Topic: Department of Environmental Conservation (DEC) Perspective on H.481 “An act relating to stormwater management”

To: Senate Committee on Natural Resources and Energy

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Witnesses:

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DEC’s general comments on H.481

- The Department very much appreciates the committee’s attention to this matter. Stormwater is complicated, as Leg. Counsel O’Grady will tell you. IT is also necessary. The three-acre retrofit program is the final increment of phosphorus control necessary to achieve the Lake Champlain TMDL.
- DEC Supports H.481 as passed out of the House and we believe it is an important recognition of the challenges Vermonters are presenting to you.
- DEC recognizes the challenges of merging the spirit of Act 64 of 2015, Vermont’s Clean Water Act (“we’re all in”) with the implementation realities. DEC is keen to help find solutions that maximize cost-efficiency and equity for Vermonters.
- Even with site-specific complexities, we are collectively making good progress on permitting – that shouldn’t be understated. Construction costs, however, loom large, and we acknowledge the limited availability of state funding to offset these expenses.
- H.481 makes solid incremental progress in addressing some of these challenges and we provide summary below where and how we think this bill can assist.
- We recognize there may be interest in expanding the scope of the study committee. DEC believes the results of the study committee will be most valuable provided their charge is specific, achievable, and solution-focused within the bounds of the existing TMDLs.
- Lastly, a note for your constituents. The Stormwater program folks are there to help, and your constituents should never hesitate to reach out directly to them for assistance when it is needed.

DEC's view on H481

At the core, this bill really does three fundamental things, all beneficial.

1. Provides more time to apply for permit coverage, and to ultimately construct practices where necessary.
2. Provides incremental incentives to support municipal adoption of private 3-AC sites by
    a. Streamlining the process of creating special assessment districts.
    b. Providing direction to the Clean Water Board for one-time and on-going funding to compliment financing mechanisms in development.
3. Creates a study committee to look at regionalization of stormwater utilities, including considerations for how to provide technical assistance, and how to spread costs among a wider set of owners to alleviate the inequities created by the three-acre threshold.

Opportunities for Clarification

The Committee heard testimony on several items that DEC would like to clarify.

The State should look towards making investments in more cost-effective sectors

- As testified to extensively in the House, but also in this Committee earlier, the phosphorus reductions are needed to achieve the TMDL. While in aggregate the overall three-acre effort is small to the overall TMDL, in certain watersheds, it is critical. Remember that the TMDL is built watershed by watershed, and separates "wasteload" from "load" reductions.

- Three acre is 13% of the wasteload allocation and makes up more than 10% of the wasteload allocation in the Winooski, Otter Creek, and North Lake Champlain Direct watersheds.

Solutions in the stormwater sector are expensive and that state investments are insufficient to cover costs

- Treasurer Pearce issued a report in 2018 outlining the approach to meeting the aggregate goals of Act 64 and the TMDLs. In that report, and carried through in policy instruments to this day by the General Assembly, is an explicit recognition that the State does not bear the financial responsibility for every clean water action.

- The GA's efforts to allocate public funding to clean water are very consequential, but the GA never intended to fund every requirement through state administered

public funding/financing. That is specifically why the tiered usage of the Clean Water Fund expressed in Act 76 (2019), was created. In H481, we are modifying the tiering in a way that does not reduce efforts in other sectors, to further assist owners subject to three-acre.

Progress on three-acre permitting is limited due to overly complex permitting and site conditions

While the program has been up and running for a few years, the availability of ARPA support for permit obtainment, including the concerted efforts to communicate anew, has resulted in consistent growth in applications and permit issuance.

- As of the date of this testimony, 204 three-acre sites have secured an authorized stormwater permit (up from 177 when we started working on this bill in January).
- there are another 166 sites that have a Notice of Intent (NOI) submitted to the program with their draft permitting materials under review,
- 134 sites that are working on finalizing and submitting NOI materials.
- Out of 674 three-acre sites, therefore, DEC estimates that roughly 504 or 75% are progressing.
- Also – public funding is locked down for design and construction at every school district property subject to the three-ac requirement through our Green Schools Initiative, and every MHC in VT save one is supported by ARPA as well,and DEC has a game plan to assist those as well.

The State should allow more low-cost and nature-based solutions to stormwater runoff management.

- DEC will support this anywhere it is feasible. It is important to consider the difference between treating a site, though, and treating offsite or elsewhere in the watershed. For onsite treatment, there are a number of non-structural or limited structural approaches.
- Offsite treatment is much more nuanced and options are probably more limited than proponents may realize. That is because the phosphorus reductions achievable from these offsite projects necessarily would attach to a different part of the TMDL. Achieving one owners P reductions at an offsite location removes that location from being used to meet the much larger load allocation.

The State should remove certain property types or applicability of three acre, or address 3 AC at re-development, or even through new development.

- DEC is aware of proposals to exempt certain property types, or to defer implementation to re-development or even reassign the reductions to “super

treatment” achievable at new development. By exempting properties, we are basically re-assigning those pounds to other regulated properties.

- Regarding staging the reductions at the time of redevelopment, at its core, this simply redirects the costs of these P reductions from owners to developers, while also risking not meeting the TMDL timeline requirements. Further, there already exists a “future growth allocation” as part of the TMDL, so the opportunities to achieve reductions based on construction of new properties from greenfield is infeasible.

Three-acre sites that have existing permit numbers, so why are we requiring changes to those? Also, is there even enough capacity to do engineering?

- These are sites subject to active permits, but which have stormwater control technologies that pre-date those that went into effect in 2002. The difference between pre-2002 and present stormwater control technologies is sufficient that there is real opportunity for reductions through retrofitting these sites.

- At present, there are at least 28 experienced stormwater or civil engineering design firms that have been actively working and submitting Full NOI 3-acre stormwater permit applications. Other design firms identified in a list on the DEC Stormwater Program's website may also be capable of providing their services. That does not mean that those firms don’t have challenges attracting staff themselves. That’s a real issue now, and why the additional time offered in this bill will help.

The following information expands upon the points made above with additional detail and reference to provisions of the TMDL or applicable law.

Here are more details on the Bill itself:

The core of the Bill is exploring mechanisms that provide additional technical and financial support to private and municipal three-acre sites.

1. First, through advancing municipal authority to assess impact fees when municipality assumes full legal responsibility for a stormwater system and establishing an upfront investment and funding floor for the Municipal Stormwater Implementation Program.
    a. These are designed as financial incentives to encourage municipalities to partner more closely with privately owned three-acre sites because there are benefits to the site and the state for municipal adoption or partnership. Municipalities tend to, but may not always be able to, offer stronger technical knowledge and expertise in permitting and construction oversight as well as capacity and equipment for operations and maintenance.
    b. Municipal impact fees and stormwater utilities are promising options to help raise local funds to enhance municipal capacity to support three-acre sites. Meanwhile, an initial appropriation of $5 million in State Fiscal Year (SFY) 2027 and an annual infusion of $1 million thereafter provides a financial commitment that provides transparency and clarity on a minimum allocation to support municipal three-acre requirements. This is particularly useful as the Municipal Stormwater Implementation Program is a Tier 2 priority for the Clean Water Board and otherwise may not receive any baseline funding from year to year.
    c. Please note the added language on page 8, section 6: <u>This program shall be available to a municipality to comply with a permit for impervious surface of three acres or more for a residential subdivision when the municipality assumes full legal responsibility for the stormwater system of the residential subdivision under subsection 1264(c)(7) of this title.</u>
        i. DEC reads this added language as expansive as opposed to exclusionary. Municipalities can access financial assistance through the Municipal Stormwater Implementation Program for all types of municipal three-acre projects, *including* where assuming full legal responsibility for a residential subdivision and/or other private/non-residential sites. This bill is not intended to force unwilling or unable municipalities into supporting private three-acre sites. We agree that municipal adoption of a private three-acre site is not always the right solution (e.g., for a grouping of sites with similar needs, such as manufactured housing communities). Private three-acre sites whose legal responsibilities are not assumed by a municipality can

still access financial assistance through the Tier 3 Developed Lands Implementation Program.

2. Second, this bill provides support through leveraging diverse perspectives and expertise into a study committee that can unpack the regional utility model.
    a. Offering financial assistance/incentive through municipal adoption may present geographic inequities, where sites will receive varying levels of financial and technical assistance depending on their location and municipality's willingness and capacity to adopt and take on legal responsibility for the site.
    b. A regional approach may provide more geographic equity in access to technical and financial assistance for three-acre sites and may also be able to raise revenue to spread costs of the three-acre requirements over time and geography. A regional approach for meeting the regulations may also involve exploring more cost-effective and equitable solutions for meeting pollution reductions "offsite."
    c. Please note that a regional utility should not replace the three-acre rule. A rule and a utility are two separate but complementary tools to support clean water. One, the rule, establishes the performance standard and regulatory framework whereas the other, the utility, helps raise the funds and manage project planning and implementation. Creation of a new utility structure would not affect enforcement of permit conditions which remains a State responsibility.

Opportunities for Clarification

The Committee heard testimony on several items that DEC would like to clarify.

1) Concern that solutions in the stormwater sector are expensive and that state investments are insufficient to cover costs

a. DEC acknowledges that individuals and entities will face significant costs to comply with this permit. State financial assistance to implement the three-acre rule is critical to ensure the overall success of this regulatory program, required under the implementation plans for the Lake Champlain and Lake Memphremagog phosphorus total maximum daily loads (TMDLs). Also note that there are cost burdens carried by all sectors to meet clean water requirements.
    i. Act 64 of 2015, Vermont's Clean Water Act, charged the Vermont Office of State Treasurer with delivering a report that assessed costs and potential revenue sources to support success of the Act and Lake Champlain and Lake Memphremagog phosphorus

TMDL implementation. Establishing a long term and sufficient revenue source(s) was a component of the Lake Champlain phosphorus TMDL implementation plan, and an expectation of EPA under the TMDL's Accountability Framework.

a. Through extensive stakeholder and legislative engagement, the state held a public policy discussion to estimate the total funding need and to determine the state's share of overall costs versus federal, local, and private costs. (See Office of the State Treasurer Clean Water Report (January 2017): https://www.vermonttreasurer.gov/sites/treasurer/files/committees-and-reports/_FINAL_CleanWaterReport_2017.pdf.) The report estimated that regulatory stormwater would have an annual funding gap of roughly $23.9 million. Funding gaps were calculated by comparing estimated costs against potential revenues.

ii. Act 76 of 2019 expanded on Act 64 of 2015, using the outcomes of the Treasurer's Clean Water Report to estimate and formalize a floor commitment to fund our water quality goals. The state committed to "funding the Clean Water Initiative in a manner that ensures the maintenance of effort and that provides an annual appropriation for clean water programs in a range of $50 million to $60 million as adjusted for inflation over the duration of the Initiative" (10 V.S.A. § 1387). Generally, the state set a target to cover half of the overall annual cost with other sources covering the rest. The breakdown of state cost share, however, varies by sector and non-regulatory versus regulatory projects. Clean Water Fund priorities were set in statute in 2019 that reflect this strategy, as follows.

1. Tier 1: incentivize non-regulatory actions necessary to achieve water quality goals. (With the exception of AAFM's Water Quality Grants to Partners and Farmers, which funds some regulatory work, but also is highly cost effective and leverages significant federal funds.)
2. Tier 2: offset costs of stormwater regulatory compliance on public lands and with public infrastructure.
3. Tier 3: offset costs of stormwater regulatory compliance for private entities.

b. With these cost-share principles in mind, it is undeniable that projected costs have increased since this report was published in 2017. Recent

trends in high demand for engineering and construction along with inflationary pressures have likely driven up costs. The Committee received testimony on a range of current projected costs.

i. In general, DEC cautions against using pre-design cost estimates as a basis for understanding current cost challenges. Cost data for sites not yet designed or permitted may change significantly through the design process as site needs and cost-effective opportunities are identified. The most reliable sector cost estimates can be drawn from constructed or bid-out projects. Out of 29 public schools in the Green Schools Initiative that have already bid for construction work or constructed, the median cost per acre is $66,533.

ii. Additionally, DEC cautions against extrapolating median costs from specific examples. Three-acre sites vary in complexity, treatment needs, landowner preferences, site characteristics and capacity. Further, median costs to date tend to omit sites that will have no construction expenses associated with their permit conditions. ANR's funding programs only have preliminary insights into bid construction costs for sites we are financially supporting.

c. While costs have gone up, so have state investments, most recently with significant investments through the American Rescue Plan Act. Almost $60 million in state-administered funding has been committed to date to support three-acre sites over the last three fiscal years. Permit Obtainment Assistance (POA) program was our largest program in terms of eligibility. It provided up to $49,999 to all eligible three-acre sites to support the costs of final design and permit obtainment. A total of 180 sites applied and received awards. The state then identified public schools, Manufactured Housing Communities (MHC), and Agricultural Fairgrounds, as key site users for prioritized construction funding assistance.

d. Despite significant state investments, cost gaps remain. Programs established with ARPA funds may be continued but most all currently remain insufficiently funded to meet the need and high construction costs. Ultimately state investments will not fully cover the compliance costs for three-acre sites and must be balanced against other state commitments for clean water progress.

i. The Clean Water Budget for SFY 2026 proposes seed funds to pilot a financing program that will reduce the cost of borrowing for regulated sites. This would increase access to the upfront capital needed to fund design and construction of stormwater practices to meet permit requirements. The proposed revolving financing

structure is intended to be self-sustaining, allowing these dollars to continue to offer financial assistance for projects over time as earlier loans are repaid. This will alleviate long-term demand on the Clean Water Budget for regulatory clean water work. Granting and loan forgiveness are not currently under consideration given the limited dollars to seed this financing program pilot. With demonstrated success, however, and any additional spending authority the program may receive, there is potential to expand beyond financing and merge with opportunities for complementary granting, loan forgiveness and/or other subsidies given the needs and repayment capacities of the target audiences. A financing structure may be best suited to leverage the scale of funding proposed through H.481.

e. H.481 proposes some critical fixes and incremental improvements that DEC supports including extension of revenue generated by the Property Transfer Tax Clean Water Surcharge through repeal of the sunset, and opportunities to lessen the burden on individual landowners by incentivizing municipal adoption and exploring the potential to transition to regional revenue raising mechanisms that will offset the individual cost burden.

2) Suggestion that the State should look towards making investments in more cost-effective sectors

a. The Lake Champlain and Lake Memphremagog TMDLs have aggressive reduction targets, and each land-use sector must maximize phosphorus reductions to meet the overarching goals. The State of Vermont continues to promote collaborative and innovative options to find cost effective phosphorus reductions. The process of developing a TMDL intentionally maximizes target phosphorus reductions where feasible in more cost-effective sectors. The three-acre requirement is a necessary component of achieving the TMDLs' developed lands phosphorus reduction targets. Meeting the three-acre targets through actions in other sector(s) would require other sector(s) to meet and exceed their targets. However, there is no known capacity available in other sectors to make up for the reductions needed within the three-acre requirements.

b. Act 76 of 2019 launched the Water Quality Restoration Formula Grant Program which establishes Clean Water Service Providers to achieve pollutant reductions on clean water projects, defined partially as those projects not subject to existing stormwater regulations. In other words, there are existing funding mechanisms and pollutant load reduction targets set for these other "non-regulatory" sectors. If seeking to achieve

three-acre assigned load reductions in other sectors, it's still unclear whether there's enough project opportunity in that space to achieve all load reductions projected to be achieved through both regulatory and non-regulatory approaches.

a. DEC remains mindful that if the state cannot make satisfactory progress to achieve required phosphorus reductions, EPA may compel phosphorus reductions from more costly/less cost-effective sources over which they have jurisdiction. This includes wastewater treatment facility upgrades and combined sewer overflow abatement efforts; both significantly more expensive than stormwater treatment. From the Lake Champlain phosphorus TMDLs Accountability Framework (pages 58-59):

   "If EPA finds Vermont has failed to make satisfactory progress in any of the report cards described above, EPA may take one or more of the following actions for the lake segment in question:

   - *Revise the TMDL for the segment to allocate load reductions from nonpoint to point sources, such as wastewater treatment plants.*
   - *Expand NPDES permit coverage to unregulated sources. For example, exercise Residual Designation Authority (RDA) to increase the number of sources, operations or communities regulated under the NPDES permit program.*
   - *Increase and target federal enforcement and compliance assurance in the watershed."*

c. While re-opening the TMDLs and sector-based load allocations is less desirable there are still ways to continue expanding the cost-effectiveness of potential solutions. The proposed regional utility study within H.481 may contemplate regional stormwater management planning that supports the utility in "achieving the phosphorus reduction targets for the three-acre stormwater permitted properties within the utility district;" and explores "how a regional stormwater utility can allocate resources and cost-effectively and equitably achieve pollutant reduction measures that are not fully achieved by regulated sites, as might be articulated in a regional stormwater management plan." A regional approach can provide expanded "offsite" treatment solutions that could potentially lower costs. There are also clear stormwater solutions that can reduce pollution from the Developed Lands sector already articulated within the Vermont Stormwater Management Manual as well as the Stormwater General Permit 3-9050 that can and are being leveraged (see item 3 below).

3) Suggestion that the State should allow more low-cost and nature-based solutions to stormwater runoff management.

a. We acknowledge that achieving water quality goals requires natural resource projects such as the protection and enhancement of wetlands and floodplains. These projects were not included as eligible 3-acre site offset projects because the Lake Champlain TMDL already accounts for these projects under the phosphorus load allocation for farms, rivers and forests – different land use sectors of the TMDL from the sector that covers 3-acre sites, the developed lands sector. We cannot trade off reductions from another sector to balance for not treating impervious surface on 3-acre sites because the pollutant reductions are needed from both sectors to meet the overall TMDL requirements (see item 2 above for more details).

b. Regulated stormwater runoff from impervious surfaces on 3-acre sites cannot be directly piped into natural wetlands without first being treated with acceptable practices in the Vermont Stormwater Management Manual. Wetlands and their functions and values are best protected by treating stormwater before it enters a wetland rather than using them for waste disposal. Natural wetlands are not acceptable Vermont Stormwater Management Manual treatment practices and many wetlands are protected under the Vermont Wetland Rules.

c. If certain existing natural areas on a 3-acre site meet specific criteria in the Vermont Stormwater Management Manual for “disconnection” of impervious surfaces in their current condition, they can be used for treatment credit with no improvements needed for those areas, and therefore in most cases at no construction cost. The regulated stormwater runoff does need to be directed or conveyed into these areas for this to be an acceptable treatment practice. The presence alone of green spaces is insufficient to address the impact of runoff from existing impervious surfaces.

d. The study committee can explore other cost-effective approaches that may be feasible, a discussion best guided by qualified stormwater professionals and the other participants appointed to the committee.

e. Municipalities are currently able to identify offsite opportunities for equivalent pollutant reductions from developed lands, however, are limited to possible solutions only within the municipal boundary. A regional approach has to potential to lead to broader offsite opportunities within the watershed across municipal boundaries.

4) Suggestion to remove certain property types or applicability of three acre

a. The three-acre threshold was initially envisioned as a permit threshold under the draft Lake Champlain TMDL Phase I Implementation Plan as a means to achieve necessary phosphorus reduction in stormwater from developed lands in the watershed. That is, a three-acre threshold was

identified as sufficient to meet the established wasteload allocation (WLA) for developed lands, when applying the stormwater redevelopment treatment standard. The permit threshold was adopted by Act 64 of 2015 and incorporated into 10 V.S.A. § 1264. The threshold was informed by previous regulatory thresholds, stormwater best management practice pollutant removal efficiencies, and the scale of required phosphorus reductions, and it was therefore not arbitrary. After the adoption of the three-acre threshold, the Agency was able to estimate the reductions in stormwater-related phosphorus that are likely to occur as a result of this general permit. Generally speaking, and with the exception of the Missisquoi Bay and South Lake B segments, implementation of the three-acre, Municipal Roads General Permit, and VTrans Transportation Separate Storm Sewer (TS4) requirements are sufficient to meet TMDL wasteload targets, without overshooting the required reductions. In the case of South Lake B, given the relatively small amount of developed lands, a minimal amount of investment in nonregulatory reductions in stormwater is likely to be sufficient to meet the TMDL target. For several other watersheds, whether the three-acre threshold is sufficient will be more dependent on the extent of future growth and the actual amount of treatment that occurs.

b. Splitting municipal roads from the private subdivision three-acre assuming MRGP provides sufficient coverage.

    i. Act 64 created both regulatory requirements with separate standards intentionally to address two different sources of pollution. For MRGP, it's about best management practices controlling sediment that erodes from road surfaces and shoulders that carries phosphorus and other pollutants to our waters. For three-acre, the focus is to provide active treatment of stormwater runoff to remove phosphorus and other pollutants prior to discharge using performance-verified and effective practices, and standards to mitigate and prevent channel erosion in stormwater-impaired streams. If enough of a site's stormwater runoff is already conveyed to existing vegetated areas that meet certain criteria in the current Vermont Stormwater Management Manual, then it is likely that the site would have no construction costs and would simply need to maintain the conditions that ensure that the runoff is disconnected and maintain their stormwater permit coverage.

    ii. Operational permits for three-acre sites and the Municipal Roads General Permit are distinct permits that differ in focus. Operational permits typically include different stormwater

treatment practices, including volumetric control of stormwater that is important for stormwater-impaired watersheds, and active stormwater treatment practices meaning there is active removal of pollutants from the stormwater runoff, including phosphorus, through verified removal mechanisms. The standards in the MRGP are focused on preventing road-related erosion which if unmanaged, carries sediment with phosphorus attached to it into receiving waters. It is also necessary to keep municipalities as co-permittees on operational permits where they have taken over a road that requires permit coverage as part of a large project such as a residential subdivision because a project's overall stormwater system, and road stormwater system, are often interrelated. All owners of impervious surface, including a municipality if they own roads that are part of a project, need to remain permittees to ensure the overall stormwater system is properly maintained unless a municipality takes full legal responsibility for the permitted stormwater system. Additionally, annual operating fees under operational stormwater permits may be waived for the portion of impervious surface that is a municipal road.

c. Triggering treatment requirements only at time of re-development or new development

    i. Construction or expansion of new impervious that requires permit coverage already requires treatment, so there isn't the net pollutant reduction benefit that is otherwise achieved through the treatment of existing unpermitted or pre-2002 permitted 3-acre sites. There is an insufficient volume of regulated redevelopment projects requiring operational stormwater permits to achieve reductions from existing redeveloped impervious equivalent to those achieved at 3-acre sites, and new redevelopment projects are required to meet only 50% of the Water Quality Volume (the same redevelopment standard applicable for most 3-acre sites) This is unrealistic and would likely be rejected by EPA if proposed to modify the TMDL.

    ii. Consider the 3-acre sites that are never going to have this as a potential option. It would be difficult to restructure the TMDL agreement through hypothetical future development scenarios where new development or redevelopment projects may happen to be located here and there adjacent to 3-acre sites. Doing so would likely delay implementation and create uncertainty with the outcomes.

iii. Future growth allocation already accounted for new development. You'd be adding new costs to new development.

5) ***Suggestion that progress on three-acre permitting is limited and due to overly complex permitting and site conditions***

a. As of the date of this testimony, over 200 three-acre sites have secured an authorized stormwater permit. This number, however, insufficiently represents the level of effort and progress Vermonters have made towards permitting. In addition to the 204 sites with authorized permits (permits where the materials have already been reviewed and approved the Stormwater technical staff and proceeded through a public comment period), there are another 166 sites that have a Notice of Intent (NOI) submitted to the program with their draft permitting materials under review, and an additional 134 sites that are working on finalizing and submitting NOI materials. Out of 674 three-acre sites, therefore, DEC estimates that roughly 504 or 75% are progressing.
b. Out of 674 three-acre sites, DEC estimates roughly 18 that represent multiple landowners and that lack a formalized owners association. The committee heard significant testimony on the challenges that these types of sites have faced. While sites without an owner's association are challenging and provide a unique set of circumstances, they are a smaller proportion of all three-ace sites identified and their difficulties shouldn't be extrapolated to suggest a reason for low permitting success.
c. H.481 provides much needed timeline extension not only to provide more time for those more complex sites to prepare their NOI materials, but also brings sites who are currently "out of compliance" back to the table and back to productive conversations with DEC so they can feel more comfortable engaging with state staff on these sorts of challenges. A regional utility model may also provide much needed assistance to the more complex sites.

6) ***Question from the Committee regarding the sites on the 3-acre list with existing operational stormwater discharge permits identified.***

The majority of these existing permits are not expired. While there was a period in the past (late 90's - early 2000's) when the Stormwater Program was administratively continuing existing expiring permits rather than renewing them, most 3-acre sites with existing permits had been renewing their permit coverage every 5 years since then.

7) ***Testimony to the Committee suggested there are only 7 stormwater design firms available for 3-acre permitting and design work.***

We are aware of at least 28 experienced stormwater or civil engineering design firms that have been actively working and submitting Full NOI 3-acre stormwater permit applications. Other design firms identified in a list on the DEC Stormwater Program's website may also be capable of providing their services.

8) ***Question from Committee on why previously permitted sites were included as subject to 3-acre permitting requirements.***
The science and available technologies for stormwater management have evolved over time. Historically, stormwater management design focused primarily on conveying stormwater from a site as quickly as possible to reduce localized flooding, including most permitted stormwater systems in Vermont prior to 2002. This approach relied on conveyance infrastructure such as curb and gutter and piping systems, which quickly discharged runoff to the nearest waterbody and was often paired with “end-of-pipe” detention/retention-type systems such as detention ponds to reduce peak runoff discharge rates. This past approach focused on peak flow control and proved to be detrimental to downstream waterbodies and water supplies. The standards to be sufficiently protective of water quality improved considerably with the adoption of the 2002 Vermont Stormwater Management Manual.

9) ***Topic of the ½ acre operational permitting threshold was raised with Department interpretation and application of the regulation questioned.***
The Stormwater Program can address this for the committee if desired, however the ½ acre threshold for new development of impervious surface is not directly related to H.481. We would prefer that this is addressed separately.