



Lake Champlain
International
Clean Water. Healthy Fish. Happy People.



April 6, 2016

Vermont Department of Environmental Conservation
Watershed Management Division
1 National Life Drive, Main 2
Montpelier, Vermont 05620-3520

Submitted by email to: julia.butzler@vermont.gov

Re: Draft Combined Sewer Overflow Rule

Dear Watershed Management Division:

These comments on the State of Vermont Department of Environmental Conservation's ("DEC") "Draft Combined Sewer Overflow Control Rule"¹ are offered on behalf of the citizen members of the Lake Champlain International, Inc., the Conservation Law Foundation, and the Connecticut River Watershed Council.

Previously, in December of 2015, we submitted comments on the Department's Draft Combined Sewer Overflow Policy. With very few and minor exceptions,² the Department disregarded those comments in shifting to a Draft rule that is very similar to the prior draft policy. Unfortunately, this latest Draft suffers from many of the same infirmities that made the draft policy an inadequate response to the longstanding problem of Combined Sewer Overflow discharges in Vermont. The Department's disregard for many of the legal and policy considerations we previously brought to its attention compels us to restate here some of those comments that remain relevant.

Combined Sewer Overflows ("CSOs") are not new. Their contribution to the water quality tragedy unfolding in Lake Champlain, its tributary rivers and streams, and other important surface waters in Vermont and points downstream is longstanding and well-established. For those reasons, the Clean Water Act requires the state of Vermont, which

¹ Hereinafter referred to as "Draft."

² One exception is DEC's recognition in the Draft that public participation efforts in the crafting of Long Term Control Plans must, consistent with federal policy, include "persons who reside downstream from the CSO outfalls, persons who use and enjoy the downstream waters, and any other interested persons." Draft § XX-403(2) (adopting comments made in LCI letter dated Oct. 30, 2015).

has been entrusted with “National Pollutant Discharge Elimination System”³ permitting authority, to adopt a stronger Combined Sewer Overflow Control Rule and, more importantly, to ensure effective implementation of existing legal obligations through ongoing permitting and enforcement. As an EPA spokesperson recently made clear, “towns are in violation (of the Clean Water Act) when there is a CSO discharge. It does violate the Clean Water Act.”⁴ Though adoption of a rule like the proposed Draft cannot insulate dischargers from liability for ongoing Clean Water Act violations, it can still—if substantially strengthened as recommended below—help eventually deliver on the law’s promise of water that is consistently safe for swimming, drinking, and fishing. *See* 33 U.S.C. § 1251(a)(2) (establishing national goal that “water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water be achieved by July 1, 1983.”).

In recent years, we have worked tirelessly to inform the public about the alarming regularity of Combined Sewer Overflows plaguing Vermont waterways, especially in the Lake Champlain Basin.⁵ The reason for our concern is manifest in EPA’s description of the pollution problems such unlawful discharges present:

Because CSOs contain untreated domestic, commercial, and industrial wastes, as well as surface runoff, many different types of contaminants can be present. Contaminants may include pathogens, oxygen-demanding pollutants, suspended solids, nutrients, toxics, and floatable matter. Because of these contaminants and the volume of the flows, CSOs can cause a variety of adverse impacts on the physical characteristics of surface water, impair the viability of aquatic habitats, and pose a potential threat to drinking water supplies. CSOs have been shown to be a major contributor to the use impairment and aesthetic degradation in many receiving waters and have contributed to...beach closures, and even occasional fish kills.⁶

Peer-reviewed research conducted within the Lake Champlain Basin confirms “that urban stream-stormflows,” especially those containing Combined Sewer Overflow Discharges, “are significant contributors of O[rganic] W[astewater] C[ompound]s to large receiving waters such as Burlington Bay in Lake Champlain.”⁷ This research reminds us that, when it comes to many forms of pollution contained in untreated Combined Sewer Overflows, dilution is not an acceptable solution.

³ 33 U.S.C. § 1342; CWA § 402 (emphasis added).

⁴ M. Polhamus, *Critics: Record on sewage overflow enforcement stinks*, VTDigger.org (Feb. 11, 2016) at <http://vtdigger.org/2016/02/11/175729/>.

⁵ *E.g., id.*

⁶ Combined Sewer Overflows Guidance for Permit Writers, U.S. E.P.A. Office of Wastewater Management, EPA 832-B-95-008 at 1-1 (Aug. 1995).

⁷ Phillips & Chalmers, *Wastewater Effluent, Combined Sewer Overflows, And Other Sources Of Organic Compounds To Lake Champlain*, Journal Of The American Water Resources Association Vol. 45 No. 1 at p. 56 (2009).

A quarter-century ago, when DEC first adopted a policy to deal with Combined Sewer Overflows, the Department concluded that “the great majority of CSO discharges are currently not in compliance with Vermont’s Water Quality Standards.”⁸ While DEC and Vermont municipalities deserve credit for eliminating more than half of the discharges that existed in 1990, a substantial number remain. Sadly, the remaining CSOs are still contributing to noncompliance with Vermont Water Quality Standards, specifically those regulating phosphorous levels in Lake Champlain.

Importance of Water Quality-Based Effluent Limitations for CSOs

In light of the ongoing contribution CSO discharges make to the violations of water quality standards in Lake Champlain, the Draft’s acknowledgment that these discharges are subject to water quality-based NPDES permitting requirements is critical.⁹ Under the Clean Water Act, NPDES permits must contain water quality-based effluent limitations for any pollutant that “causes, has the reasonable potential to cause, or contributes to” a violation of water quality standards.¹⁰

Binding Clean Water Act precedent from the Vermont Environmental Court makes clear that, in issuing NPDES permits, DEC must conduct a “site-specific,” “time-specific” analysis to determine whether a permit’s proposed water quality-based effluent limitations are sufficient to achieve compliance with water quality standards.¹¹ Accordingly, we observe that the adequacy of DEC’s response to the CSO problem cannot be judged facially in the abstract context of a general policy. Rather, DEC’s fulfillment of its obligations as the permitting authority must be judged on an as-applied basis when DEC issues a draft for each permit covering CSO discharges.¹² DEC’s past implementation—through permitting—of existing federal and state CSO control policy provides us with little confidence moving forward. We hope the issuance of this Rule—wherein compliance with water quality standards is paramount—marks a new era in DEC’s implementation of the federal Clean Water Act and the CSO policy it incorporates.¹³

DEC Should Not Back Away From Provisions Prohibiting Dischargers from Worsening their CSO Problems

The severity of the CSO problem in Vermont and the lack of urgency on the part of many CSO dischargers when it comes to planning, financing, and implementing CSO elimination efforts, militate against a regulatory program that allows polluters to make this problem worse before it gets better. For that reason, we strongly supported § XX-

⁸ Combined Sewer Overflow Control Policy, State of Vermont, Agency of Natural Resources, Department of Environmental Conservation at p. 3. (June 1990).

⁹ Draft Environmental Protection Rule, Combined Sewer Overflow Rule Ch. XX, State of Vermont, Department of Environmental Conservation (Mar. 2016) § XX-102 Statement of Purpose.

¹⁰ 40 C.F.R. § 122.44(d)(1)(iii) (implementing 33 U.S.C. § 1311(b)(1)(C)).

¹¹ *In re Montpelier WWTF Discharge Permit*, No. 22-2-08 Vtec (Vt. Env’tl. Court. June 2009).

¹² *Id.*

¹³ *See* 33 U.S.C. § 1342(q)(1).

402(10) as originally issued for notice by DEC. It wisely contained a “[p]rohibition of the connection of new sources of stormwater or wastewater to any CSS if such connection would result in a net increase of stormwater or wastewater to the CSS.” We are disappointed that DEC has retreated—by issuance of an updated Draft dated March 4, 2016—from its original proposal in response to outcry from officials representing polluting municipalities.

Contrary to the outcry of polluting municipalities that have been and still remain out of compliance with the law as a result of frequently-recurring, heavily-polluted CSO discharges, it is possible to enable new development in existing CSS areas without making CSO problems worse. In fact, the language DEC added to the March 4 Draft Long-Term Control Plan at § XX-403(5) contains clear illustrations of how a “no net-increase” standard could be complied with as polluters work toward ultimate CSO discharge elimination:

The LTCP shall ensure that new sources of stormwater and wastewater to the CSS do not increase the volume, frequency, or duration of CSO events through implementation of control measures, such as making reductions in existing sources of stormwater or wastewater to the CSS, creating or increasing storage capacity within the collection system, or other measures approved by the Secretary.

Aggressive and long-overdue deployment of green stormwater infrastructure, restoration of natural infrastructure, and water/sewer conservation measures and standards are available now to ensure that municipalities and developers building in CSSs do not exacerbate the CSO problem plaguing our waterways. This requirement belongs as an immediately-effective minimum control measure rather than as an element of a long-term plan.

Pollutant Concentration Monitoring is Essential to Comply with Minimum Clean Water Act Standards

Through express adoption by reference in the Clean Water Act, Congress has required that NPDES permits issued to address Combined Sewer Overflows conform to EPA’s April 1994 “Combined Sewer Overflow Control Policy.”¹⁴ Among other requirements, the 1994 policy sets forth “Nine Minimum Controls” that CSO dischargers were supposed to implement “by no later than January 1, 1997.”¹⁵ “Monitoring to effectively characterize the CSO impacts and the efficacy of CSO controls” is among the required Nine Minimum Controls.¹⁶ The EPA Control Policy explains that permittees should develop “a comprehensive, representative CSO monitoring program that measures the

¹⁴ 33 U.S.C. § 1342(q)(1); U.S. E.P.A. Combined Sewer Overflow Control Policy, 59 Fed. Reg. 18,688-98 (April 11, 1994).

¹⁵ 59 Fed. Reg. at 18,696.

¹⁶ *Id.* at 18,691.

frequency, duration, flow rate, volume and pollutant concentration of CSO discharges,” and that “nutrients” like phosphorous should be included in the monitoring parameters.¹⁷

Unfortunately, DEC has not effectively required dischargers’ compliance with these monitoring requirements. As a result, DEC has been unable to provide EPA with the data necessary to target these discharges with precision as part of the pending TMDL process for Lake Champlain. The following excerpts from the 2015 U.S. E.P.A. Draft “Phosphorous TMDLs for Vermont Segments of Lake Champlain” illustrate the source of our concern:

“Data are not available from CSOs (other than the CSO discharging to Burlington Bay) and stormwater outfalls to characterize their individual phosphorus loads for the purpose of the TMDLs.”

“A review of available information related to Vermont CSO discharges to Lake Champlain indicates that there is insufficient information to estimate annual phosphorus loads from untreated CSOs....Continuous simulation hydrologic/hydraulic models have not been developed for the combined sewer systems in Vermont. Consequently, there is not a reliable means for calculating annual discharge volumes for the untreated CSOs, which are needed to calculate loads.”

“Estimates of discharge flows from active untreated CSO are non-existent.”¹⁸

The absence of these important data, nearly eighteen years after permittees were required to implement a “comprehensive” monitoring program, indicate insufficient permitting and enforcement oversight by DEC. The word “phosphorus” is notably absent in the current Draft; we, therefore, see little reason to hope for more effective permitting and enforcement on this point moving forward.

As a state delegated to administer the NPDES program, Vermont is authorized to design and implement a program that exceeds federal minimum standards.¹⁹ Vermont enjoys no authority to weaken federal standards.²⁰ Therefore, at a minimum, DEC must establish rule-based standards that conform to the monitoring provisions of EPA’s CSO Control Policy and that ensure effective administration of NPDES permitting through establishment of WQBELs based on site-specific, time-specific analysis. Such conformity with federal policy and permitting requirements is not possible without representative CSO monitoring that includes pollutant concentration measurements, specifically for pollutants of extreme concern like phosphorus.

¹⁷ *Id.* at 18,692.

¹⁸ The excerpts from the Draft Phosphorous TMDLs are found at pages 33-35.

¹⁹ C.W.A. § 402(b); 40 C.F.R. § 123.1 (“Nothing in this part precludes a State from . . . [a]dopting or enforcing requirements [under its State Program] which are more stringent or more extensive than those required under this part.”).

²⁰ *See* 40 C.F.R. § 123.25(a) (States are not precluded from omitting or modifying any provisions to impose more stringent requirements . . . but they must establish requirements at least as stringent as [EPA’s] listed provisions [in the Act].”; *see also* 3 V.S.A. § 842(b)(1) (authorizing legislative objection to rules that go beyond the authority of the agency).

Permitting and Enforcement to Ensure CSO Dischargers' Financial Commitment to Clean Water

Vermont municipalities, and the state and federal legislators and executives who have traditionally been more generous partners in sharing responsibilities for maintaining clean water, have long been on notice of the need to finance CSO remediation. The fact that Combined Sewer Overflows have so long persisted as well-known yet poorly accounted for and controlled contributions to water quality standard violations represents a failure of planning for and execution of clean water obligations. Ultimately, however, DEC owns some responsibility for this failure because it has not used its enforcement authority to impose penalties on CSO dischargers who have not timely taken the necessary steps to meet requirements to control CSO discharges. The Draft's anticipated use of "1272 Orders"²¹ is an acknowledgment that many CSO dischargers are violating state and federal law.

DEC must take stronger actions to hold dischargers accountable for compliance with existing and future CSO Control policy and permit requirements. For this reason, the CSO Rule and permits issued consistent with the rule should include language modeled on EPA's "Combined Sewer Overflows Guidance for Permit Writers."

The permittee shall allocate adequate funds specifically for operation and maintenance activities. The permittee shall submit a certification of assurance from the appropriate local government entities that the necessary funds, equipment, and personnel have been or will be committed to carry out the O&M plan.²²

The foregoing model permit term, while focused on operations and maintenance, could easily be adapted to installation of CSO control measures such as green infrastructure in CSO sewersheds. Such enforceable permit conditions mandating financial planning for CSO control are essential to ensuring that dischargers and their financial partners in the state and federal legislatures dedicate the resources necessary to protecting and restoring the invaluable public trust asset of clean water. Such permit terms would also enable those affected downstream communities and citizens to supplement the DEC's enforcement capability through the use of citizen suits.

Timely and Effective Public Notification of CSOs Needed

Better consideration of downstream communities and those who may reside away from CSO-affected waters but who would otherwise exercise their rights to use and enjoy those waters should be given in the Draft's requirements for "public notification" of CSOs. H.674, legislation recently passed by the Vermont House and under consideration by the Senate, embodies the appropriate minimum standards (one-hour notice) for a

²¹ 10 V.S.A. § 1272.

²² *Combined Sewer Overflows Guidance for Permit Writers*, U.S. E.P.A. OFFICE OF WASTEWATER MANAGEMENT, EPA 832-B-95-008 at A-9 (Aug. 1995).

system of timely and effective notification. The Draft should at least conform to those standards.

Accounting for Climate Change in Interim Control Design Storm Recommendations

As DEC knows, our climate has changed dramatically in the quarter-century since DEC first established a CSO design standard. The following excerpts from leading climate research papers paint a stark picture of the clean water and flood resilience challenge that lies ahead because of climate change:

Vermont's annual precipitation has been increasing by one inch per decade since 1941. The amount of rain events with high intensity rainfall is increasing dramatically. From 1960-1980, Vermont averaged four days with precipitation greater than one inch. For the last two decades, these intense precipitation events occur on average 7 days a year, with many observations over 10 days per year.²³

The increased incidence of extreme precipitation in Vermont communities as a result of climate change—a trend that is predicted to increase as climate change accelerates²⁴—underscores the urgency of effectively addressing CSOs lest their damaging occurrence increase. As reported by Vermont Public Radio, nearly half of the sixty remaining CSO discharge points are not constructed to handle the flow volume or intensity of the current, badly outdated design storm in the existing CSO Control Policy.²⁵ This is yet another example of the underutilization of enforcement to establish a culture of compliance among municipal officials and their state and federal funding partners. Without real consequences, CSO dischargers will continue to pass the burden of pollution to downstream neighbors.

DEC's Draft marks an important evolution in its historically tolerant approach to CSO discharges. Specifically, the Draft recognizes that compliance with a wet-weather design standard alone is not tantamount to compliance with the Clean Water Act and Vermont Water Quality Standards. Rather, elimination of Combined Sewer Overflow discharges is required—either through separation or deployment of conservation measures and sewershed controls like green stormwater infrastructure. As such, the Draft recognizes that compliance with a design storm standard pegged to the 5-year recurrence event based on updated precipitation data *may* be an acceptable interim control under a Long-Term Control Plan that results from an enforcement action.²⁶ We applaud DEC for its evolution

²³ Galford et al., Eds, *Considering Vermont's Future in a Changing Climate: The First Vermont Climate Assessment*, GUND INSTITUTE FOR ECOLOGICAL ECONOMICS, pp. 26 (2014).

²⁴ Average daily precipitation is projected to increase by 7.1 percent by midcentury, and 9.9 percent by late century. Guilbert et al., *Impacts of Projected Climate Change over the Lake Champlain Basin in Vermont*, 53 *Journal of Applied Meteorology and Climatology* 1869 (Aug. 2014).

²⁵ *Sanctioned Pollution: Why Regulators Allow Sewage Dumps Into State Waters*, Vermont Public Radio (June 22, 2015.).

²⁶ Draft §XX-403(7) (recognizing that a dischargers' LTCP "may include interim CSO controls as a step in the process of bringing CSOs into compliance with the VWQS.").

in recognizing that compliance with Vermont Water Quality Standards, rather than a technical design standard, is the bottom line.

If, however, the final rule is going to encourage dischargers to consider deployment of interim CSO controls based on a 5-year design storm, then the rule must reflect the reality of a climate that is changing rapidly, especially as regards to precipitation patterns. We applaud DEC's attempt to account for the "spatial variability" of these changes and its desire to provide extreme precipitation depths tailored to the geography of each discharger as reflected in Appendix A. Yet we are concerned by the notion that incorporation of Appendix A into a rule may result in interim controls being calibrated to stale data no longer reflective of on-the-ground precipitation conditions and the discharges they can cause.

Appendix A notes that "data were downloaded from Cornell's Northeast Regional Climate Center's (NRCC) Extreme Precipitation Analysis website (<http://precip.eas.cornell.edu/>)." A review of the narrative accompanying that dataset reveals that it is based on a period of record ending in 2008—more than eight years ago.²⁷ Thus, the creators of this data recognize that "given current trends and projected changes in extreme rainfall, the establishment of a fixed base is problematic."²⁸ For that reason, the Cornell team plans to complete updates, likely on a decadal basis, to strike a balance between providing some degree of certainty and an appropriate degree of accuracy upon which to base regulatory decisions.²⁹

DEC should, therefore, heed the caution of the climate researchers. Rather than fixing a static set of precipitation values in rule, the final rule should adopt a narrative standard. Thus, DEC could set forth a review protocol for interim CSO controls, in cases where they are lawfully permissible, to be evaluated based on 5-year design storm calculated at the time such interim controls are proposed using best-available data plus a margin of safety accounting for uncertainty.

Green Infrastructure Appropriately Emphasized as CSO Control Measures

Finally, we strongly support the Draft's emphasis on green stormwater infrastructure "to reduce stormwater flow into CCS's to the greatest extent feasible and practical."³⁰ We do, however, suggest deletion of the phrase "and practical" from the sentence cited above, as it is redundant and confusing. Across the country, deployment of green stormwater infrastructure is displacing outmoded "gray infrastructure" approaches that rely on centralized, heavily-engineered holding tanks as the preferred method of CSO control. The experience in cities like Philadelphia³¹ indicates that a CSO control strategy focused

²⁷ Art DeGaetano, PhD and Dan Zarrow, *Northeast Regional Climate Center's Extreme Precipitation in New York and New England*, Northeast Regional Climate Center, Cornell University, p. 6, available at http://precip.eas.cornell.edu/docs/xprecip_techdoc.pdf.

²⁸ *Id.*

²⁹ *Id.*

³⁰ Draft § XX-403(3)(F).

³¹ See Green City, Clean Waters

http://www.phillywatersheds.org/what_were_doing/documents_and_data/cso_long_term_control_plan.

primarily on green stormwater infrastructure is more cost-effective than gray infrastructure approaches. Green stormwater infrastructure also provides ancillary benefits by improving the aesthetic of the built environment, positively affecting property values, and reducing localized flash flooding hazards.

In addition to requiring consideration of green stormwater infrastructure as CSO controls, DEC should also encourage dischargers to investigate “natural infrastructure.”³² While green stormwater infrastructure generally involves the engineered creation of landscapes that mimic natural beneficial hydrologic landscape features, natural infrastructure in the CSO remediation context would consider restoration of existing natural landscape features whose beneficial hydrologic features have been compromised. Even in urbanized areas that typically comprise CSO sewersheds, there are potentially opportunities to locate and restore wetlands that can slow flows and store precipitation that would otherwise result in a CSO discharge.

We appreciate DEC’s recognition that the existing CSO Control Policy and overall approach to CSO control is badly in need of an overhaul. While the Draft contains many important on-paper enhancements to existing requirements, more can and should be done to ensure timely control of CSO discharges to Vermont waters. Ultimately, the worthiness of this overhaul effort must be judged in actual results. We look forward to working with DEC, the legislature, federal partners, and discharging municipalities as we all work toward improving those results without further delay.

Sincerely,



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³² For a comprehensive discussion of the natural infrastructure concept, see Ozment, S., DiFrancesco, K., Gartner, T., *The role of natural infrastructure in the water, energy and food nexus*, Nexus Dialogue Synthesis Papers. Gland, Switzerland: IUCN (2015).