

August 30, 2022

Via electronic mail to TDEC.Appeals@tn.gov

State of Tennessee
Department of Environment and Conservation
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**PETITION FOR APPEAL OF NPDES PERMIT NO. TNS000000, SMALL
MUNICIPAL SEPARATE STORM SEWER SYSTEMS**

Introduction and Summary

Harpeth Conservancy (“Petitioner”) hereby appeals the Tennessee Department of Environment and Conservation’s (“TDEC or “the Department”) August 1, 2022 issuance of National Pollutant Discharge Elimination System (“NPDES”) Permit No. TNS000000 (“MS4 Permit” or “Permit”). That Permit will govern discharges by small municipal separate storm sewer systems (“MS4s”) into Tennessee’s rivers and streams.

Storm sewer systems are the second largest source of water pollution in Tennessee, after agriculture, and the subject permit will govern pollution control measures that local governments must require of developers who build new projects and/or redevelop real estate. The permit contains two problematic loopholes that will undermine stormwater control measures throughout Tennessee. First, the permit allows local governments to exempt so-called “uncontaminated roof runoff” from the volume of water that stormwater control measures must be designed to treat. Second, the permit allows infiltration-based stormwater control measures to be placed inside riparian buffers rather than leaving such buffers undisturbed.

Roofs are impervious surfaces that send stormwater into our rivers and streams. Roof runoff is contaminated with pollutants including organic material (like pollen and leaf litter), fecal matter from birds and wildlife, industrial pollutants deposited from the air, and deteriorating roofing materials. Excluding roof runoff from stormwater treatment will increase water pollution as Tennessee experiences increasing urban sprawl and severe rain events.

If developers are allowed to ignore roof runoff when designing stormwater treatment systems, those systems will be permanently undersized, ineffective, and subject to being overwhelmed during rain events. Ignoring roof runoff when designing permanent stormwater control measures will increase pollution, aggravate streambank instability and erosion, exacerbate urban flooding, and make it more difficult for cities to develop climate-resilient infrastructure.

Also, allowing stormwater control measures to be sited inside riparian buffers will increase water pollution and contribute to urban flooding.

The Clean Water Act,¹ the Tennessee Water Quality Control Act ("TWQCA"),² and their implementing regulations require TDEC to ensure that its NPDES permitting program requires that discharges from MS4s reduce pollutants to the Maximum Extent Practicable ("MEP"). Those statutes and regulations also require that renewed or reissued permits contain standards or conditions which are at least as stringent as comparable limitations in previous permits. By including loopholes in the permit that do not ensure that stormwater pollutants are reduced to the MEP, and by issuing a Permit which contains standards or conditions less stringent than those in the previous permit, TDEC violated federal and state water protection statutes and their implementing regulations.³

TDEC also violated the Tennessee Uniform Administrative Procedures Act ("UAPA") when it issued so-called "guidance" regarding the "uncontaminated roof runoff" loophole. That "guidance" violates the UAPA because it meets the statutory definition of a rule, yet TDEC did not undertake the rule making procedures required by that statute.⁴

What's at stake?

Stormwater pollution control is critical to maintaining clean water. As noted in Tennessee's *TNH2O Plan*, "MS4 discharges are by far the leading pollution source in Tennessee that is subject to regulation."⁵ As TDEC states in the *Tennessee Permanent Stormwater Management and Design Guidance Manual*:

Clean water resources are essential to the economic viability of Tennessee, where we have over 60,000 miles of rivers and streams and over 570,000 acres of lakes and reservoirs.

...

The transformation from native landscapes to a built environment increases the amount of impervious surfaces, such as roads, parking areas, and rooftops. Native soils are altered during the construction process such that their infiltration properties are generally degraded. These changes reduce, disrupt, or eliminate natural drainage features, such as infiltratable soils, native vegetation, shallow

¹ 33 U.S.C. § 1251 *et seq.*

² Tenn. Code Ann. § 69-3-101 *et seq.*

³ 33 U.S.C. § 1342(p)(3)(B); 40 C.F.R. § 122.34; 40 C.F.R. § 122.44(l); Tenn. Code. Ann. § 69-3-102; Tenn. Code Ann. § 69-3-108(g)(1); Tenn. R. & Regs. 0400-40-05-.08(1)(j); Tenn. R. & Regs. 0400-40-10.04.

⁴ Tenn. Code Ann. § 4-5-201 *et seq.*

⁵ TDEC, *TNH2O*, Natural Resources Chapter at 17 (2018), https://www.tn.gov/content/dam/tn/environment/water/tn-h2o/documents/plan-&-appendices/wr-tnh2o_plan-app_natural-resources-chapter.pdf.

depressions, and native drainage patterns. As development progresses, the land area that contributes overland flow (or runoff) in short time periods (minutes) increases, while the land area that stores, infiltrates, and recharges groundwater over long periods of time (days, weeks) decreases []. The cumulative effect of these changes . . . results in destabilized stream channels, impacted groundwater resources, degraded water quality, and more frequent flooding.⁶

TDEC also acknowledges that “[w]ater quality degradation due to urban runoff [] creates the need for costly water treatment at drinking water plants, increased maintenance of municipal infrastructure, and increased risk to public health.”⁷

Because the stakes are high, TDEC must ensure that its NPDES permit regulating municipal stormwater discharges complies with all applicable federal and state laws and regulations. Anything less will not protect Tennessee’s water resources and will violate Petitioner’s and its members’ legal right to unpolluted waters.

Challenged Permit Provisions

Petitioner challenges two permit provisions: (1) the “uncontaminated roof runoff” loophole found in MS4 Permit Section 4.2.5.2(c); and (2) MS4 Permit Section 4.2.5.4(a) which allows for the placement of certain stormwater control measures inside riparian buffers. As discussed in detail below, those provisions fail to ensure that pollutants are reduced to the MEP, and they otherwise violate the Clean Water Act, TWQCA, and UAPA.

- a. MS4 Permit Section 4.2.5.2(c) and its accompanying “guidance” document are unworkable and unlawful.*

Petitioner challenges Section 4.2.5.2(c) of the MS4 Permit, which provides that permittees may exclude “uncontaminated roof runoff” from the water quality treatment volume (“WQTV”) which must be considered when designing water quality treatment stormwater control measures (“SCMs”) at new development or redevelopment projects. In addition, Petitioner challenges the *NPDES Municipal Separate Storm Sewer Systems (MS4) Permit Uncontaminated Roof Runoff Exclusion Guidance*⁸ published by TDEC contemporaneously with issuance of the MS4 Permit.

⁶ TDEC, *Tennessee Permanent Stormwater Management and Design Guidance Manual*, 9 (last updated Mar. 2, 2015) (internal citations omitted),

<https://app.box.com/s/pdl1afehg00s1wwqa94d8qmizyptxw3i>.

⁷ *Id.* at 13.

⁸ TDEC, *NPDES Municipal Separate Storm Sewer Systems (MS4) Permit Uncontaminated Roof Runoff Exclusion Guidance*, DWR–NR–G–12–Municipal Stormwater–08012022 (Aug. 1, 2022) (“Uncontaminated Roof Runoff Guidance”),

<https://www.tn.gov/content/dam/tn/environment/water/policy-and-guidance/dwr-nr-g-12-municipal-stormwater-08012022-ms4-uncontaminated-roof-runoff.pdf>.

Petitioner challenges that so-called “guidance” document because it is an unlawful rule adopted in violation of the UAPA’s procedural requirements governing rulemaking.⁹

Section 4.2.5.2(c) of the MS4 Permit states that “Uncontaminated roof runoff may be excluded from the WQTV.” The WQTV is “a portion of the runoff generated from impervious surfaces at a new development or redevelopment project by the design storm.”¹⁰ The total quantity of the WQTV depends on the SCM treatment type in use.¹¹ Per the draft MS4 permit, the “SCMs must be designed, at a minimum, to achieve an overall treatment efficiency of 80% [total suspended solids] removal from the WQTV.”¹² The newly-added loophole allowing for the exclusion of “uncontaminated roof runoff” from the WQTV was not part of the previous MS4 general permit issued in 2016.¹³ Thus, that loophole does not achieve pollution control to the MEP because the loophole is less protective than the stormwater control measures that Tennessee required of MS4s—and by extension, developers—for years.

TDEC received over 160 pages of comments on the draft MS4 permit.¹⁴ None of those comments support the “uncontaminated roof runoff” loophole. Many commenters noted the significant legal and practical problems arising from the new roof runoff exclusion, and they requested that the final permit remove the language. Others asked that the Department at least define the term “uncontaminated roof runoff” and expressed concern that TDEC provides no legal precedent or scientific basis upon which MS4s can rely when implementing the exclusion. Objecting commenters included professional engineers, the Tennessee Stormwater Association, numerous city and county governments, environmental consultants, water protection and conservation organizations, drafters of the State’s *TNH2O Plan*, and concerned private citizens.¹⁵

Instead of heeding the overwhelming public response requesting that the problematic loophole be removed from the Permit, TDEC retained it. In addition, the Department failed to define the term “uncontaminated roof runoff” or provide any defensible legal or scientific basis for the loophole’s inclusion in the Permit. Rather, the Department issued a so-called “guidance”

⁹See Tenn. Code Ann. § 4-5-201 *et seq.*

¹⁰ TDEC, National Pollutant Discharge Elimination System (NPDES) From Small Municipal Separate Storm Sewer Systems Permit Number TNS000000, 34 (effective Sept. 1, 2022) (“MS4 Permit”).

¹¹ See MS4 Permit, 35.

¹² MS4 Permit, 34

¹³ See TDEC, NPDES General Permit For Discharges from Small Municipal Separate Storm Sewer Systems (MS4) Permit No. TNS000000, Part 4.2.5.2 (2016) (“2016 MS4 Permit”).

¹⁴ See Comments to 2022 Draft Permit, available at https://dataviewers.tdec.tn.gov/dataviewers/apex_util.count_click?p_url=BGWPC.GET_WPC_DOCUMENTS?p_file=198222780811973562&p_cat=DOCS&p_id=198222780811973562&p_user=APEX_PUBLIC_USER&p_workspace=19833722515258996 (document date May 23, 2022).

¹⁵ See, e.g., Comments to 2022 Draft Permit, 16–20, 22, 26, 29, 34–35, 37, 64, 66, 73, 80, 85, 100–102, 107, 113, 117, 120–121, 122–125, 128, 136–138, 152–153, 154–156, 158–159.

document which purportedly “describes the implementation of the uncontaminated roof runoff exclusion”¹⁶ while shifting the burden of defining “uncontaminated roof runoff” to local governments.

TDEC's response was insufficient and unlawful. Section 4.2.5.2(c) relies on the false premise that roof runoff can be permanently “uncontaminated,” and the exclusion does not ensure that stormwater pollutants are treated to the maximum extent practicable (MEP), as required by federal and state law. Moreover, TDEC's “guidance” document fails to resolve the permit's legal infirmities, raises more questions than it answers, and imposes new conditions on permittees in violation of state laws governing rulemaking.

- i. The exclusion relies on the false premise that roof runoff can be considered permanently “uncontaminated.”

The “uncontaminated roof runoff” exclusion is practically unworkable because it is impossible to establish that a particular site's roof runoff will be perpetually “uncontaminated.” Developers should not be allowed to premise their design and implementation of permanent SCMs upon the fictitious assumption that their roof runoff is forever clean.

As pointed out by multiple commenters, roofs can and do produce contaminated roof runoff at every stage of their use.¹⁷ Roofing materials become a source of contamination as they age, weather, and deteriorate.¹⁸ Roof runoff can also become contaminated by external elements to various degrees depending on the season and weather patterns. Contamination occurs due to organic debris, such as leaf litter, as well as fecal matter from birds and other wildlife.¹⁹ The speed

¹⁶ Uncontaminated Roof Runoff Guidance, 1.

¹⁷ See, e.g., Comments to 2022 Draft Permit, 17, 22, 29, 64, 85, 107, 113, 117, 124, 136, 152, 158–159.

¹⁸ See, e.g., Shirley Clark *et al.*, *Roofing Materials' Contributions to Storm-Water Runoff Pollution*, 134 J. of Irrigation and Drainage Engineering 5 (2008), <https://ascelibrary.org/doi/full/10.1061/%28ASCE%290733-9437%282008%29134%3A5%28638%29> (noting that potential for pollutant release from some roofing panel types can exist for more than sixty years).

¹⁹ See, e.g., Kristen Nicole Wyckoff, *Drivers of Stormwater Runoff Characteristics from Non-Point Source Urban Pollution*, PhD diss., University of Tennessee, 10 (2017), https://trace.tennessee.edu/utk_graddiss/4841 (“Pollutants found in rooftop runoff and in cisterns vary based on different characteristics such as location, storm event characteristics, and rooftop characteristics. Commonly measured parameters measured include pH, conductivity, total suspended solids (TSS), turbidity, anions, cations, metals, and organic pollutants.”). Other scientific papers also support these points. See, e.g., P.J. De Buyck *et al.*, *Roof runoff contamination: a review on pollutant nature, material leaching and deposition*, REV ENVIRON SCI BIOTECHNOL 20, 549–606 (2021), <https://link.springer.com/article/10.1007/s11157-021-09567-z> (“Available data from literature however show that roof runoff can be contaminated by a wide range of (micro)pollutants, and in concentrations often exceeding surface water quality and/or drinking water standards.”).

of decomposition of organic matter, as well as how much metals and other pollutants leach from roof material, depends partly on ambient air temperature and the chemical characteristics of rainfall, both of which vary over time.²⁰ Surrounding infrastructure and industry can also contribute to rooftop pollution.²¹ Moreover, even if roof runoff could somehow avoid being physically contaminated (an unlikely miracle), the water can still be thermally polluted so as to interfere with the designated uses of receiving waterways.²²

As time passes, roof materials degrade, weather conditions change, wildlife activity fluctuates, and further development occurs. Thus, it is never reasonable or accurate to assume that the runoff from a particular roof will always be clean.²³

In TDEC's *Tennessee Permanent Stormwater Management and Design Guidance Manual*, the Department acknowledges that rooftops are continuous sources of pollution loading into stormwater systems. Specifically, when discussing maintenance of impervious surface areas, TDEC states, "[a]t all times, the roof area shall be maintained to reduce the debris and sediment load to the system."²⁴ This language reflects the necessity of long-term management of rooftops in acknowledgement of their varying pollution loads. Research, experience, and common sense make clear that no roof can be guaranteed to remain pollution free; therefore, roof runoff cannot be permanently determined to be "uncontaminated" for the life of a structure.

²⁰ This variability in pollution level was demonstrated by the recent fish consumption advisory released by TDEC for mercury likely caused by "atmospheric deposition which has been shown to be the result of the global burning of coal." Adrian Mojica, *Fish consumption advisory issued for parts of midstate due to mercury, chemical levels*, FOX17 WZTV NASHVILLE (June 20, 2022), <https://fox17.com/news/local/fish-consumption-advisory-issued-for-parts-of-midstate-due-to-mercury-chemical-levels-tennessee-fishing-wildlife>.

²¹ See Kathy DeBusk et al., *Water Quality of Rooftop Runoff: Implications for Residential Water Harvesting Systems*, North Carolina Cooperative Extension, 1 (undated), https://www.ctahr.hawaii.edu/hawaiiirain/Library/Guides&Manuals/NC_WaterQuality_RooftopRunoff2009.pdf ("Primary substances of concern in roof runoff include heavy metals, polycyclic aromatic hydrocarbons [PAHs], microbes, pathogens, and pesticides. In areas of heavy traffic and industry, dust and particular matter from vehicle exhaust and the burning of fossil fuels can collect on roof surfaces, producing elevated PAH levels in runoff.").

²² See, e.g., Tenn. R. & Regs. 0400-40-03-.03 (specifying temperature criteria for each designated water use); see also Comments to 2022 Draft Permit, 124.

²³ As one commenter on the draft Permit pointed out, the exclusion does not seem to contemplate situations like "a new roof on a building that would result in the runoff being considered contaminated," or "a bird infestation that would cause the runoff to be considered contaminated." Comments on 2022 Draft Permit, 80. Neither the final Permit nor the guidance addresses these scenarios.

²⁴ TDEC, *Tennessee Permanent Stormwater Management and Design Guidance Manual*, 186 (last updated Mar. 2, 2015).

- ii. The roof runoff exclusion does not require MS4s to reduce pollutant discharges to the MEP.

Given the impossibility of establishing that roof runoff will remain truly “uncontaminated” by pollutants during the life of the site, the question remains what level of pollution can exist in roof runoff but still be considered “uncontaminated” for purposes of the Permit. TDEC does not say. Ignoring the request of several commenters to at least define the term “uncontaminated roof runoff,” the Department instead leaves the decision to MS4s themselves.

TDEC’s delegation to MS4s of defining “uncontaminated roof runoff” is more than a simple exercise in wording. Instead, it allows MS4s to exclude pollutant-laden runoff from the NPDES permitting regime entirely by defining contamination into nonexistence. The Permit therefore violates the Clean Water Act’s regulatory mandate that MS4 permits require, at minimum, that MS4s “reduce the discharge of pollutants from the MS4 to the maximum extent practicable.”²⁵ It also violates the regulation’s requirement that MS4 permits “ensure that controls are in place that would prevent or minimize water quality impacts.”²⁶ Instead of “includ[ing] permit terms and conditions” that are “clear, specific, and measurable,” TDEC has given away the keys to the castle by creating an undefined loophole which allows MS4s to not require roof runoff treatment in certain situations *at all*.²⁷

Treating stormwater that runs off of roofs is practicable. We know this is true because Tennessee has previously and successfully required developers to do so.²⁸ TDEC has also published documents demonstrating that it can and must be done. As mentioned, past iterations of this permit required treatment of runoff from impervious surfaces, including roofs. And the *Tennessee Permanent Stormwater Management and Design Guidance Manual* highlights the importance of rooftop runoff treatment, stating:

The [runoff] treatment volume is any runoff generated from the first inch of rainfall from site elements that can potentially contribute pollutants. These areas include impervious surfaces (such as **rooftops**, pavements, dirt roads, etc.) . . . **In order to be compliant with treatment requirements, this volume must run through an SCM that is approved for treatment.**²⁹

TDEC’s manual also includes drawings demonstrating stormwater control measures that can treat roof runoff:

²⁵ 40 C.F.R. § 122.34(a).

²⁶ 40 C.F.R. § 122.34(b)(5).

²⁷ 40 C.F.R. § 122.34(a).

²⁸ See, e.g., 2016 MS4 Permit, Part 4.2.5.2 (requiring permanent stormwater management programs to calculate WQTV based on the runoff generated from all impervious surfaces at the site).

²⁹ TDEC, *Tennessee Permanent Stormwater Management and Design Guidance Manual*, 52 (last updated Mar. 2, 2015).

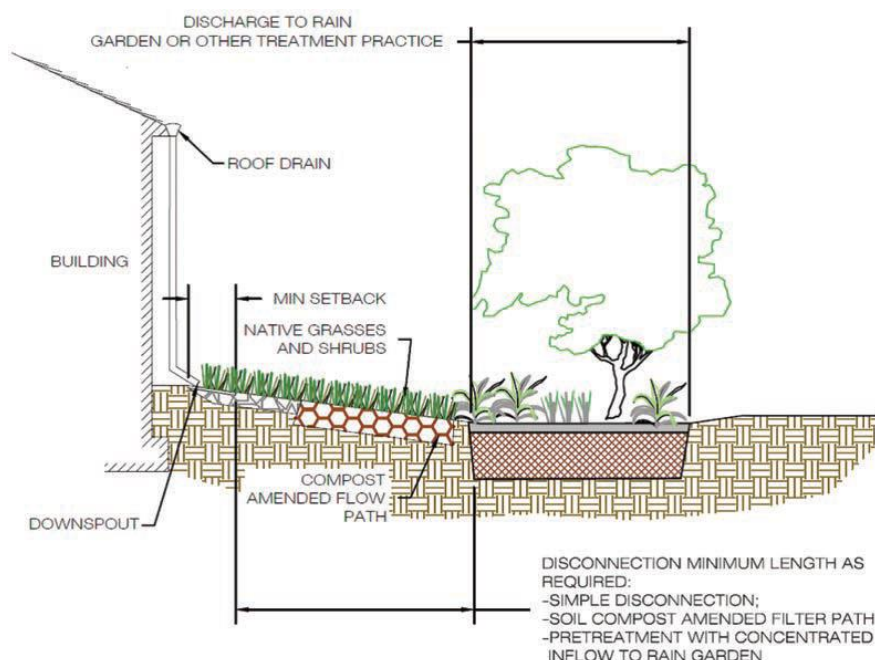


Figure 21: Residential Rooftop Disconnection to downstream raingarden – Bioretention without an underdrain (Source: VADCR).³⁰

By making the subject exclusion in the current Permit discretionary, TDEC also implicitly acknowledges that roof runoff can still be practicably treated. For if an MS4 chooses not to utilize the exclusion, developers will be required to incorporate roof runoff into their WQTV and SCM calculations as they have in the past.

TDEC failed to include clear, specific, and measurable terms in the Permit to satisfy the federal requirement that pollutant-laden discharges are treated to the maximum extent practicable. The Department also fell short of that legal requirement by allowing a category of stormwater to be left untreated when state guidance, past practice, and current Permit provisions all indicate that it can practicably be done.

- iii. MS4s will be under enormous pressure to utilize the exclusion regardless of their ability to legally create and implement such an exception.

TDEC attempts to wave away all of the concerns raised by commenters with respect to the roof runoff exclusion by insisting that the exclusion is *permissive* and therefore there is nothing to worry about. Not true. As highlighted by numerous commentors, such a position by TDEC willfully ignores the political pressures that developers will bring to bear on MS4s. Developers will push small localities, who frequently lack adequate funding and expertise, to utilize the new

³⁰ *Id.* at 159.

loophole and to accept the developers' assertions that the roof runoff associated with various projects is miraculously "uncontaminated."

Through the subject loophole, TDEC illegally saddles small MS4s with the burden of establishing measures required to reduce pollution to the MEP. In its 2016 remand rule, the U.S. Environmental Protection Agency ("EPA") clearly stated that such is the responsibility of the permitting authority (i.e. TDEC), not the MS4. As EPA stated:

A. Permitting Authority as the Ultimate Decision-Maker

To directly address the clear message from the Ninth Circuit remand that the regulations need to preclude the small MS4 from determining on its own what actions are sufficient to meet the MS4 standard "to reduce pollutants to the maximum extent practicable, protect water quality and satisfy the appropriate water quality requirements of the CWA," EPA proposed revisions throughout § 122.34 to make it clear that the permitting authority is responsible for establishing permit requirements that meet the standard. For this reason, EPA proposed to shift the focus of the requirements in § 122.34 to the "NPDES permitting authority" rather than the regulated small MS4.³¹

Several commentors discussed the burdens associated with the Permit's wrongful delegation of authority to manage the permissive loophole. One commentor explained that "MS4 permittees will inconsistently apply their own standards and result in a patchwork [of] compliance strategies across Tennessee."³² One commentor noted that because "uncontaminated roof runoff" is undefined, the Permit places "an undue burden on the MS4,"³³ and another commentor explained that the subject loophole "causes undo complexity at the local level."³⁴

TDEC is the entity charged with the responsibility of ensuring that its Permit requires MS4s to reduce pollution to the MEP. It cannot legally foist that responsibility onto MS4s or grant MS4s the discretion to pollute Tennessee waters. As demonstrated by the comments of the City of Bristol, the City of Chattanooga, the City of Elizabethton, the City of Franklin, the City of Gallatin, the City of Maryville,³⁵ Johnson City, Knox County, the Metropolitan Government of Nashville and Davidson County, Montgomery County, and the Tennessee Stormwater Association, TDEC should not saddle MS4s with the burden of contending with a regulatory loophole that developers will attempt to exploit.

³¹ National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System General Permit Remand Rule, 81 Fed. Reg. 89320, 89333 (Dec. 9, 2016).

³² Comments to 2022 Draft Permit, 117.

³³ Comments to 2022 Draft Permit, 120.

³⁴ Comments to 2022 Draft Permit, 136.

³⁵ The City of Maryville made a comment dated May 18, 2022, but TDEC did not include that document in the comments posted to TDEC's Data Viewer. Accordingly, that comment is attached hereto as Exhibit A.

- iv. The roof runoff exclusion constitutes a less stringent standard or condition than the comparable provision in TDEC's 2016 MS4 permit.

The 2022 version of the MS4 Permit was substantially revised from the MS4 permit TDEC issued in 2016. In particular, the section governing permanent stormwater standards underwent significant change. For the first time, in the 2022 version, TDEC included the loophole allowing "uncontaminated roof runoff" to be exempted from the WQTV. The 2016 version of the permit, in contrast, required that all impervious surfaces be included in the WQTV.³⁶ Whereas before the MS4 Permit required that stormwater management programs address pollutant-laden runoff from all impervious surfaces, the newer iteration of the Permit does not. Such a change constitutes a revision to the Permit's standards or conditions which serves to weaken water quality protection and permanent stormwater controls.

Issuing the Permit with the less stringent and less protective roof runoff exclusion takes stormwater pollution control backwards. It constitutes impermissible backsliding that contravenes federal law,³⁷ federal regulations,³⁸ and state regulations.³⁹ The Permit should require treatment of roof runoff in order to ensure that treatment is performed to MEP, and that other state and federal standards, including water quality standards, are not violated.

Several commenters voiced concern to TDEC regarding the regressive nature of this proposed exclusion, and its weaker protections as compared to previous state stormwater requirements. Commenters pointed out that this exclusion was newly added to the draft Permit's terms,⁴⁰ would result in less stormwater treatment,⁴¹ exacerbate stormwater runoff problems in state waterways,⁴² and ultimately provide less pollution control resulting in negative impacts to

³⁶ 2016 MS4 Permit, Part 4.2.5.2.2.

³⁷ 33 U.S.C.A. § 1342(o)(1) states that for "effluent limitations established on the basis of section 1311(b)(1)(C) . . . a permit may not be renewed, reissued, or modified to contain effluent limitations which are less stringent than the comparable effluent limitations in the previous permit." The law contains an exception for compliance with 33 U.S.C.A. § 1313(d)(4), which relates to meeting particular water quality standards and does not here apply. 33 U.S.C.A. § 1311(b)(1)(C) describes the need to achieve "any more stringent limitation, including those necessary to meet water quality standards, treatment standards, or schedules of compliance, established pursuant to any State law or regulations [] or any other Federal law or regulation, or required to implement any applicable water quality standard. . ."

³⁸ 40 C.F.R. § 122.44(l)(1) states that, except under conditions not here applicable, "interim effluent limitations, standards or conditions must be at least as stringent as the final effluent limitations, standards, or conditions in the previous permit."

³⁹ Tenn. Comp. R. & Regs. 0400-40-05-.08(j)(1): "When a permit is renewed or reissued, effluent limitations, standards or conditions shall be at least as stringent as the effluent limitations, standards, or conditions in the previous permit unless" conditions not here applicable apply.

⁴⁰ See *e.g.*, Comments to 2022 Draft Permit, 101–102.

⁴¹ See *e.g.*, Comments to 2022 Draft Permit, 136–137.

⁴² See *e.g.*, Comments to 2022 Draft Permit, 26.

water quality.⁴³ Yet TDEC retained the exclusion. In doing so, the Department impermissibly included a less stringent standard or condition in the Permit as compared to its previous version.

v. The roof runoff exclusion will cause SCMs to be undersized and ineffective.

Problems with the roof runoff exclusion are not limited to the roof runoff discharge itself. By exempting so-called “uncontaminated” roof runoff from WQTV, the Permit puts all stormwater discharge treatment at risk.

Neither the Permit nor its guidance require that excluded roof runoff be physically separated from other stormwater runoff in the final design of the site. Therefore, during storm events, runoff from the roof can commingle with other stormwater which must go through the site's SCM.⁴⁴ However, because project designers can now exclude “uncontaminated” roof runoff from the volume of water that stormwater control measures must be designed to treat, those SCMs will be too small. Undersized SCMs will become inundated with more water than they are equipped to handle, ensuring that all pollution contained in flowing stormwater will not be treated to the MEP. At least one commenter alerted TDEC to this issue, noting:

From an SCM design perspective, splitting roof discharges from other stormwater flows can be tricky to design, especially for residential developments. A fallback approach for this would be to just credit the roof area from the WQTV calculation without actually diverting the runoff onsite and allowing an equivalent portion of impervious area to runoff untreated or just under-sizing the SCM. (These situations are not prohibited by the draft permit and will be attempted by site designers.). So, sending roof runoff to a SCM and not accounting for the volume of the roof inherently makes the SCM undersized and thus, it neither functions as intended nor provides the treatment required.⁴⁵

Although TDEC maintains that it is only concerned with water quality, not water quantity, when undersized SCMs are overwhelmed with amounts of water larger than they are designed to treat, the result is more pollution and degraded water quality. Neither the Permit nor the guidance prevents such a scenario. Moreover, given that roofs can constitute over half of the impervious

⁴³ See *e.g.*, Comments to 2022 Draft Permit, 113.

⁴⁴ In the *Uncontaminated Roof Runoff Guidance*, TDEC asserts that, “[f]or purposes of calculating WQTV, the roof runoff must be physically separated (uncontaminated) from other sources of runoff.” While not the model of clarity, this language does not seem to require physical separation of “uncontaminated” roof runoff from other stormwater sources in the permanent design of the site. In other words, the guidance appears to only require separation of excluded runoff when *establishing* the WQTV amount to design SCMs. It does not seem to require that the roof runoff has to *remain* separate from other stormwater sources during the lifetime of the site when those SCMs are in use.

⁴⁵ Comments to 2022 Draft Permit, 136–37.

surface area at new development or redevelopment sites, the additional pollution caused by this exclusion will result in serious negative impacts to state water quality.⁴⁶

- vi. The roof runoff exclusion “guidance” published by TDEC is an improper rulemaking in violation of state statute.

Finally, TDEC's “guidance” pertaining to the roof runoff exclusion is an exercise in improper rulemaking under the UAPA. The UAPA requires state agencies to follow certain procedures when making rules, such as giving public notice, holding public hearings, and obtaining approval of the rules by the Attorney General.⁴⁷ A “rule” is an “agency statement of general applicability that implements or prescribes a law or policy or describes the procedures or practice requirements of any agency.”⁴⁸ In contrast, “[g]eneral policy statements that are substantially repetitious of existing law” are not rules.⁴⁹ A rule is also distinct from a “policy” defined as “any statement, document, or guideline prepared or issued by an agency pursuant to its delegated authority that merely defines or explains the meaning of a statute or a rule.”⁵⁰

TDEC's roof runoff “guidance” states that it “does not remove or modify any standard established in the rule or in the permit,” and that it merely “describes the implementation” of the roof runoff exclusion.⁵¹ But “implement[ing]” a law and “describ[ing] the procedures or practices of any agency” is included in the statutory definition of a rule.⁵²

Without the instruction given in the “guidance,” it would be impossible for MS4s to even try to sensibly make a determination on whether or when roof runoff could be excluded from the WQTV. Neither the underlying regulation nor the Permit defines “uncontaminated” or offers any framework to come up with a legally- or scientifically-defensible definition, and neither provides insight into the steps a permittee must take to demonstrate that the definition should apply to any given roof runoff.

The so-called “guidance” contains explicit directives where it imposes new requirements on permittees in order to comply with the Permit. For example, the guidance states that “analytical characterization of the atmospheric deposition in the project area and of the roofing materials planned for the project *shall* be provided to the municipality” when the municipality attempts to

⁴⁶ See, e.g., Comments to 2022 Draft Permit, 153.

⁴⁷ Tenn. Code Ann. § 4-5-201 *et seq.*

⁴⁸ Tenn. Code Ann. § 4-5-102(12).

⁴⁹ Tenn. Code Ann. § 4-5-102(12).

⁵⁰ Tenn. Code Ann. § 4-5-102(10).

⁵¹ *Uncontaminated Roof Runoff Guidance*, 1.

⁵² See Tenn. Op. Att’y Gen. No. 99-213 (Oct. 27, 1999). The Attorney General determined that a Tennessee Department of Health policy that sought to change licensing examination standards for nurse aides by requiring one of the three skills in the performance test be a “critical skill” (as defined in the policy) should have been a rule, rather than a policy, because the changes “implemented” or “prescribed” law or policy. It did not matter that the “critical skills” defined in the policy were already included within the general pool of skills subject to testing. *Id.*

utilize the exclusion.⁵³ If the permittee failed to require such a characterization, and instead chose to use some other method, would it still be in compliance with the Permit? If not, how can this be characterized as guidance rather than part of the Permit's requirements? The guidance goes on to state that permittees "will then be able to compare" this analytical characterization to the International Stormwater BMP Database "to determine if further treatment would be practicable."⁵⁴ Is this the only way a permittee can make such a determination? Will the permittee be out of compliance with the Permit if it fails to utilize that Database? It is not clear from the language of the "guidance," but if so, the document places additional, substantive responsibilities on permittees wishing to utilize the roof runoff exclusion and therefore is properly considered a rule.

These directives in TDEC's roof runoff "guidance" impose new obligations on permittees seeking to utilize the exclusion and constitute rulemaking undertaken in violation of the UAPA's procedural requirements.

- b. *MS4 Permit Section 4.2.5.4(a) wrongfully allows placement of SCMs in riparian buffers.*

Petitioners also challenge Section 4.2.5.4(a) of the Permit, which allows "infiltration-based SCMs" to be placed within riparian buffers. This provision allows such SCMs to be located in areas immediately adjacent to streams, wetlands, or other waterbodies. As discussed by several commenters, such placement inhibits the proper functioning of those SCMs and therefore prevents them from reducing pollutant runoff to the MEP. The provision also allows placement of SCMs in areas where they cannot be managed effectively, and it combines two separate stormwater control measures, thereby reducing water quality. Moreover, this provision weakens stormwater control measures governing riparian buffers as compared to the protections in the previous MS4 permit.

- i. The provision does not require MS4s to reduce pollutant discharges to the MEP.

Infiltration-based SCMs include stormwater treatment devices such as bioretention areas. Those areas "use the interaction of plants, soil, and microorganisms to store, treat, and reduce runoff volume, and to reduce flow rate of stormwater runoff."⁵⁵ *Tennessee Permanent Stormwater Management and Design Guidance Manual* states that to operate effectively, those systems should be at least two feet from the water table, thirty feet from surface water, and generally outside the 100-year floodplain.⁵⁶ Yet, the Permit contains no such constraints, and instead allows developers to install such infiltration-based SCMs within riparian buffers regardless of the location of the water table, floodplain, and in certain circumstances, closer than thirty feet to surface waters.

⁵³ *Uncontaminated Roof Runoff Guidance*, 2.

⁵⁴ *Uncontaminated Roof Runoff Guidance*, 3.

⁵⁵ *Tennessee Permanent Stormwater Management and Design Guidance Manual*, 141.

⁵⁶ *Tennessee Permanent Stormwater Management and Design Guidance Manual*, 141, 143.

The problems with such an approach are threefold: First, in areas where the water table is high, bioretention areas will not be able to “store” or “reduce” stormwater runoff because the soil in the areas will already be saturated with water and unable to hold more. Second, such infiltration-based SCMs are impracticable to maintain in riparian buffers, as they become clogged with silt and sediment during high-water events, thus impeding their effectiveness.⁵⁷ Third, by allowing permittees to combine two separate stormwater control measures, which are individually required in the Permit without additional protection, TDEC is essentially allowing permittees to reduce the overall treatment required on site.

Several commenters alerted TDEC to these problems. For instance, one commenter questioned the effectiveness of infiltration-based SCMs in riparian buffers because “the water table adjacent to a stream would likely prevent any meaningful infiltration, particularly during a storm event.”⁵⁸ Another city commenter noted that at least one infiltration-based SCM within a riparian buffer in its jurisdiction has been effectively abandoned after having been silted over and subsequently cleaned numerous times. The City wrote that “[a]t the last cleaning it was determined no more cleaning of the area would be performed as cleaning was not successful at restoring infiltrative capacities.”⁵⁹ A third commenter urged TDEC to clarify that, if infiltration-based SCMs were allowed in the riparian buffer, the Department should require that those SCMs “do not count towards the buffer area” otherwise required on site and that mitigation would be necessary to offset the lost treatment capacity.⁶⁰

Despite the obvious problems with this loophole, TDEC retained the ability of MS4 permittees to allow infiltration-based SCMs in riparian buffers in the final Permit, stating that “the specifics of buffer use are at the discretion of the local jurisdiction.”⁶¹ Yet, as described above, such practices result in water discharges where pollutants are not treated to the MEP. Furthermore, the Department did not provide any clarification about whether SCMs can or cannot be counted toward the minimum buffer area required by the Permit.

As acknowledged in the Permit, riparian buffers are meant to provide “*additional* water quality treatment in riparian areas” beyond that which is already required of stormwater management elsewhere in the permit, including SCMs based on WQTV.⁶² Yet, the Permit impermissibly allows permittees to minimize the amount of water quality controls maintained on site by combining infiltration-based SCMs and riparian buffers and then counting both requirements as individually met. Such an approach has been demonstrably shown to reduce water quality treatment and thus does not ensure that stormwater pollution is reduced to the MEP.

⁵⁷ See Comments to 2022 Draft Permit, 19, 120.

⁵⁸ Draft Permit Comments at 22.

⁵⁹ Draft Permit Comments at 120.

⁶⁰ Draft Permit Comments at 124.

⁶¹ NPDES Permit TNS000000 Notice of Determination, NOD-9.

⁶² See also Tenn. R. & Regs. 0400-40-10-.04(4).

- ii. The provision relaxes permit standards or conditions protecting and maintaining water quality enhancing riparian buffers.

The Department also modified the 2022 version of the MS4 Permit to provide less protection of water quality enhancing riparian buffers than was previously required in the 2016 MS4 permit. These changes to stormwater control requirements constitute weaker water quality treatment standards or conditions than were previously applicable and therefore violate federal and state regulations.

Specifically, the 2022 MS4 Permit reduces the width of undisturbed riparian buffers.⁶³ Previously, the 2016 version of the MS4 permit specified that infiltration-based SCMs could only be placed in the “outer zone” of riparian buffers.⁶⁴ Depending on the drainage area of the stream, that meant that infiltration-based SCMs were prohibited from being within 30-40 feet of the waterway. As discussed in detail above and noted in the *Tennessee Permanent Stormwater Management and Design Guidance Manual*, such spacing between infiltration-based SCMs and surface water is crucial to ensuring that infiltration-based SCMs function properly. The 2022 MS4 Permit modified these conditions, however, allowing infiltration-based SCMs to be placed within fifteen feet of certain waters and thirty feet for all the rest, regardless of the waterway's drainage area.⁶⁵

The 2022 MS4 Permit's reduction of unaltered riparian buffer zones results in a pollution reduction standard or condition that is less stringent than was imposed in a previous permit. Commenters pointed out as much, noting that such revisions “weaken buffer zones,”⁶⁶ “invite more flooding,”⁶⁷ and will “render [infiltration-based SCMs] ineffective.”⁶⁸ By allowing infiltration-based SCMs to encroach on riparian buffers, the MS4 Permit reduces their effectiveness as water quality treatment tools and results in a final permit with standards or conditions less protective than its predecessor.

Claims for Relief

I. Claim 1: Violation of Section 301 of the federal Clean Water Act and implementing regulations

The purpose of the Clean Water Act is “to restore and maintain the chemical, physical, and biological integrity of the Nation's waters.”⁶⁹ To that end, Congress established an “interim goal of [achieving] water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation” as well as a longer-term goal “that the discharge of

⁶³ MS4 Permit, 4.2.5.4.

⁶⁴ 2016 MS4 Permit, 4.2.5.2.4.

⁶⁵ MS4 Permit, 4.2.5.4.

⁶⁶ Draft Permit Comments, 74.

⁶⁷ Draft Permit Comments, 74.

⁶⁸ Draft Permit Comments, 107.

⁶⁹ 33 U.S.C. § 1251(a).

pollutants into navigable waters be eliminated by 1985.”⁷⁰ To meet those goals, Congress prohibited the discharge of pollutants from point sources without a permit.⁷¹

Congress designed the NPDES permitting program so that permits for municipal discharges “shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants.”⁷² Federal regulation specifies that permits issued to regulated MS4s must “include permit terms and conditions to reduce the discharge of pollutants from the MS4 to the maximum extent practicable (MEP), to protect water quality, and to satisfy the appropriate water quality requirements of the Clean Water Act.”⁷³ Additionally, MS4 permits “must ensure that controls are in place that would prevent or minimize water quality impacts.”⁷⁴

The roof runoff provision violates the Clean Water Act and its implementing regulations because it fails to ensure that pollutant discharges are reduced to the MEP. As discussed in detail above, the provision creates an exclusion which allows permittees to forego requiring treatment of potentially-significant percentages of impervious surface on development and redevelopment sites. The Permit condition does so without defining or otherwise clearly detailing when this exemption can apply but rather leaves it to permittees to craft their own definitions. The Permit provision lacks clear, specific, and measurable requirements required by the Clean Water Act and its implementing regulations to control the discharge of pollutants to the MEP, and it illegally shifts the burden of establishing protective standards to under-resourced small MS4s.

The Permit provision allowing infiltration-based SCMs in riparian buffers likewise violates the Clean Water Act and its implementing regulations. As detailed above, the provision allows for pollution control measures to be sited in riparian areas demonstrated to interfere with the effectiveness of the SCMs. Moreover, the provision allows for the combination of pollution control measures such that overall pollution control is minimized or otherwise impaired. Because the Permit provision fails to reduce discharge of pollutants to the MEP, it violates federal law and regulations.

II. Claim 2: Violation of federal anti-backsliding laws and regulations.

Section 402 of the federal Clean Water Act prohibits the issuance of backsliding permits. Specifically, the statute states that “a permit may not be renewed, reissued, or modified to contain

⁷⁰ 33 U.S.C. § 1251(a).

⁷¹ 33 U.S.C. § 1311(a); *see also id.* § 1362 (defining “pollutant” and “point source”).

⁷² 33 U.S.C. § 1342(p).

⁷³ 40 C.F.R. § 122.34(a).

⁷⁴ 40 C.F.R. § 122.34(b)(5).

effluent limitations which are less stringent than the comparable effluent limitations in the previous permit. . . .”⁷⁵ The implementing federal regulations contain a similar prohibition.⁷⁶

The roof runoff loophole violates federal anti-backsliding laws because it constitutes stormwater management effluent limitations that weaken permanent stormwater control measures required by the previous permit. Whereas the previous permit did not contain such a loophole, the new Permit does. Similarly, the revision to the permanent storm water control provision related to placement of infiltration-based SCMs in riparian buffers also constitutes illegal backsliding. By reducing riparian buffer zones and allowing placement of SCMs in areas where their effectiveness is compromised, the provision relaxes the prior permit's standards and limitations unlawfully.

III. Claim 3: Violation of Section 108 of the Tennessee Water Quality Control Act and implementing regulations

Tennessee, in partnership with the U.S. Environmental Protection Agency, manages the state's NPDES permitting program.⁷⁷ As part of this process, TDEC must comply with applicable federal statutes and regulations.⁷⁸ The TWQCA requires all NPDES permits to include “[t]he most stringent effluent limitations and schedules of compliance . . . necessary to comply with other state or federal laws or regulations.”⁷⁹ Because the Permit violates the Clean Water Act and its implementing regulations (*see* Claims 1 and 2, above), it also violates the TWQCA.

TDEC regulations additionally prohibit issuance of any permit that would violate the TWQCA or Section 301 of the Clean Water Act.⁸⁰ Further, TDEC regulations specify that when “more stringent effluent limitations are necessary . . . to comply with other state or federal laws or regulations, then they *should* be imposed in the permit.”⁸¹ The regulations also require that renewed or reissued permits contain effluent limitations, standards, and conditions “at least as stringent” as those in the previous permit subject to limited exceptions.⁸² Because the Permit violates both the state and federal statutes, it likewise violates TDEC's own regulations.

The roof runoff exclusion provision violates the TWQCA and implementing regulations because it does not require permittees to reduce the discharge of pollutants to the MEP. The provision allowing infiltration-based SCMs in riparian buffers also violates the TWQCA and implementing regulations for the same reason. In addition, both provisions violate state regulations because they contain less protective conditions than were imposed in the previous permit. The

⁷⁵ 33 U.S.C.A. § 1342(o)(1).

⁷⁶ 40 C.F.R. § 122.44(l)(1).

⁷⁷ 33 U.S.C. § 1342; Tenn. Code Ann. § 69-3-108.

⁷⁸ Tenn. Code Ann. § 69-3-108(g)(1); Tenn. R. & Regs. 0400-40-05-.04(6).

⁷⁹ Tenn. Code Ann. § 69-3-108(g)(1).

⁸⁰ Tenn. R. & Regs. 0400-40-10.03(1) (“No permit shall be issued which will violate any provision of §§ 301, 302, 303, 306, or 307 of the Federal Water Pollution Control Act, or of the Tennessee Water Quality Control Act of 1977, or otherwise result in a condition of pollution.”)

⁸¹ Tenn. R. & Regs. 0400-40-10.05.07(1)(a) (emphasis added).

⁸² Tenn. R. & Regs. 0400-40-05-.01(1)(j).

provisions are unlawful because they allow permittees to reduce the overall amount and effectiveness of stormwater control measures.

Because the Permit provisions discussed above violate the TWQCA and implementing regulations, the Permit provisions are unlawful.

IV. Claim 4: Violation of the Tennessee Uniform Administrative Procedures Act and implementing regulations

The Tennessee Uniform Administrative Procedures Act requires state agencies to follow certain procedures when engaging in rulemaking. Specifically, “an agency shall precede all its rulemaking with notice and a public hearing” unless the rule is adopted as an emergency rule or is promulgated as a proposed rule.⁸³ Further, an agency “shall transmit written notice” of a public hearing done as part of a rulemaking process to the secretary of state for publication.⁸⁴

TDEC's document entitled *NPDES Municipal Separate Storm Sewer Systems (MS4) Permit Uncontaminated Roof Runoff Exclusion Guidance* is a rule which was promulgated in violation of the notice and public hearing requirements of the UAPA. The document imposes new, substantive obligations on MS4 Permit permittees who seek to utilize the Permit's roof runoff exclusion and constitute a material change to the Permit's terms. Because TDEC failed to follow the notice and public hearing requirements of the UAPA when issuing this rule, it violated the terms of that statute.

V. Claim 5: The Permit illegally delegates the responsibility of determining whether to invoke the “uncontaminated roof runoff” exclusion [MS4 Permit Section 4.2.5.2(c)] and the riparian buffer loophole [MS4 Permit Section 4.2.5.4(a)] to small MS4s.

Contrary to significant concerns expressed by the Tennessee Stormwater Association, as well as numerous small MS4s, Section 4.2.5.2(c) of the Permit illegally delegates to local jurisdictions the responsibility of determining whether roof runoff is “uncontaminated” and therefore excludable from stormwater treatment. The Department illegally delegated that responsibility to local jurisdictions knowing that small MS4s frequently lack the funding and expertise necessary to implement the exclusion. Likewise, Section 4.2.5.4(a) of the Permit illegally delegates to small MS4s the responsibility of determining whether to allow construction of infiltration-based SCMs inside riparian buffers. Those illegal delegations are in derogation of the public notice, public comment, and public hearing requirements associated with NPDES permit making, and they contravene the EPA's National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System General Permit Remand Rule, 81 Fed. Reg. 89320, 89333 (Dec. 9, 2016) and other applicable regulations.

⁸³ Tenn. Code Ann. § 4-5-202(a).

⁸⁴ Tenn. Code Ann. § 4-5-203(a).

About Petitioner

Petitioner and its members are aggrieved persons entitled to review of TDEC's decision to issue the MS4 Permit.⁸⁵ The TWQCA and TDEC regulations authorize appeals by aggrieved persons who have submitted written comments, given testimony at formal public hearings, or attended public hearings about the permit.⁸⁶

The TWQCA recognizes Tennesseans' interests in the waters of the state, which are "held in public trust for the use of the people of the state."⁸⁷ The TWQCA declares it to be the public policy of Tennessee that "the people of Tennessee, as beneficiaries of this trust, have a right to unpolluted waters."⁸⁸ The Act further asserts that an additional purpose of the statute is to enable the state to qualify for full participation in the NPDES system established under § 402 of the Federal Water Pollution Control Act, Public Law 92-500 (33 U.S.C. § 1342).⁸⁹

Petitioner submitted comments on the draft MS4 Permit.⁹⁰ And as set forth below, the issuance of the Permit harms Petitioner's organizational interests. The Permit also harms Petitioner's members' recreational and aesthetic interests as well as their interests in the waters of the State as public trust beneficiaries. Each of these legally recognized interests is protected by the federal Clean Water Act and the TWQCA.

Petitioner, Harpeth Conservancy, is a public benefit corporation based in Brentwood, Tennessee. Petitioner is organized under the laws of Tennessee, and it was previously known as the Harpeth River Watershed Association, which was formed in 1998.

Petitioner's Bylaws describe its purpose as follows:

Harpeth Conservancy is an organization of citizens dedicated to restoring and protecting clean water and healthy ecosystems for rivers in Tennessee by employing scientific expertise and collaborative relationships to develop, promote and support broad community stewardship and action.

(Article I, Section B of Harpeth Conservancy Bylaws). In furtherance of those goals, Petitioner's members and volunteers engage in community outreach, habitat restoration, recreation, scientific research, engagement with government officials, and statewide advocacy.

⁸⁵ Tenn. R. & Regs. 0400-40-05-.12

⁸⁶ Tenn. Code Ann. § 69-3-105(i); Tenn. R. & Regs. 0400-40-05.12.

⁸⁷ Tenn. Code Ann. § 69-3-102(a). *See also* *Tenn. Env'tl. Council v. Bright Par 3 Associates, L.P.*, 2004 WL 419720 at *3 (Mar. 8, 2004) (holding that all citizens of Tennessee had legally protected interest as beneficiaries of conservation easements "held for the benefit of the people of Tennessee").

⁸⁸ Tenn. Code Ann. § 69-3-102(a).

⁸⁹ Tenn. Code Ann. § 69-3-102(c).

⁹⁰ Draft Permit Comments, 101-104.

Petitioner is committed to analyzing and understanding the Harpeth River and other Tennessee waterways, including in-stream flows (hydrology), aquatic biodiversity, physical characteristics, and chemical composition. Scientific understanding of the Harpeth River watershed and other Tennessee waterways is central to Petitioner's purpose and work.

Petitioner commissions and performs scientific research, and it often commissions experts to perform scientific analyses of the Harpeth River and its watershed. Petitioner commissions those scientific studies in order to provide its staff and membership with data that enhances understanding of the river, including whether water quality and ecological conditions are changing and whether management efforts are resulting in improvements.

Petitioner helps convene expert advisory groups to design and carry out scientific studies, and Petitioner's staff and volunteers work on designing and carrying out scientific studies regarding water quality. Petitioner's water protection efforts include, *inter alia*, sediment study; a grant from the Tennessee Department of Agriculture's Nonpoint Source Program to conduct a Visual Habitat Assessment of tributaries on the § 303(d) list of impaired streams in the Harpeth watershed; identification of stream restoration sites; multiple diurnal studies of dissolved oxygen in the Harpeth watershed; an impoundment characterization study on the Harpeth River; preparation of watershed management plans; restoration projects on agricultural property along § 303(d) listed streams; assembling and cataloguing scientific studies of and data on the Harpeth River; sharing reports and data compilations with federal, state and local government officials; conducting studies of the water quality effects of various development designs via pre- and post-construction monitoring; working with cities on stormwater related issues; reviewing development proposals; reviewing NPDES sewer plant permits; purchasing and using state of the art water quality monitoring equipment; land use and development planning; providing expert analyses to state and federal agencies regarding permit applications affecting water quality in Tennessee; and engaging in statewide policy advocacy.

Petitioner has provided comments and analyses regarding all MS4 Phase II permits over the last twenty years. In addition, Petitioner has expertise in writing stormwater regulations at the local jurisdictional level, working with small MS4s like the City of Franklin, the City of Brentwood, and the City of Dickson as well as with Phase I jurisdictions like the Metropolitan Government of Nashville and Davidson County.

For more than twenty years, the Petitioner has worked with Williamson County, the City of Franklin, Metro Nashville, and other communities around middle TN on stormwater management, on stream restoration, and with the development and engineering profession on approaches that can improve water quality and reduce the risk of flooding and erosion. In 2003, Petitioner secured a \$200,000 EPA grant with both Williamson County and the City of Franklin as partners to design stormwater approaches with representatives of the development and the engineering communities. In addition to a focus on riparian buffers, another key focus was on how to integrate nutrient reduction targets from the EPA's Harpeth TMDL on low dissolved oxygen and nutrients into stormwater management.

Robert Karesh, TDEC's Stormwater Program Coordinator, worked at the Petitioner on the EPA grant after his position as the Williamson County Stormwater Coordinator and before his position at TDEC. One of Robert Karesh's efforts while working at the Petitioner was to launch the TN Stormwater Association, an organization that enables stormwater coordinators across the state to confer and learn from experts. Petitioner's current Science Director, Dr. Ryan Jackwood, has served as a board member of that organization.

Petitioner's President/CEO, Dorene Bolze, served on Williamson County Stormwater Appeals board since its formulation in 2004 as the Environmental Representative. That work included serving as the Vice Chair and Chair for several years. Similarly, Ms. Bolze served on the City of Franklin stormwater committee that prepared the city's new stormwater ordinance over fifteen years ago, and she served on the city's Stormwater Appeals Board for several years.

The regulatory loopholes contained in the MS4 Permit, described above, will directly harm Petitioner's interests by reducing or eliminating effective post construction stormwater treatment in many instances and degrading water quality in the Harpeth River, its tributaries, and other Tennessee rivers and streams. In addition, if the subject loopholes take legal effect, Petitioner will be required to expend philanthropic and programmatic resources as it works to persuade local municipalities not to allow developers to exclude so-called "uncontaminated roof runoff" from the volume of water that must be treated by post construction stormwater control measures, and Petitioner will be required to expend resources advocating against the construction of SCMs inside riparian buffers. In addition, Petitioner will be required to expend time, money and effort monitoring water quality and conducting additional scientific studies to document the effects and degradation of Tennessee waterways resulting from the post-construction stormwater management loopholes challenged in this proceeding.

Petitioner's members, supporters, and volunteers fish, swim, float, paddle, and otherwise recreate in and along the Harpeth River and other Tennessee rivers and streams. Some of Petitioner's members, supporters and volunteers live and/or own property along the Harpeth River and other Tennessee rivers and streams. The regulatory loopholes challenged in this permit appeal will directly harm the interests of Petitioner's members, supporters, and volunteers by increasing pollution in the Harpeth River and other Tennessee rivers and streams caused by stormwater runoff. In addition, the subject loopholes will harm the interests of Petitioner and its members by exacerbating urban flooding as post-construction SCMs are permanently undersized and riparian buffers are disrupted.

Relief Requested

Petitioner requests the following relief:

- i) That the Board find that TDEC's issuance of the August 1, 2022 Permit was arbitrary, capricious, or otherwise in violation of the Clean Water Act, the TWQCA, and those statutes' implementing regulations by failing to include clear, specific, and measurable requirements to reduce pollution to the maximum extent practicable;

- ii) That the Board find that TDEC's issuance of the August 1, 2022 Permit was arbitrary, capricious, or otherwise in violation of the Clean Water Act, the TWQCA, and those statutes' implementing regulations by including standards or conditions which are less stringent than the standards or conditions in the previous permit governing discharges from small municipal separate storm sewer systems;
- iii) That the Board find that TDEC's issuance of the August 1, 2022 Permit was arbitrary, capricious, or otherwise in violation of the Clean Water Act, the TWQCA, and those statutes' implementing regulations by illegally delegating to small MS4s the responsibility of determining when to invoke the exclusions contained in Sections 4.2.5.2(c) and 4.2.4.5(a) of the Permit, all in derogation of public notice, public comment, and public hearing requirements associated with NPDES permits;
- iv) That the Board vacate in part the August 1, 2022 Permit and remand the Permit to TDEC with directions to modify Sections 4.2.5.2(c) and 4.2.4.5(a) to comply with applicable state and federal law;
- v) That the Board declare pursuant to Tenn. Code Ann. § 4-5-223 that TDEC's issuance of *Municipal Separate Storm Sewer Systems (MS4) Permit Uncontaminated Roof Runoff Exclusion Guidance* constituted unlawful rulemaking in violation of Tenn. Code Ann. § 4-5-201 *et seq* and is therefore void and of no effect pursuant to Tenn. Code Ann. § 4-5-216; and
- vi) That the Board grant such additional relief which the Board deems just and proper and to which Petitioner is entitled.

Respectfully submitted,

s/ George Nolan

George Nolan, BPR# 014974

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Attorneys for Petitioner

Exhibit A



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May 18, 2022

Tennessee Department of Environment and Conservation, Division of Water Resources
Attention: Ariel Wessel-Fuss
312 Rosa L. Parks Avenue, 11th Floor
Nashville, Tennessee 37243

Dear Ms. Wessel-Fuss,

This letter provides comments to the draft State of Tennessee NPDES small Municipal Separate Storm Sewer System (MS4) Permit (draft permit) published on March 22, 2022. These comments are submitted on behalf of the City of Maryville TN. Note that the City may submit additional comments separate from those provided in this letter. Contact information for the City is provided below.

Dale Jayne
Stormwater Program Manager, City of Maryville, TN

(865) 273-3512
dfjayne@maryville-tn.gov

Wood Environmental & Infrastructure Solutions, Inc. (Wood) was authorized by the City to prepare and provide these comments to you on their behalf. Any questions you may have regarding these comments can be directed to me (contact information below).

Kind regards,

A handwritten signature in blue ink that reads "Mary C. Halley". The signature is fluid and cursive.

Mary Halley
Project Manager, Wood Environmental and Infrastructure Solutions, Inc.
mobile: (865) 414-0642
email: mary.halley@woodplc.com

Cc: Dale Jayne, City of Maryville TN

Item 1.

General Comment: Comments are as follows.

- The draft permit seems to apply a “one size fits all” approach in that it prescribes BMPs, measurable goals, and reporting deliverables. This is a significant divergence from past permits, which allowed permittees to craft their SWMP around their local stream impairments, citizen complaints, water quality priorities, and water quality goals. This approach does not recognize that inherent differences exist among local governments and their individual capabilities to determine and ensure which BMPs are effective. The Division should refrain from prescribing BMP descriptions and the types, number, and measurable goals for MCMs and instead focus on compliance minimums.
- The draft permit includes a considerable increase in the level and specificity of required documentation and reporting. Numerous procedures, processes, and plans are identified, as well as an annual solicitor’s certification, SWMP Evaluation Report, and the annual reporting deliverables identified in management measure tables. Some of these items seem unnecessary or redundant (detailed comments will follow). This increase in the level and specificity of required documentation and reporting will require substantially more permittee resources to implement and maintain at a time when permittees are resource-stressed already. The changes will force permittees to focus on getting paperwork done and keeping it updated each year rather than meaningful permit compliance and water quality protection. The Division should re-examine the level and specificity of required documentation and reporting in the draft permit and seek ways to reduce the administrative burden on permittees. Additional, more detailed comments will follow on this subject.
- For most of the new sub-plans, reports, procedures, and annual reporting requirements in the draft permit, a deadline for implementation is not provided. Does this mean permittees are required to step-up administratively immediately when the permit becomes effective? Given the substantial increase in documentation required by this permit and the potential need to secure additional staff or outside resources to prepare these items, permittees will need significant additional time to budget, plan, and prepare the new plans, reports, and procedures. This is especially true for the upgrade in compliance tracking required in the annual report. This change alone will require permittees to revisit current methods of compliance tracking, determine the changes needed to meet the new permit, coordinate with the departments affected, and allocate funding/resources required to upgrade.

As well, the new permit could become effective near the beginning of a municipal fiscal year (July 2022) for many permittees. For these permittees, their FY22-23 budgets do not include funding to deal with such a substantial increase in the permit’s administrative needs. As a result, at least three years from the effective date of the permit may be needed for permittees to budget, plan, and then implement the necessary changes.
- Should the high level of documentation and reporting remain in the final permit, the Division must provide clear deadlines for preparation of each of the written components should be provided. Additional, more detailed comments will follow on this subject. Additionally, the permit should gradually increase annual reporting requirements, allowing permittees time to plan, adjust, and implement new permit compliance tracking methods.

Item 2.

General Comment: Part 5 of the Rationale is clear that acronym “SWMP” now means Stormwater Management Program in this permit. However, there are numerous statements pertaining to documentation in the SWMP or in the program that imply there are additional written elements required by the Division beyond the NOI and annual reports previously required. It is not always clear when something is required as a written element, and when it is not. The explanation of a SWMP in the rationale (i.e., the 3-ring binder sitting on a file cabinet) does not clarify the Division’s expectations. Examples of confusing statements relevant to the SWMP are provided below.

- **3.1.2 Discharges to Waterbodies with Unavailable Parameters**, 1st sentence, specifically the phrase and bolded words “the permittee must document in its SWMP how the BMPs will address the discharge of these pollutants”. While the remainder of the paragraph goes on to state that compliance with the requirement is demonstrated through monitoring, it is unclear how monitoring once every permit period demonstrates how BMPs address pollutants. Are monitoring results alone sufficient or must permittees extrapolate conclusions from monitoring results as they relate to BMP effectiveness? It is suggested the permit clearly identify how the permittees must “document in their SWMP how” or that the sentence be revised to something like “the permittee’s SWMP must address the discharge of these pollutants”.
- **4.1 Requirements**, 1st paragraph, 3rd sentence “The elements of the Program must be documented by the permittee in a Storm Water Management Program”. The sentence does not make sense (i.e., documenting program elements in a program). Since a written stormwater management plan does not seem to be required, the Division needs to identify how (or in what ways) the permittee must document in writing elements of the program. It is suggested that it may be more appropriate to say the elements of the Program must be documented in the permittee’s NOI, annual reports, and other compliance tracking or reporting tools or documents used by the permittee and kept on file.
- **4.1 Requirements**, 3rd paragraph “The SWMP must include the following information documented in a plan for each of the program elements ...”. The text in bold is confusing if a written plan is not required.

Item 3.

Part: 4.1 Requirements

Location: page 11, 1st paragraph, 4th sentence “... in accordance with subpart 4.4 and in conjunction with the requirements found in various sections throughout this permit”

Comment: Please replace “the requirements found in various sections throughout this permit” with specification of the permit parts where these requirements are found so it is clear the requirements to which this section refers.

Item 4.

Part: 4.1 Requirements

Location: page 11, list items b and c

Comments: Within this permit, the Division has already written the BMPs and measurable goals explicitly. That those items are to remain, this information should be pre-set in the permittee’s NOI to reduce the permit’s administrative burden on permittees.

Additionally, the draft permit includes requirements for documentation/reporting of most or all of this same information multiple times, in annual reports, the SWMP Evaluation Report, and other required sub-plans (PIE Plan, publicity plan, etc.). The Division should re-examine and eliminate redundant reporting elements to reduce the permit’s administrative burden on permittees.

Item 5.

Part: 4.1.1 Newly Permitted MS4 Jurisdictions

Location: page 12, 1st sentence

Comment: Newly permitted MS4 jurisdictions should have the entire five-year permit period to fully implement a SWMP. Effective MS4 permit compliance requires ample forethought and a corresponding change in municipal resources. Two years is not enough time when one considers the time it takes to educate municipal staff and elected officials, create, and agree on a viable plan for compliance and its financial implications to the permittee, and then secure staff/resources to implement a full suite of compliance activities.

Item 6.**Part:** 4.1.2 Previously Permitted MS4 Jurisdictions**Location:** page 13, 1st and 2nd rows of the table

Comment: These rows are in conflict. Row 1 indicates “all updates” required by the permit must be done soon as possible but no later than 24 months, while row 2 says it must be 18 months for the construction site runoff program. It is suggested that row 2 be deleted or revised and that ordinance/regulatory mechanism revision deadlines be aligned with the deadline for ordinance changes required for the permanent stormwater legal authority (i.e., not to exceed 24 months from the permit effective date). This would eliminate the possibility that some permittees will have to put their ordinances before their elected body twice (i.e., once for construction site runoff changes and again for permanent stormwater management changes) or more often. To elected leaders, minimum control measures 4 and 5 seem very much like the same thing even when they are informed otherwise. Thus, requesting multiple city council actions for what they believe is “the same thing” can strain relationships and trust between municipal staff and elected leaders.

Item 7.**Part:** 4.2.1 Public Education and Outreach on Storm Water Impacts; and 4.2.2 Public Involvement/Participation**Location:** page 14, 2nd paragraph, regarding the PIE Plan; and Page 18, list item e, regarding the publicity plan

Comment: Please clarify if the PIE Plan and publicity plans should be a written documents. If so, please provide a clear deadline for preparing these plans.

Additionally, given the increase in required activities for these two minimum control measures and the additional documentation and tracking required for each, permittees should be given at least two permit years to identify, budget, and begin implementation for new/additional PIE and publicity activities. As a result, PIE and publicity plans should not be required until Permit Year 2 at the earliest, with activity implementation under both minimum control measures graduated over the full five-year permit period.

Item 8.**Parts:** 4.2.1 Public Education and Outreach on Storm Water Impacts; 4.2.2 Public Involvement/Participation**Location:** Pages 14 through 22, all sections of 4.2.1 and 4.2.2

Comment: It is strongly suggested that the permit target improvements in public education and public involvement activity selection and effectiveness rather than requiring arbitrary increases in the number of activities based on population. As written, the permit is unnecessarily burdensome and lacking focus on the goal of water quality protection.

The minimum number of annual activities conducted in the draft permit is considerably excessive for permittees that have populations of 25,000 and higher. The control measures emphasize the number of activities performed over the quality and effectiveness of any activities. However, more activities do not necessarily equate to effective programs. How did the Division derive these numbers?

If the draft permit stands as written, permittees that can and do provide effective public education, outreach, and involvement with fewer activities than that required will need more staff/funding resources simply to achieve the permit’s minimums. To what end is this necessary?

Finally, adding considerably more activities will require more staff and/or financial resources, neither of which can be secured quickly in a local government setting. If the draft permit is not modified in keeping with the comment above, then permittees should be allowed to gradually increase the number of activities they perform each year, over the full five-year permit period.

Item 9.

Parts: 4.2.1 Public Education and Outreach on Storm Water Impacts; 4.2.2 Public Involvement/Participation

Location: Pages 14 through 22, all sections of 4.2.1 and 4.2.2

Comment: What constitutes an “activity” and how are activities measured? For example, is having/using a social media account for stormwater education considered a single activity or can each post (or series of posts) on a different topic considered a single activity?

Item 10.

Part: 4.2.2 Public Involvement/Participation

Location: Pages 18 through 22

Comment: This entire section is confusing. The list of elements a through i on page 18 does not seem to directly correspond to the management measures table on pages 19 and 20. Further these two permit elements do not seem to correspond well with the additional management measures tables on pages 21 and 22. Some requirements seem stated more than once, but in somewhat different ways making it difficult to clearly understand if these are separate requirements or the same. Suggest revising the control measure to the format used for the Public Education MCM, where the PIE plan provided the required activities, and the management measures tables outlined the activity minimums and reporting requirements.

Item 11.

Part: 4.2.1.1 and 4.2.2.1 General Public

Location: Pages 14 through 22, 1st paragraph in both subparts

Comment: For both the public education and public involvement/participation control measures, the permit identifies the public as the target audience in subsections 4.2.1 and 4.2.2.1, and then further categorizes sub-audiences under each subsection. It is unclear whether these sub-audiences are required targets or just suggested targets. Please clarify the required targets for both the public education and public involvement/participation activities. Suggested audiences should be moved to the rationale so Division staff don’t inadvertently include them as requirements during audits.

Item 12.

Part: 4.2.2.1 General Public and 4.2.2.2 Commercial and Development Community

Location: Pages 14 through 22

Comment: Are the management measures indicated in these parts in addition to the management measures identified in the table on pages 18 and 19? If so, indicate this clearly.

Item 13.

Part: 4.2.2 Public Involvement/Participation

Location: Entire section

Comment: Is a social media (e.g., Twitter or Instagram) activity considered public involvement/participation? Input from the public can be provided via responses to tweets and posts.

Item 14.

Part: 4.2.3 Illicit Discharge Detection and Elimination

Location: Page 23, list item a

Comment: Please provide correct sub-part number.

Item 15.**Part:** 4.2.3 Illicit Discharge Detection and Elimination**Location:** Page 23, list item c

Comment: Please indicate if these procedures must be in the form of a written document. If so, please provide a clear deadline for preparing this plan. Given the increase in additional documentation required by this permit, permittees should be allowed to gradually document their procedures over the full five-year permit period.

Item 16.**Part:** 4.2.3 Illicit Discharge Detection and Elimination

Location: Page 23, list items 6 and 7, and pages 25-26, management measures table, 3rd row of 1st column and 3rd and 4th row of middle column

Comment: A permittee may not always be able to determine the source and discharger for a confirmed illicit discharge. So, being able to initiate enforcement and/or receive corrective action plans for 100% of confirmed discharges may not always be possible. Suggest parts 6 and 7 and the corresponding management measure be rewritten to allow for this situation so permittees do not have compliance liability if they cannot readily identify a source and discharger.

Item 17.**Part:** 4.2.3 Illicit Discharge Detection and Elimination

Location: Page 24, list items e and f

Comment: Suggest these sections refer back to Part 4.2.1.1. and 4.2.2.1, respectively

Item 18.**Part:** 4.2.3 Illicit Discharge Detection and Elimination

Location: Page 25, management measures table, third row, middle column

Comment: The measurable goal wording is confusing and focuses on tracking the reporting source rather than the illicit discharge complaint itself. Suggest rewording to say something like “track all potential illicit discharges reported, categorized by reporting source (public or permittee staff)”.

Item 19.**Part:** 4.2.3 Illicit Discharge Detection and Elimination

Location: Page 27, management measures table, last row, middle and last columns

Comments:

1. The requirement to conduct or sponsor at least one activity that fosters interagency coordination places permittees in jeopardy of potential enforcement by the Division for the action (or inaction) of agencies should be removed. Activity effectiveness is not within the control of the permittee. The majority of other agencies involved in hazardous waste or material spills response and cleanup operate independently from a permittee’s stormwater department, nor are they subject to this permit. As a result, they may not feel compelled to participate in an annual interagency activity needed by the permittee. Suggest eliminating this as a required activity. Or, alternately, the activity could be revised it to a minimum requirement for annual (one-way if necessary) contact from the permittee to other agencies (e.g., a letter from the permittee advising other agencies of the permittee’s interest and responsibilities with respect to hazardous waste and materials spills, requesting or outlining permittee involvement when issues occur, and providing permittee contact information).

2. It is not clear how the last two bullets of the last column (pertaining to a target audience) are associated with IDDE requirements. Please clarify.

Item 20.

Part: 4.2.4. Construction Site Stormwater Runoff Control

Location: Page 28, list item a

Comment: Item a, with its specification of a 12 month timeframe for ordinance updates, is in conflict with implementation dates specified in the first and second rows of the table provided in Part 4.1.2, which state ordinance updates are required within 24 and 18 months, respectively.

Item 21.

Part: 4.2.4. Construction Site Stormwater Runoff Control

Location: Page 29, list items f and h

Comment: Please indicate if these procedures must be in the form of a written document. If so, please provide a clear deadline for preparing this plan. Given the increase in additional documentation required by this permit, permittees should be allowed to gradually document their procedures over the full five-year permit period.

Item 22.

Part: 4.2.4 Construction Site Stormwater Runoff Control

Location: Page 29, list item f

Comment: Past small MS4 permits have already resulted in local government processes that eliminate (or severely limit) the commencement of land disturbance activities without an approved plan for construction site stormwater runoff control. This control is clear, effective, and implementable. Thus, it is difficult to understand the Division's desire in this permit to require specification, or even address the topic, of a timeframe for construction site plan reviews in this draft permit. Plan review timeframes are outside the scope of water quality protection and permitting. Thus, forcing permittees to specify plan review timeframes solely for purposes of permit compliance is unnecessary for water quality protection and an overstepping of the Division into individual local government land development processes to the primary benefit of land developers.

Plan review timeframes can vary widely, depending on a local government's land development process, the role(s) of other departments involved (e.g., planning, codes enforcement, etc.), matters unrelated to permit compliance, legal issues surrounding a specific land development, the completeness and quality of the submitted plan, and other factors. Additionally, It can also unnecessarily complicate local government land development processes, potentially resulting in activity ineffectiveness.

Item 23.

Part: 4.2.5.2 Permanent Stormwater Standards

Location: Page 32, list item d

Comment: For many permittees, modification of their current permanent stormwater management programs to one that is compliant with the new permit will take significant planning. Permittees should be given at least 120 days after the effective date of the final permit to prepare the implementation plan.

Item 24.

Part: 4.2.5.2 Permanent Stormwater Standards

Location: Page 33, list item c, 3rd sentence

Comment: The sentence regarding uncontaminated roof runoff should be deleted from the permit. Scientific data is limited and generally does not support the position that roof runoff is uncontaminated. Further, common sense does not support the position that roof runoff is uncontaminated (i.e., contains no other substances than rain/storm water). Rather, it is easy identify possible contaminants and their sources.

- Landscape debris, dust, sediment, and other pollutants can be dropped by nearby trees or deposited on the roof via wind/air deposition.
- Feces can be deposited by birds and pathogens can be deposited from carrion dropped by predatory birds.
- Rainfall contamination is another key source of pollutants for some areas.
- For some roof types, the roofing material itself can deliver contaminants in stormwater. For example, asphalt roofs release grit/particles that are carried from the roof through downspouts.

No roof is free from such exposures. Further, the sentence crafted by the Division is permissive, which allows permittees the ability to NOT exclude uncontaminated roof runoff. However, due to the very nature of roof runoff contamination, creating a permissive authority causes undo complexity at the local level to defend the issue. It places the responsibility of defining uncontaminated roof runoff on the permittee, without the safety of typical bona fides should a permittee's program be challenged. Such bona fides include the following.

1. Explicit coverage for roof runoff discharges under this permit, or under any other State or Federal permit is not provided.
2. Precedence for inclusion of similar exclusions of roof runoff (or a successful defense of challenges to similar statements) in other Federal or state municipal or NPDES permits or programs likely do not exist.
3. A basis in science and engineering that allows permittees to safely qualify or set criteria for defining uncontaminated roof runoff (i.e., what types of roofs, roof locations, land use, etc.) has not been developed. Generally, most permittees have neither the knowledge nor resources to develop the scientific basis needed to craft criteria for uncontaminated roof runoff to the degree that they can overcome concerns 1 and 2 listed immediately above and defend their criteria if challenged by EPA, the Division, land development stakeholders, and/or environmental defense stakeholders.

From an administrative perspective, eliminating a portion of a site's impervious area (i.e., rooftops) from stormwater quality requirements when stormwater quantity requirements (i.e., detention and conveyance) still apply will require significant additional attention to detail for permittees during plan review and approval, construction inspection and enforcement, SCM definition, tracking, and maintenance. As new development and redevelopment within a subdivided site occurs, the separation of roof runoff must be tracked so that new design plans take the exclusion into account. Ultimately, the management of this exclusion will require more permittee staff resources to administer for the life of each site designed in this manner.

As the Tennessee Rule 0400-40-10-.04 progressed through its own approval and adoption, the Division staff have been asked about the uncontaminated roof runoff sentence by several parties. Division responses have included the statement that the sentence is permissive, therefore permittees do not have to exclude roof runoff if they do not want to. With this answer, the Division has been unwilling to eliminate the sentence. However, this response lacks an understanding by the Division of municipal stormwater regulation and administration and of the poor position the Division has placed permittees in as a result of the sentence. It places them in a defensive posture, without providing the basis at the State level to defend local government decisions.

Finally, even the valid arguments made above against a roof runoff exclusion, many permittees will not be able to withstand political pressure to allow the exclusion from land development stakeholders seeking to weaken local stormwater quality standards. As we have seen in recent years, such challenges are often decided by politics as opposed to scientific understanding, environmental permit compliance liabilities, municipal resource needs and balancing, or even water quality protection goals. Thus, by including this sentence in the permit, the Division has placed permittees in jeopardy of allow pollutant discharges that will be difficult to defend.

Item 25.**Part:** 4.2.5.2 Permanent Stormwater Standards

Location: Pages 33 through 35, Water Quality Treatment Volume and Corresponding SCM Treatment Type table

Comment: The Division should readily accept and allow the use of existing compliant 80% TSS Removal approaches based on work of Richard A. Claytor and Thomas R. Schueler in 1996 (*Design of Stormwater Filtering Systems*, 1996), henceforth called “the traditional approach”, with all SCMs sized for a 1.25” rainfall WQTV as equivalent to that defined in Part 4.2.5.2 parts b, c, and d. if TDEC strongly desires a lower tier, then green infrastructure SCMs without an underdrain could still be sized to a 1” rainfall WQTV. Requiring permittees that have already implemented the traditional approach to modify their ordinance and design support tools or obtain coverage under an individual permit simply to adhere to a prescribed, but no better, approach is both unnecessary and costly. Ultimately, it will not provide an increased level water quality protection than is already implemented by these permittees.

Rationale for this comment is as follows.

- The tiered WQTV approach adopted in Tennessee Rule 0400-40-10-.04 and now in the draft permit displays a lack of understanding in the long-standing traditional 80% TSS removal approach. To date, the Division has provided no scientific basis for the tiered WQTV approach as being more protective than the traditional approach. Nor is the tiered approach more quantifiable, easier to understand, or easier to apply. It is simply a different method to meet the goal of 80% TSS Removal of the WQTV, but no better or worse than the traditional approach.
- In discussions about the traditional approach in the past year, Division staff have expressed a dislike for the traditional approach’s imperviousness parameter “Rv” as a basis for requiring the alternative, tiered approach. Worries by Division staff regarding the Rv parameter as a parameter that is mysterious or not scientific are unfounded and ignore the imprecision of hydrologic science itself.
 - Rv is simply a measure of the influence of imperviousness on runoff, akin to the NRCS method’s curve number or a Rational Method C factor. The latter two parameters have been standard hydrologic parameters used in engineering many decades. (In fact, Division staff and their consultant have been using the NRSC method to explain WQTV in recent conferences.) Rv has been used widely since 1996 (almost 30 years). All three parameters seek to describe runoff response to rainfall on single or mixed land uses. Some are more detailed than others, but none of the three are considered to be wholly accurate. Rather, they are the best we can do in science and engineering to describe mother nature. Hydrology itself is an inexact science. Whether we are using a curve number or an Rv value to determine WQTV, we are simply estimating how rainfall transforms to runoff to get a volume for design. Neither method is exact or more correct.
 - The 80% TSS removal standard itself, whether applied under the traditional or tiered approach, is exact as well. It is a wholly presumptive standard based on the premise that if a SCM is designed, constructed, and maintained in keeping with certain specifications, it will generally provide a certain level (%) of TSS removal. The TSS removal %’s are often based on limited literature compilations from SCMs studied in other areas of the United States – and thus not entirely relevant to Tennessee hydrology. Further, the SCM specifications, using TSS as a measure of pollutant, and the hydrology used to determine WQTV are all inexact methods and parameters, based on estimations, studies, and assumptions. If we monitor the water quality of SCM inflows and outflows, its unlikely the results will hit the exact % pollutant removal assigned to the SCM. So, the point is, putting too fine of a point on disliking a single parameter (i.e., Rv) that has nearly 30 years of acceptance and use as a valid hydrologic parameter is overthinking the entire foundation of any 80% TSS removal approach.
 - When the traditional approach using the Rv parameter is applied on impervious area only, its results are no different than the WQTV that would be obtained using the draft permit’s tiered approach. When applied over an entire drainage basin (including pervious areas), the Rv parameter considers green space

but does not reduce the impact or treatment of impervious surfaces. Thus, it provides an inherent added incentive for the use Low Impact Development (LID). Thus, it could be argued the traditional approach is a “greener” and possibly more effective approach than what is provided in Tennessee Rule 0400-40-10-.04 and the draft permit.

- The traditional approach is widely accepted as a credible and permit-acceptable approach for post-construction stormwater quality management throughout United States east of the Rocky Mountains. In fact, this approach been used in the State of Tennessee since the early 2000’s and, until this permit, been accepted by the Division as compliant. Since the traditional approach REQUIRES the use of treatment trains when an SCM alone cannot meet the 80% TSS removal of the WQTV standard, it is NO LESS PROTECTIVE than the tiered approach.
- Many Tennessee permittees have already implemented a traditional 80% TSS Removal program for compliance with prior small MS4 permittees. To date, these programs have been deemed compliant by the Division. For the permittees providing these comments, it would not be significant to adhere to a 1.25” WQTV requirement for all SCMs, provided the required 80% TSS removal is met under the traditional approach. This SHOULD BE VIEWED AS EQUIVALENT BY THE DIVISION BECAUSE IT IS EQUIVALENT. However, to modify an already compliant post-construction program to the tiered approach is much larger effort that will require significant time and financial resources. It will also require a significant level of staff and stakeholder training and education to understand. Yet, the level of water quality protection that results from this change will be no different. For resource-strapped TN permittees, this is an unnecessary use of public dollars and a waste permittee staff time.

Item 26.

Part: 4.2.5.2 Permanent Stormwater Standards

Location: Page 33 Water Quality Treatment Volume and Corresponding SCM Treatment Type table

Comment: The tiered approach provided in the table shows a lack of understanding in the complexity of municipal land development regulation as it pertains to stormwater in many areas of Tennessee. The tiered approach targets green infrastructure without an underdrain (i.e., infiltration, evaporation, transpiration, and reuse) as the SCM treatment type of choice since it has the lowest required WQTV. However, it does not recognize the substantial feasibility issues associated with these types of SCMs:

- infiltration SCMs without an underdrain are rarely feasible in urban, semi-urban, and suburban settings in many parts of Tennessee. Physical and hydrologic constraints are prevalent, such as poorly-draining soils, high slopes, and karst features. Biofiltration with an underdrain is often the better approach because it balances water quality protection with safety, drainage, and maintenance concerns.
- Capture and reuse SCMs such as green roofs and cisterns are SCM options that many permittees avoid because of concerns about maintenance oversight and enforcement. Since these SCMs are often attached to a building, they cannot be placed into maintenance easements, which is a legal tool for maintenance oversight used by many permittees. They also require a continual level of operation on behalf of the property owner that is difficult to inspect (even with right of entry).

Thus, the tiered approach in the draft permit promotes largely unfeasible SCMs at the WQTV expense of other quasi-green infrastructure approaches (e.g., biologically active filtration with an underdrain) that are often more feasible. Allowing the lower WQTV requirement for biologically active filtration may have a long-term positive impact on water quality.

Item 27.

Part: 4.2.5.2 Permanent Stormwater Standards

Location: Page 34, SCM Treatment Type Table, last row, and list item d. Treatment Train Calculations

Comment: Questions regarding MTDs in treatment trains.

1. If a flow-through MTD must provide an overall treatment efficiency of at least 80% TSS reduction (as required per the last row and last column of the table), then why would the MTD be used in a treatment train? It satisfies the requirement as a standalone MTD and a second SCM is not necessary.
2. Is there any volume criterion associated with the use of MTDs in a treatment train? For example, a designer wants to use a sand filter SCM for water quality treatment but cannot size it to control the entire WQTV.
 - a. If they opt to place a flow-through MTD upstream of the sand filter, is there a WQTV requirement for the MTD? If the answer to the question is the WQTV requirement for the MTD is the “maximum runoff generated from the entire design storm” per the SCM treatment table, then why is there a need for the treatment train? Doesn’t the MTD alone satisfy the 80% TSS removal requirement?
 - b. Is there a minimum WQTV requirement for the sand filter (i.e., the downstream SCM)?

Item 28.**Part:** 4.2.5.2 Permanent Stormwater Standards**Location:** SCM Treatment Table**Comment:** Do MTDs used for SCM pretreatment purposes need to have a minimum treatment efficiency?**Item 29.****Part:** 4.2.5.2 Permanent Stormwater Standards**Location:** Page 35, list item f.3

Comment: Incentives can take time to develop and adopt. Sometimes they are identified as a result of other stormwater program activities, such as the implementation of a stormwater utility or a change in stormwater utility rate. Also, incentives do not often require a change to an ordinance, so from the permittees perspective would not necessarily need to be done during the (maximum) 24-month implementation period specified by the permit. Is there a deadline for submitting incentives to the Division or can they be developed and submitted at any time during the 5-year permit period?

Item 30.**Part:** 4.2.5.4 Water Quality Riparian Buffers**Location:** Page 36, first paragraph, first sentence

Comment: The permit should define the expectations for permittees to “protect and maintain” permanent water quality riparian buffers.

Item 31.**Part:** 4.2.5.6 Development Project Plan Review, Approval, and Enforcement**Location:** Page 38

Comment: Please indicate if these procedures or processes must be in the form of a written document. If so, please provide a clear deadline for preparing this plan. Given the increase in additional documentation required by this permit, permittees should be allowed to gradually document their procedures over the full five-year permit period.

Item 32.**Part:** 4.2.5.7 Maintenance of Permanent Stormwater Control Measure Assets**Location:** Page 39, list item b.3

Comment: Delete “agreement” and replace with “instrument”. Local law departments for some permittees are unwilling to support their own jurisdiction’s use of SCM maintenance agreements. Rather, these law departments identify and support other legal instruments, including but not limited to ordinance requirements, plat notes, easements, and deed restrictions, as sufficient and effective to compel and enforce property owner maintenance of SCMs and permittee right-of-entry for inspections and enforcement. The Division should not be predicated the type of local legal mechanisms used by a local government to compel compliance, but rather the legal authorities and rights needed for compliance.

Staff of the Division have indicated verbally (in past discussions) the requirement for a maintenance agreement is the Division’s preferred method of: 1) compelling maintenance; and 2) ensuring the SCM owner or maintainer is aware of their responsibilities. However, experience throughout Tennessee since 2008 indicates that a maintenance agreement typically does not increase SCM owner awareness, even at the time property changes ownership. Rather, locally-appropriate legal instruments (not necessarily an agreement) combined with consistent owner communication and education regarding SCM maintenance responsibilities are the key to a more effective SCM maintenance. The permit should reflect this knowledge of Tennessee permittees and not rely so heavily on a maintenance agreement as the critical component for permanent stormwater management programs.

Item 33.

Part: 4.2.5.9 Management Measures, Goals, and Annual Report Requirements

Location: Page 41, table first rows pertaining to Stormwater Mitigation and Public Stormwater Fund

Comment: The measurable goals and annual report requirements are difficult to understand and do not track back to the requirements stated in subpart 4.2.5.3, which say nothing about project completion. It is understandable that the Division wants to see that all projects entering a mitigation process are accounted for. However, the measurable goals and annual report requirements predicate project processes that will likely differ from how a viable mitigation and/or fee-in-lieu program actually works and secures funding over time. Some programs may work within the annual budgeting of a stormwater utility and others may secure funding through multi-year program grants. Instead of writing measurable goals and annual report requirements for permittees, the Division should allow permittees to write their own measurable goals that best fit their offsite and fee-in-lieu programs.

Item 34.

Part: 4.2.5.9 Management Measures, Goals, and Annual Report Requirements

Location: Page 42, table row pertaining to policies for submittal and review of plans (subpart 4.2.5.6a)

Comment: Eliminate the measurable goal and annual report requirements pertaining to reviewing plans within a certain timeframe. What does a plan review timeframe have to do with effective water quality protection under the permanent stormwater minimum control measure? Plan review timeframes can vary widely among permittees, depending on a local government’s land development process, the role(s) of other departments involved (e.g., planning, codes enforcement, etc.), matters unrelated to permit compliance, legal issues surrounding a specific land development, the completeness and quality of the submitted plan, and other factors. Forcing permittees to specify plan review timeframes solely for purposes of permit compliance is unnecessary for water quality protection and an overstepping of the Division into individual local government land development processes.

Item 35.

Part: 4.2.6 Pollution Prevention/Good Housekeeping

Location: Pages 43 and 44

Comment: Page 43 talks about an O&M program while page 44 talks about an O&M Facility Plan, without actually stating a requirement for a “plan”.

1. Please correct or clarify, differentiating between the two if both are required.

2. Please clarify which items, if any, must be established or provided as written documentation along with a clear deadline for preparing these plans, and whether (or not) the facility plans must be submitted. Given the increase in additional documentation required by this permit and the fact that O&M Facility Plans may identify new resources or equipment needs at facilities, permittees should be allowed several years to budget for and prepare these plans, and then the remainder of the five-year permit period to fully implement them.

Item 36.

Part: 4.3 Qualifying Tribe, State or Local Program (QLP)

Location: Page 45

Comment: The definition of a QLP in the first sentence of the Part implies the Division can designate QLPs on their own. It is suggested this be revised to indicate the MS4 must desire and apply for QLP status or otherwise has a say in being identified as a QLP.

Item 37.

Part: 4.4.1.1 Minor Modifications

Location: Page 47, item a

Comment: What is a component, control, or requirement to the SWMP as opposed to a BMP/activity?

Item 38.

Part: 4.4.2 Stormwater Management Program Updates Required by the Division

Location: Page 49, first sentence of subpart

Comment: The phrase “as needed” is too broad, essentially allowing the Division to compel SWMP changes beyond the scope of the permit. These words should be replaced with “in keeping with the requirements of this permit”.

Item 39.

Part: 4.5.4 Requirements for Chronic Violators

Location: Page 52, first sentence of subpart

Comment: The first sentence should end after the word “component” and the remainder of the sentence deleted.

Item 40.

Part: 4.6.1.1 Monitoring

Location: Page 54, first paragraph, second sentence

Comment: Please clarify if the description of the monitoring program must be in the form of a written document.

Item 41.

Part: 4.6.2 Storm Water Management Program Evaluation

Location: Page 58

Comment: The requirement for a SWMP Evaluation Report should be eliminated from the draft permit. Permittee evaluation of their stormwater management program has always been required under prior permits and is documented in their annual reports (e.g, 2020-21 Small MS4 Permit Annual Report Part 8). Why is it now necessary for permittees to create yet another written document to address a requirement already provided for under the annual report? Further, why is it necessary for the SWMP Evaluation Report to restate program activities already provided and described under the NOI, annual report, newly required sub-plans (e.g., publicity plan,

implementation plan, etc.), and other written elements of the SWMP? This additional paperwork for permittees does not improve the potential for program effectiveness because permittee resources will be spent on paperwork rather than water quality protection.

Item 42.

Part: 4.7.1 Annual Report Requirements for Legal Authority

Location: Page 60

Comment:

1. This requirement is unnecessary given that legal instruments and authorities are reviewed within each permittee's jurisdiction when they are written, modified, and/or considered by elected governing bodies. Further, it is not clear why it is necessary for a permittee to have a solicitor certify these requirements when the NOI and all annual reports, both of which address these legal instruments and authorities, are signed by the principal executive officer or ranking elected official of the permittee. That signature alone should indicate acceptance of these legal instruments and authorities by the permittee.
2. If the requirement for a signed solicitor's certification statement remains in the draft permit, making this an annual requirement is unnecessary and likely much more cumbersome than the Division realizes. It is suggested the requirement be changed to obtain the certification once every five year permit period and/or whenever a legal instrument is modified administratively or adopted by the governing body.

First, legal instruments are typically reviewed and approved by local government attorneys/legal departments before they are considered for adoption by the governing body. So, adoption alone can indicate a legal review and approval has already occurred. Second, an annual certification is unnecessary because legal instruments do not change/undergo adoption on a routine basis. Most permittees operate under an adopted legal instrument for many years before making changes and securing approvals from legal and governing agencies. Finally, securing the interest and signature of local government attorneys or legal departments typically requires significant advance notice and administrative interactions to allow the attorneys the time to understand, review, and act upon the request for a signature..

Item 43.

General Nomenclature Comments:

1. The words "stormwater" and "storm water" are used inconsistently throughout the permit. Suggest the Division pick one word or two and be consistent thereafter.
2. The permit uses the words "BMP" and "activity" interchangeably. Please provide consistency throughout the permit with these terms and specify if there is a difference in the two words.