agricultural sector. This is further discussed in the 2015 Report, attached.

Further, the investment necessary to create additional water quality credit trading opportunities would need to coincide with the demand from the developed lands and/or wastewater sectors, which the Agency is currently not receiving. Coupled with the significant financial assistance the State is receiving

through the federal Infrastructure Investment and Jobs Act (IIJA) and the American Rescue Plan Act (ARPA) ANR does not anticipate such demand to increase in the near future.

Lastly, ANR does not at present have the staff resources necessary to stand up additional trading programs, or to support the complex regulatory interactions required. The implementation of these types of programs would require either additional staff resource or result in an impact to existing services provided by the Agency if additional positions to support the work were not allocated or would require the creation of a new external entity such as a third-party 'trading bank' which would necessitate significant startup investment and ongoing operational costs.

Conclusion and Recommendations

There are several existing mechanisms to achieve the fundamental goals of water quality-based trading already in place at ANR, the addition of new trading concepts is fraught by both logistical and capacity-based concerns, and there is not currently a demonstrable need for these additional mechanisms.

Based on these considerations ANR does not believe development of additional market-based trading mechanisms to address the developed lands or wastewater waste load allocations in the *Phosphorus Total Maximum Daily Loads (TMDLs) for Vermont Segments of Lake Champlain* (i.e., "Lake Champlain TMDLs") is warranted at this time. ANR will continue to monitor both the demand for additional trading opportunities and any regional or national developments in trading concepts or implementation and is open to revisiting our recommendations if conditions change.