In the Matter of the Petition of Blue Water Balt., et al., Nos. 1426 & 1803, September Term, 2022. Opinion by Nazarian, J.

ENVIRONMENTAL LAW – PERMITS AND CERTIFICATIONS – DISCHARGE OF POLLUTANTS

The Department of the Environment is afforded wide flexibility in choosing municipal separate storm sewer system ("MS4") permit terms that comply with the federal maximum extent practicable ("MEP") standard. The Department has discretion to include water quality-based effluent conditions in addition to the MEP standard to protect water quality and has broad discretion in how it achieves consistency with wasteload allocations ("WLAs"). The Department did not act arbitrarily or capriciously in issuing MS4 permits with terms it found consistent with applicable total maximum daily load WLAs to protect water quality. The administrative record reveals a rational basis for and substantial evidence to support the Department's decision to include the challenged permit requirements.

Circuit Court for Baltimore City
Case No. 24-C-21-005448

Circuit Court for Baltimore County
Case No. C-03-CV-21-004013

REPORTED

IN THE APPELLATE COURT

OF MARYLAND

CONSOLIDATED CASES

Nos. 1426, 1803

September Term, 2022

IN THE MATTER OF THE PETITION OF BLUE WATER BALTIMORE, INC., ET AL.

Wells, C.J.,
Nazarian,
Tang,

JJ.

Opinion by Nazarian, J.

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In this appeal, environmental advocates challenge the most recent stormwater permits issued by the Maryland Department of the Environment (the "Department") to Baltimore City and Baltimore County. They argue that the permits don't do enough to limit pollution or flooding, are legally deficient, and require a do-over. In these consolidated cases initiated in the Circuit Courts for Baltimore County and Baltimore City, Blue Water Baltimore, Inc., the Chesapeake Bay Foundation, Inc., and various individuals (the "Environmental Advocates") assert that (1) the municipal separate storm sewer system ("MS4") permits fail to meet water quality standards of receiving waters, (2) the permits violate the anti-backsliding provision of the Clean Water Act, and (3) the Department otherwise failed to "consider the totality of information available, resulting in disproportionate impacts." The Department and City of Baltimore defended the permits and both circuit courts affirmed the final determination of the Department to issue them. We affirm as well.

I. BACKGROUND[1]

A. General Overview Of Discharge Permit Requirements.

MS4 permits are a type of National Pollutant Discharge Elimination System

[1] MS4 permitting has been explained in depth already in connection with other challenges to other MS4 permits and we need not reinvent that wheel here. *See Maryland Dep't of the Env't v. Anacostia Riverkeeper*, 447 Md. 88 (2016); *Maryland Dep't of the Env't v. Cnty. Comm'rs of Carroll Cnty.*, 465 Md. 169 (2019); *Maryland Small MS4 Coal. v. Md. Dep't of the Env't*, 479 Md. 1 (2022). For much more extensive legal, historical, and scientific background on MS4 permitting, see *Anacostia Riverkeeper*, 447 Md. at 96–103, and *Carroll County*, 465 Md. at 182–97, and for extensive background on the Chesapeake Bay Total Maximum Daily Load and the Clean Water Act, see *American Farm Bureau Fed'n v. EPA*, 984 F. Supp. 2d 289, 294–307 (M.D. Pa. 2013).

("NPDES") permit, 33 U.S.C. §§ 1311(a), 1342, and in Maryland, the Department is the NPDES permitting authority, as delegated by the Environmental Protection Agency ("EPA"). 33 U.S.C. § 1342(a)(5), (b); Md. Code (1987, 2014 Repl. Vol., 2022 Supp.), § 9-253 of the Environment Article ("EN"); COMAR 26.08.04.01. Under the Clean Water Act, all point source[2] discharges of pollutants are prohibited unless authorized by permit. 33 U.S.C. § 1311(a).

Generally, discharge permits must include: "(1) effluent limitations that reflect the pollution reduction achievable by using technologically practicable controls and (2) any more stringent pollutant release limitations necessary for the waterway receiving the pollutant to meet 'water quality standards.'" *Piney Run Pres. Ass'n v. Cnty. Comm'rs of Carroll Cnty.*, 268 F.3d 255, 265 (4th Cir. 2001) (*quoting American Paper Inst. v. EPA*, 996 F.2d 346, 349 (D.C. Cir. 1993)). In other words, "[e]ffluent limitations may be [(1)] 'technology based' or [(2)] 'water quality based.'" *Carroll County*, 465 Md. at 186; *see also* 33 U.S.C. § 1362(11) (defining "effluent limitation" as "any restriction . . . on quantities, rates, and concentrations of chemical, physical, biological, and other constituents which are discharged from point sources into navigable waters"). Those are

[2] A point source is "any discernible, confined and discrete conveyance," and includes, for example, "any pipe, ditch, channel, tunnel, . . . or vessel or other floating craft, from which pollutants are or may be discharged." 33 U.S.C. § 1362(14). By contrast, a "nonpoint source" is "[u]ndefined by the statute," but "includes dispersed runoff from rainwater or snowmelt that sweeps over buildings, farms, and roadways, and that carries pollutants and pesticides into navigable waters, their tributaries, and groundwater." *Maryland Small MS4 Coal.*, 479 Md. at 7.

not necessarily "mutually exclusive goals" and certain permit requirements can support both. *Maryland Small MS4 Coal.*, 479 Md. at 42.

Typical "end-of-pipe" discharges from factories or wastewater treatment plants use technology-based effluent limitations, which are "designed from the perspective of the discharger" and specify "a numeric level of pollution . . . . [T]he point source must install technology to ensure that the amount of pollution emitted from the pipe is below the specified level." *Carroll County*, 465 Md. at 211–12. "If technology based limitations do not achieve the water quality standards, permits may include 'any more stringent limitation . . . necessary to meet water quality standards'—*i.e.*, 'water quality based effluent limitations.'" *Id.* at 187 (*quoting* 33 U.S.C. § 1311(b)(1)(C); 40 C.F.R. § 130.7(c)).

B. MS4 Permit Requirements.

This appeal involves a specific kind of discharge system: stormwater pollutants that pass through municipal separate storm sewer systems, known colloquially as MS4s. MS4s include complex systems of drains, gutters, ditches, and outfalls that dispose of untreated rain and runoff and "[t]he quantity of stormwater that flows through these conveyances into a waterway can vary unpredictably depending on the weather, any development of the land . . . , and other activities on the land . . . ." *Id.* at 188–89. MS4s are unpredictable, so the statute distinguishes them from the typical "end-of-pipe" permit standards. "It is also difficult to discern the amount of pollutant that any one discharger contributes to a waterbody because municipalities have so many outfalls, or discharge points, leading into the waters." *Anacostia Riverkeeper*, 447 Md. at 98. The Baltimore County and Baltimore City MS4 systems in particular carry water from large land masses, including impervious

(*i.e.*, paved over) developed areas, that picks up various pollutants as it flows downstream and eventually into the Chesapeake Bay.

As a result, MS4 permits must be "more comprehensive than the typical NPDES permit," *Maryland Small MS4 Coal.*, 479 Md. at 11, and they involve management programs rather than numeric caps on the amount of pollutants discharged. These programs include features the Department describes as "things like erosion and sediment control, litter-reduction, and stormwater management—designed to reduce the amount of pollution that makes it into the stormwater in the first place." The programs are considered best management practices ("BMPs"), and they can be "an appropriate control when '[n]umeric effluent limitations are infeasible.'" *Anacostia Riverkeeper*, 447 Md. at 99 (*quoting* 40 C.F.R. § 122.44(k)(3)).

1. The MS4 technology-based standard is the MEP standard.

The Clean Water Act carved out a different standard for MS4s, distinct from numeric caps on discharges typically required for NPDES point sources. *Id.* at 98 ("Congress adopted a flexible approach to the control of pollutants in MS4s."). MS4 permits instead require controls of stormwater point sources "to reduce the discharge of pollutants to the maximum extent practicable," 33 U.S.C. § 1342(p)(3)(B)(iii),[3] a principle

[3] The full text of 33 U.S.C § 1342(p)(3)(B) provides:

> (B) Permits for discharges from municipal storm sewers—
>
> (i) may be issued on a system- or jurisdiction-wide basis;
>
> (ii) shall include a requirement to effectively prohibit non-

Continued . . .

commonly referred to as the "MEP standard." "The MEP standard is analogous to a technology based effluent limitation in that its reference point is the MS4 operator rather than the waterway," and its differences from typical point source regulation reflect the unique and complicated nature of MS4s as pollution sources. *Carroll County*, 465 Md. at 212; *see also id.* at 234–37 (discussing how the MEP standard is more flexible and allows for pollution mitigation programs that serve as surrogates for typical NPDES requirements). "Congress did not define the MEP standard in the Act and the EPA has explicitly declined to define it as well." *Id.* at 210. The MEP standard is, however, less stringent than water quality based effluent limitations. *Id.* at 211–12. "[T]his approach contemplates that states shall set controls *they deem necessary* to reduce the discharge of pollutants into their waters." *Anacostia Riverkeeper*, 447 Md. at 178 (*citing* 33 U.S.C. § 1342(p)(3)(B)(iii)). And this leaves broad discretion in the Department to establish and define programs for MS4s.

2. MS4 water quality based effluent limitations are discretionary, but if used, must be consistent with total maximum daily load ("TMDL") wasteload allocations ("WLAs").

Discharge permits also must achieve limitations "necessary to meet water quality

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> stormwater discharges into the storm sewers; and
>
> (iii) 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.

standards,"[4] as required by 33 U.S.C. § 1311(b)(1)(C). But again, MS4s are different—the overarching MEP approach assigned to MS4s "unambiguously demonstrates that Congress did not require municipal storm-sewer discharges to comply strictly with 33 U.S.C. § 1311(b)(1)(C)." *Defenders of Wildlife v. Browner*, 191 F.3d 1159, 1164 (9th Cir. 1999). MS4s "are not . . . *required* to impose effluent limitations necessary to meet water quality standards," *Anacostia Riverkeeper*, 447 Md. at 104 (emphasis added), but permitting authorities have *discretion* to include water quality based effluent conditions in addition to the MEP standard to protect water quality. *Carroll County*, 465 Md. at 220–21; *id.* at 214 ("[A]n MS4 permit may include, as needed, effluent limitations consistent with TMDL wasteload allocations, in compliance with the EPA regulation that requires a discharge permit for a point source to contain such effluent limitations."). Since 1990, the EPA has "'recommend[ed] that the . . . permitting authority exercise its discretion to include appropriate narrative and/or numeric water quality-based effluent limitations . . . as necessary to meet water quality standards.'" *Id.* at 222 (*quoting* EPA Letter to Maryland Department of the Environment re Supplemental Comments on Frederick County Phase I MS4 Permit (Sept. 23, 2014)).

The Department imposes water quality standards on MS4 operators that incorporate the "assumptions and requirements of wasteload allocations," *Carroll County*, 465 Md. at 193 (cleaned up), through use of an impervious acre metric that acts as a surrogate for

[4] "'Water quality standards' are targets set by the states and approved by the EPA." *Maryland Small MS4 Coal.*, 479 Md. at 9 (*citing* 33 U.S.C. § 1313).

Chesapeake Bay stormwater WLAs. When a state identifies impaired waters (waters where technology-based effluent limitations in NPDES permits are not stringent enough to ensure water quality), it must establish a TMDL for every pollutant that prevents the water from meeting water quality standards. 33 U.S.C. § 1313(d)(1). The TMDL describes a numeric cap or "'level' of a pollutant that a water body can tolerate without violating applicable water quality standards." *Carroll County*, 465 Md. at 190. A TMDL is made up of the sum of individual WLAs for point sources and load allocations ("LAs") for nonpoint sources plus natural background. 40 C.F.R. § 130.2(i).

The EPA issued the Chesapeake Bay TMDL in 2010. *See Carroll County*, 465 Md. at 194. It requires Bay jurisdictions, including Maryland, to reduce discharges of pollutants for which the Bay has failed to attain target water quality standards—*i.e.*, nitrogen, phosphorus, and sediment—by 2025. *Id.*; *Anacostia Riverkeeper*, 447 Md. at 106–07, 109. And "the Bay TMDL is neither self-implementing nor directly enforceable. Rather, it serves as an informational tool that the EPA and the states use in seeking to achieve the specified pollutant levels—and the applicable water quality standards—by means of discharge permits and other regulatory tools." *Carroll County*, 465 Md. at 193; *Anacostia Riverkeeper*, 447 Md. at 123 (the impervious surface restoration requirement is a "surrogate or proxy" effluent limitation with a water quality-based standard, and only indirectly reduces pollution). "TMDLs inform," *Anacostia Riverkeeper*, 447 Md. at 100, but "WLAs are more akin to restrictions." *Id.* at 104. As such, TMDL WLAs require

"translation pursuant to 40 C.F.R. § 122.44(d)(1)(vii)(B)"[5] into permit limits. *Id.* at 133. But those water quality standards, in the MS4 context, are "like the MEP standard, flexible as to how a permitting authority complies" with its obligation "to establish effluent limitations that take into account WLAs[.]" *Id.* at 134–35. The text of the regulation, 40 C.F.R. § 122.44(d)(1)(vii)(B), "does not instruct the permitting authority as to how it must ensure this consistency," but "[i]nstead, the EPA set a minimal, flexible requirement in which the permitting authority is to design a scheme where effluent limits are compatible or in agreement with WLAs." *Id.* at 136. And "the overarching federal law for MS4s—33 U.S.C. § 1342(p)(3)(B)(iii)—is broad and flexible," even with respect to the water quality based effluent limitations. *Id.* at 137; *see also id.* at 179 (*citing* 40 C.F.R. § 122.44(d)(1)(vii)(B)) (the EPA "has afforded permitting agencies such as [the Department] the flexibility to develop effluent limitations").

3. Maryland's impervious surface restoration ("ISR") strategy.

In order to meet Bay TMDL water quality targets, the EPA directed Maryland to create watershed implementation plans ("WIPs") that provide a roadmap for how it would achieve the Bay TMDL's goals for reducing pollution. *Carroll County*, 465 Md. at 194–

[5] The regulation requires the Department to establish effluent limitations that take TMDL WLAs into account:

> When developing water quality-based effluent limits under this paragraph the permitting authority shall ensure that[] . . . [e]ffluent limits developed to protect a narrative water quality criterion, a numeric water quality criterion, or both, are consistent with the assumptions and requirements of any available wasteload allocation for the discharge prepared by the State and approved by EPA . . . .

95. Maryland developed its WIPs in three different phases. Maryland's first phase (the "Phase I WIP") committed the State to reducing the adverse effect of MS4 discharges by an amount equal to retrofitting twenty percent of the State's impervious area to restore the areas' pollution-trapping capabilities. This retrofitting is called the "ISR strategy." The ISR strategy is a water quality-based effluent limitation that operates "in addition to" the MEP-level programs. *See id.* at 211–12. At times, it also supports the MEP standard. *Maryland Small MS4 Coal.*, 479 Md. at 42.

"Impervious surfaces that do not absorb rainwater have long been recognized as a key cause of water pollution and the resulting impairment of water quality, particularly in urban areas." *Id.* at 15. Restoration can involve replacing an impervious surface with material that allows for absorption of stormwater, in order to "function more like a natural terrain that absorbs and filters rain water." *Carroll County*, 465 Md. at 195. Environmental groups largely favor such "green infrastructure," which, according to the Environmental Advocates, can "include constructed wetlands, rain gardens, protecting large open natural spaces, or planting trees along city streets and greening alleyways."

Maryland is now on Phase III of the WIP strategy, which requires Baltimore City and County to restore ten percent of their impervious areas during the five-year MS4 permit term (in addition to maintaining all of the restoration achieved in Phase I). One important aspect of the Department's implementation of the statewide ISR strategy is the "credits to acres approach," which allows jurisdictions to avoid the costly green infrastructure projects with practices that more indirectly impact water quality and stormwater volume. To detail these practices, the MS4 permits incorporate two documents by reference: the 2000

Maryland Stormwater Design Manual ("Design Manual") and the Accounting for Stormwater Wasteload Allocations and Impervious Acres Treated Guidance for [NPDES] Stormwater Permits (2021) (the "Accounting Guidance"). The Design Manual provides guidance on how to size, design, select, and locate alternative BMPs to meet Maryland's WIP performance standards, *Anacostia Riverkeeper*, 447 Md. at 112, while the Accounting Guidance provides a "credits to acres approach" that translates pollutant reduction qualities of BMP into credits for acres restored. *Id.* at 109, 159–60. The credits assigned by the Accounting Guidance provide flexibility to permittees to determine how best to satisfy the Bay TMDL's pollution allocations based on local conditions and resources. These credits allow jurisdictions to utilize "alternative BMPs" such as street sweeping, storm drain cleaning, stream restoration, and tree planting to meet the ISR requirement. Permittees' authority to choose alternative BMPs and the effectiveness of the BMPs strikes at the heart of the present challenge to the permits.

C. Earlier Maryland Decisions On MS4 Permits.

MS4 permitting challenges have made their way up to the Maryland Supreme Court three times—sometimes for being too strict and sometimes for being too lax, depending on who is seeking review. The first case involved "large" MS4 permits, the second involved "medium" jurisdictions, and the last challenged "small" MS4 permits.[6] In *Anacostia Riverkeeper*, environmental advocates challenged permit terms as not stringent enough to satisfy the Clean Water Act. In *Carroll County*, the counties argued that their respective

[6] Baltimore County and Baltimore City are categorized under the Clean Water Act as "large MS4s." *See* 40 C.F.R. § 122.26(b)(4).

permits were too stringent and exceeded the Department's authority under the Act. And lastly, in the *Maryland Small MS4 Coalition* case, the permittee county asked the Maryland Supreme Court to reconsider its holding in *Carroll County*. In all three cases, the Maryland Supreme Court affirmed the Department's authority to issue the permits in question.

1. Anacostia Riverkeeper

In this 2016 Maryland Supreme Court decision, Anacostia Riverkeeper and other environmental groups—including two of the parties here, Blue Water Baltimore and the Chesapeake Bay Foundation—challenged large MS4 permits for not being stringent enough. 447 Md. at 95 n.1. The primary contention was that the twenty percent ISR requirement imposed on jurisdictions was "too opaque" and undefined to comply with federal and state law. *Id.* at 123. In other words, the challengers contended that the MS4 permits allowed for too much flexibility for permittees' compliance because they could choose their own BMPs from the State's Design Manual. *See id.* at 125.

The Court held that MS4s are not required to impose strict numerical limits that would otherwise be required in a typical "end-of-pipe" NPDES permit:

> MS4s are subject to the MEP standard under 33 U.S.C. § 1342. MS4s are not, however, required to impose effluent limitations necessary to meet water quality standards. The [Clean Water Act] still requires Maryland to set water quality standards and TMDLs—subject to the EPA's approval. Flowing from this obligation is the requirement that MS4s are subject to effluent limitations that are consistent with WLAs of EPA-approved TMDLs.

Id. at 104 (emphasis added). The Court also held that the Department had established a sufficient performance standard in its Design Manual from which "Counties may choose

from to fulfill the 20% restoration requirement." *Id.* at 125. "Because 33 U.S.C. § 1342(p)(3)(B)(iii) does not require a specific performance standard, and because the concepts of restoration and impervious surface 'not restored to the MEP' are sufficiently clear as to the controls that the Counties must install, the 20% restoration requirement in the Permits complies with the MEP standard." *Id.* at 126; *see also id.* at 133 ("[W]e uphold the Guidance as a component the Counties may legally use to achieve the 20% restoration requirement."). The Court held that the ISR requirement satisfied both the State stormwater permitting standards (that incorporate water quality standards) *and* the MEP standard in the Clean Water Act. *Id.* at 126, 128–29.

2. Carroll County

Three years later, the Supreme Court clarified the relationship of these separate legal standards in *Carroll County*. 465 Md. at 222–23. This MS4 challenge came from the opposite side, with the counties suing the Department for making permit conditions too strict. There, the parties agreed the ISR requirement was "a water quality based control that [wa]s *in addition* to those provisions included under the MEP standard," but one county contended that requiring permittees to go beyond the MEP standard in the statute was unlawful. *Id.* at 213 (emphasis added). The Court narrowed its holding by stating that the question in *Anacostia Riverkeeper* "was whether the [ISR] requirement *satisfied* the MEP standard whereas in [*Carroll County*] the question is whether it *unlawfully exceeds it*." *Id.* at 214.

The Court upheld the permits. In the course of analyzing them, the Court considered that under the Clean Water Act, MS4 permits "'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 [EPA] Administrator or the State determines appropriate* for the control of such pollutants.'" *Id.* at 215 (*quoting* 33 U.S.C. § 1342(p)(3)(B)(iii)) (emphasis added). The Court held that the phrase "such other provisions" authorized the Department to include permit conditions that "are not limited by the MEP standard," including conditions that require compliance with water quality standards. *Id.* at 217.

In order to "[h]armoniz[e] MS4 [p]ermit [t]erms with the TMDL [p]rocess" the Court clarified that there is no practicability analysis with respect to water quality compliance in MS4 permits:

> The EPA's regulations require that a water quality based effluent limitation be derived from the applicable water quality standard, *without referring to a practicability test*. Permitting agencies shall ensure that the level of water quality to be achieved by water quality based effluent limitations on point sources is derived from, and complies with, all water quality standards. The EPA's rationale is that deriving water-quality based effluent limits from water quality standards is the only reliable method for developing water quality-based effluent limits that protect aquatic life and human health. Importantly, this rationale does not distinguish between types of point sources, *i.e.*, whether the discharger is a factory, a wastewater treatment plant, an MS4, or any other kind of point source. . . . Thus, when an entity discharges to a waterway subject to a TMDL, its permit must contain effluent limitations consistent with the assumptions and requirements of the corresponding wasteload allocation in the TMDL.
>
> When the final provision of clause (B)(iii) is read to encompass water quality based effluent limitations, *MS4 permits are treated like any other discharge permit for purposes of implementing TMDLs*. This interpretation harmonizes clause (B)(iii) with the TMDL provisions insofar as the latter likewise

> do not distinguish between types of point sources. By contrast, if permitting agencies must constrain all TMDL based effluent limitations in MS4 permits by some sort of practicability analysis, there would be tension with the basic tenet that water quality based effluent limitations must derive from water quality standards.

Id. at 222–23 (cleaned up) (emphasis added).

The Court explained that the ISR "permit term is a numeric water quality based effluent limitation" that is authorized by 33 U.S.C. § 1342(p)(3)(B)(iii). *Id.* at 234. Even still, NPDES permits for MS4s are more flexible and implement pollution mitigation programs as surrogates compared to the typical NPDES requirements. *Id.* at 234–37. The Court found that the ISR term in the counties' permits "correspond[ed] to Maryland's stormwater wasteload allocation within the Bay TMDL. As such, when crafting that limitation, the Department was authorized to focus on what would be necessary to achieve water quality standards . . . ." *Id.* at 238. The Court added that "[t]o the extent that the Counties challenge restoration provisions in their permits that derive from EPA-approved local TMDLs, such challenges should have been made when the local TMDL was approved by the EPA and are not appropriately part of judicial review of an MS4 permit in State court." *Id.* at 264.

One county also challenged the twenty percent ISR requirement as arbitrary and capricious because "compliance with the permit's requirements within five years was financially and logistically impossible." *Id.* at 225. The Court rejected this challenge, stating that "[t]he fact that an agency does not change a proposed action . . . in light of comments requesting a change does not mean that the process lacked a meaningful

opportunity for comment or that the agency failed to consider those comments." *Id.* at 226. Further, the Court found that there was "a rational basis for saying that the restoration requirement is necessary for consistency with the Bay TMDL and the Maryland WIP" and thus it was reasonable for the ISR requirement to be included in the permit. *Id.* at 226–27.

3. The Maryland Small MS4 Coalition *Case*

In this most recent MS4 case decided in 2022 (after the current permits were issued), Queen Anne's County brought an action for judicial review of its small MS4 permit and asked the Maryland Supreme Court to reconsider its holdings in the *Carroll County* case and hold that the "such other provisions" language of 33 U.S.C. § 1342(p)(3)(B)(iii) does not authorize the Department to impose requirements that exceed the MEP standard. 479 Md. at 6. The Supreme Court declined the invitation. Instead, it clarified that *Anacostia River* and *Carroll County* are not inconsistent with the MEP standard:

> In response to challenges from environmental groups, the *Anacostia Riverkeeper* decision concluded that the permit conditions in question satisfied the baseline MEP standard. In response to a converse challenge from permittees, the *Carroll County* decision concluded that the Act authorizes permit conditions beyond the MEP standard for the purpose of satisfying water quality standards. Together, the two decisions stand for the proposition that MS4 permit conditions must meet the MEP standard, but may do more to protect the water quality of a waterway. These two holdings are not in conflict with one another.

Id. at 33.

The Court elaborated on the relationship between the MEP standard and the water quality standards necessary for TMDLs, stating that permit conditions *must* satisfy the MEP standard, but *may* do more. *Id.* at 42–43. "This supplementary relationship"

analogizes "the relationship between technology-based effluent limitations and water quality limitations in typical NPDES permits." *Id.* at 43. "In both types of permits," the Court continued, "there is a minimum standard, and in both types of permits the permitting authority may increase the stringency of those standards to protect water quality." *Id.*

D. Baltimore County's & Baltimore City's MS4 Permits.

1. Public notice and comment period.

Against this abridged regulatory backdrop, we turn to the specific permits before us in this appeal. The Environmental Advocates[7] sue to overturn the MS4 permits the Department issued to Baltimore City and Baltimore County. Draft permits were issued in October 2020, underwent a public notice and comment period, *see* EN §§ 9-324, 1-601 *et seq.*, and went into effect November 5, 2021. In our view, the final permits were not meaningfully different from the drafts.

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[7] The Chesapeake Bay Foundation is a conservation organization "whose mission is to 'Save the Bay' and keep it saved" at least in part by "[r]educing urban and suburban stormwater pollution . . . ." Blue Water Baltimore is an organization "focused on restoring the health of Baltimore's rivers, streams, and harbor to the benefit of our environment and communities." In doing so, it "conducts long-term water quality monitoring in the tidal Patapsco River and its tidal tributaries, non-tidal tributaries in the Jones Falls and Gwynns Falls watersheds, as well as Herring Run, a tributary of the Back River."

The appellants also include individuals whose affidavits were used to establish standing under EN § 1-601(c). The City took issue in its brief with the appellants' attempt to rely on these affidavits as evidence, but the substance of those affidavits was part of the administrative records, and we limit our review to what was before the Department during the public comment period. EN §1-601 *et seq.*; Md. Rules 7-201 *et seq.*

As mentioned before, we'll refer to all appellants as they labeled themselves in their briefs: the "Environmental Advocates."

During the statutory comment period, the Environmental Advocates took the position that the draft permits "lack[ed] specificity and focus needed to deliver reduction in stormwater runoff." More specifically, they attacked the draft permits for relying on ISR "equivalent standard[s]," which, they said, "fail[] to meaningfully reduce pollutant loads to local waters even though it may minimally reduce nutrient and sediment loads to the bay." They added that "[t]he permits also fail to acknowledge changing weather patterns linked to climate change" and urged the Department to "[r]evise the [MEP] standard to reflect specific, individual pollutant load reduction goals."

In support of their arguments, the Environmental Advocates provided the Department with its own data showing, in their view, that "[w]ater [q]uality is not improving as a result of our current MS4 permitting regime." Blue Water Baltimore explained that it "routinely collect[s] scientifically rigorous water quality data for a full suite of parameters at 49 stations throughout the Jones Falls and Gwynns Falls watershed, as well as the tidal Patapsco River and the tributaries that feed into it" and highlighted "several key findings." Among them were "significantly improving trends in *Enterococcus* bacteria" but also "significantly worsening trends" involving "polluted stormwater runoff":

> For example, 23 of our 27 nontidal stations (85%) showed a worsening trend for at least one of the following parameters: Total Nitrogen (mg/L), Total Phosphorus (mg/L), Specific Conductance (uS/cm), or Turbidity (NTU) across all weather types over a 7-year time period. Only 2 stations showed a statistically significant improvement for a single measurement of water health.
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> * * *
>
> Interestingly, our 7-year nontidal dataset covers the previous MS4 permit term, suggesting to Blue Water Baltimore that the

> current approach to stormwater management in Baltimore City, namely street sweeping, is not improving water quality. We similarly question whether Baltimore County's approach is keeping pace with climate change, a growing suburban population, and increased development. We believe our data suggests that substantial changes, including greater reliance on stormwater interventions that reduce stormwater volumes, and treat stormwater before it enters our waterways, are necessary if we expect to see future water quality improvements.

The letter urged the Department to require green infrastructure and to reduce the amount of ISR credit from alternative BMPs like street sweeping, septic pump-outs, and stream restoration.

Blue Water Baltimore also urged the Department to consider Baltimore City and Baltimore County together to relieve "inequity":

> By allowing under-compliance with stormwater remediation requirements within the Patapsco or Back River watersheds in [Baltimore] County, [the Department] is allowing a more affluent, predominantly white, and populous jurisdiction to eschew pollution and volume reductions to the detriment of the less populous, predominantly Black, and less affluent downstream neighbor, Baltimore City. Under-compliance in Baltimore County will not necessarily impact County residents; but instead, will impact City residents, already suffering from unmitigated stormwater, poor water quality in receiving waterways, increased flood volumes, and associated public health impacts and property damage.

The permittees also participated in the public comment process. Local governments urged the Department to "defer to the Permittees to determine what constitutes MEP" based on fiscal and policy considerations. According to the permits, "the Department . . . solicited ideas, concerns, and available data related to restoration implementation. These discussions

were an open, ongoing dialogue with the regulated community relating to restoration practices and permit requirements over several years."

2. Terms and conditions of the permits at issue.

Despite the recommendations of the Environmental Advocates, the Department issued the MS4 permits simultaneously on November 5, 2021, and they appear to be substantially similar to the draft permits. Part III of the permits, titled "WATER QUALITY," requires the jurisdictions to "manage, implement, and enforce stormwater management programs" that comply with federal law and to comply with the following requirements:

> 1. Effectively prohibit pollutants in stormwater discharges or other unauthorized discharges into, through, or from the MS4 as necessary to comply with Maryland's receiving water quality standards;
> 2. Attain applicable stormwater wasteload allocations (WLAs) for each established or approved Total Maximum Daily Load (TMDL) for each receiving water body, consistent with Title 33 of the U.S. Code (USC) § 1342(p)(3)(B)(iii); 40 CFR § 122.44(k)(2) and (3); and
> 3. Comply with all other provisions and requirements contained in this permit, and in plans and scheduled developed in fulfillment of this permit.

The permits provide that compliance with that Part satisfies the MEP standard and represents "adequate progress toward compliance with Maryland's receiving water quality standards and U.S. [EPA] established or approved stormwater WLAs for this permit term."

Part IV of the permits, titled "STANDARD PERMIT CONDITIONS," provides for stormwater management programs and stormwater restoration. With respect to the ISR

requirement for stormwater restoration, the permits state that "MS4 permits must require stormwater controls to reduce the discharge of pollutants to the MEP and such other provisions as the Department determines appropriate for the control of such pollutants." The permits also provide that they must be consistent with stormwater WLAs of TMDLs and that they are. The City and County are required, by the end of their permit terms, to restore an additional 3,696 and 2,696 acres, respectively. For example, Baltimore City's MS4 permit requires the following:

> 1. Annual alternative control practices used by Baltimore City to meet its prior MS4 permit's impervious acre restoration requirement shall be:
>
> a. Continued annually at the same level of implementation (e.g., street lane miles swept, catch basin cleaning) under this permit;
>
> b. Replaced with 5,701 impervious acres using stormwater management BMPs, programmatic initiatives, or alternative control practices in accordance with the 2021 Accounting Guidance; or
>
> c. A combination of a and b above.
>
> 2. The impervious acre restoration requirements described below are in addition to the requirements listed [above].

The permits give the jurisdictions flexibility to implement the ISR strategy "by implementing stormwater BMPs, programmatic initiatives, or alternative control practices in accordance with the 2021 Accounting Guidance . . . as long as the total restoration at the end of year one meets the implementation benchmark schedule" in the permits. The jurisdictions also must submit annual implementation plans to the Department for approval, as well as annual BMP effectiveness monitoring.

E. Judicial Review.

On December 3, 2021 and December 6, 2021, the Environmental Advocates filed petitions for judicial review of the MS4 permits in the Circuit Court for Baltimore County and the Circuit Court for Baltimore City, respectively. The circuit courts affirmed the Department's final determination to issue the permits. The Environmental Advocates filed timely notices of appeal, and this Court consolidated the appeals on motion of the Environmental Advocates on May 2, 2023.

II. DISCUSSION

This appeal asks three questions about what is required legally of these MS4 permits by state and federal law and whether there is competent, substantial evidence in the record to support the Department's determination that those standards are met by these permits. The Environmental Advocates attack the permits by asking this Court to resolve three questions:[8] *First*, "Do the Permits violate federal or state law by not ensuring compliance

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[8] The Department (and, by adoption, the County, *see* Md. Rule 8-503(f)) phrased the Questions Presented as follows:

> 1. Do the Permits' restoration requirements, derived from the Chesapeake Bay total maximum daily load and Maryland's Phase III Watershed Implementation Plan, and scientifically verified by the Chesapeake Bay Program, protect water quality?
>
> 2. Do the Permits' restoration requirements constitute unlawful backsliding when they are water quality-based effluent limitations that require additional restoration from what the Permits' previous iterations required?
>
> 3. Do the Permits consider climate change and impacts on City residents, because (a) they require pollution reduction

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with water quality standards?" *Second*, "Do the Permits violate federal or State law by allowing unlawful backsliding?"[9] And *third*, "Do the Permits violate federal or State law by failing to consider the substantial evidence in the record related to climate change, disproportionate impacts, and ineffective stormwater management controls?"

The Environmental Advocates argue that the Department applied the wrong legal standards in drafting the terms of the permits and that it acted arbitrarily and capriciously by failing to issue permits that would meet mandated water quality standards. The Department responds that the Environmental Advocates "seek[] to impose additional standards on the Department" not required by state and federal law and the permits are otherwise supported by competent, substantial evidence. We agree with the Department

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> practices that also manage stormwater volume and (b) afford the City with flexibility to address impacts on City residents?

The City phrased its Questions Presented as follows:

> 1. Did MDE's determination to issue the City's permit violate federal or State law regarding water quality standards given the Court of Appeals' (now Maryland Supreme Court) opinion in *Anacostia Riverkeeper*?
>
> 2. Did MDE's determination to issue the City's MS4 permit violate federal or State law prohibiting backsliding when it imposes new and continuing restoration requirements?
>
> 3. Did MDE's determination to issue the City's MS4 permit violate federal or State law when there are no legal requirements for an MS4 permit to include requirements related to climate change and community impacts?

(Footnote omitted).

[9] "Backsliding" refers to permits which "contain effluent limitations which are less stringent than the comparable effluent limitations in the previous permit." 33 U.S.C. § 1342(o)(1).

that the record supports its decision to issue the permits and we affirm the judgments of the circuit court.

A. Standards of Review.

It's important to define the narrow issue before us and our limited role as a reviewing court. The Environmental Advocates don't (and can't) challenge the Bay TMDL or Maryland's Phase III WIP. *See Carroll County*, 465 Md. at 264 (no judicial review of EPA-approved TMDLs). By statute, we review only the agency's decision to issue each permit against the administrative record before the Department, EN § 1-601(d), 1-606(c), and we determine whether the permitting decision is legally correct and supported by competent, substantial evidence, and determine whether the agency action is arbitrary and capricious. *Maryland Small MS4 Coal.*, 479 Md. at 30; *Anacostia Riverkeeper*, 447 Md. at 120–21. In addition, we "review[] the agency action itself rather than the decision of the circuit court." *Carroll Count*y, 465 Md. at 201.

Factual findings, the review of matters committed to the Department's discretion, and our review of the Department's legal conclusions are all subject to different standards of review. *See id.* at 201–04. *First*, when reviewing factual findings by the Department under the "substantial evidence" standard, we "defer[] to the facts found and inferences drawn by the agency when the record supports those findings and inferences. . . . [W]ith respect to factual issues that involve scientific matters within an agency's area of technical

expertise, the agency is entitled to 'great deference.'" *Id.* at 201–02 (*citing Anacostia Riverkeeper*, 447 Md. at 120) (citation omitted).

Second, when reviewing the Department's discretionary decisions, we apply the "arbitrary and capricious" standard, which also affords great deference to the Department. *Id.* at 202. "[G]enerally the question is whether the agency exercised its discretion 'unreasonably or without a rational basis.'" *Id.* (*quoting Harvey v. Marshall*, 389 Md. 243, 297 (2005)). For purposes of MS4 permitting, we may consider federal administrative case law and "should affirm decisions of 'less than ideal clarity' so long as the court can reasonably discern the agency's reasoning." *Id.* (*quoting Bowman Transp., Inc. v. Ark.-Beset Freight Sys., Inc.*, 419 U.S. 281, 285–86 (1974)).

Third, when reviewing the Department's legal conclusions, we "accord[] the agency less deference than with respect of fact findings or discretionary decisions." *Id.* at 202–03. We won't uphold an action based on legal error, but we "give careful consideration to the agency's interpretation" of laws the Department has been charged to administer. *Id.* at 203.

B. There Is Competent, Substantial Evidence That The Permits Comply With Applicable State And Federal Water Quality Standards.

The heart of the Environmental Advocates' challenge to the permits lies in their contention that pollution reduction data from the past seven years reveals that the Department has issued ineffective MS4 permits in the past. As drafted, they contend, the Department has acted arbitrarily and reached conclusions not supported by the evidence in the administrative record, and thus the permits violate federal and state law because they don't ensure compliance with water quality standards. The Department disagrees as a

factual matter and responds that "the Permits ensure conformity with water quality standards because the restoration requirement is consistent with the goals and assumptions of the Bay TMDL." We agree, given the deference owed to the Department here, that the Department had a rational basis for implementing permit terms it found were consistent with applicable WLAs.

1. The Department exercised its discretion to implement water quality based effluent limitations in the permits.

As a threshold matter, we address the City's contention that MS4s are not required to comply with water quality standards. The City contends that *Anacostia Riverkeeper*'s holding that "MS4s are not subject to the requirement of imposing effluent limitations necessary to meet water quality standards," 447 Md. at 102 (cleaned up), "is controlling and dispositive" and "the standards referenced by Appellants are *inapplicable* to the City's MS4 permit." This overstates the holding of *Anacostia Riverkeeper*. The Department exercised its discretion and implemented water quality-based effluent limitations in the permits akin to those in the *Carroll County* decision. As the Department concedes, the permits' restoration requirement is, at least in part, a water quality-based effluent limitation. This means that the ISR requirement must be *consistent with applicable WLAs* per 40 C.F.R. § 122.44(d)(1)(vii)(B). But again, the Department has a lot of flexibility in how it achieves this consistency in the permits, and the permits here are valid.

2. The Department has broad discretion in how it achieves consistency with TMDL WLAs.

To the extent that the Environmental Advocates seek to challenge the ISR requirement, including use of alternative BMPs and the "credits to acres" approach of the

Accounting Guidance, this contention *is* foreclosed by the Maryland Supreme Court's decision in *Anacostia Riverkeeper*. 447 Md. at 128–29. In that case, the Court approved the use of such a flexible, "iterative" approach to meet TMDL WLAs. *Id.* at 135 ("iterative" process incorporating WLAs complies with 40 C.F.R. § 122.44(d)(1)(vii)(B)). The permits here take the same approach—under each, the jurisdiction provides specific implementation plans that detail how it will implement adequate progress toward TMDL WLAs.

To the extent that the Environmental Advocates dispute the *effectiveness* of the ISR strategy (namely, the credits assigned to alternative BMP like street sweeping), that raises factual issues that lie within the Department's scientific discretion. The Environmental Advocates argue that "[i]n the past and the current permit, the Department has allowed Baltimore City to rely in large part on alternative practices such as street sweeping that do nothing to mitigate the flow and volume of polluted stormwater. Nor have these practices resulted in observable or quantifiable improvements to local water quality." We give deference to the Department in its ISR strategy and apply the "arbitrary and capricious" standard. *Carroll County*, 465 Md. at 202. "[G]enerally the question is whether the agency exercised its discretion 'unreasonably or without a rational basis.'" *Id.* (*quoting Harvey*, 389 Md. at 297). And in the administrative record below, Blue Water Baltimore presented evidence that "[w]ater [q]uality is not improving as a result of our current MS4 permitting regime." It cited to evidence that pollutant trends are not improving, which it characterized as "*suggesting* . . . that the current approach to stormwater management in Baltimore City, namely street sweeping, is <u>not</u> improving water quality." (First emphasis added.) The

Environmental Advocates cite their backward-looking data to argue that the alternative BMPs haven't worked to reduce stormwater pollutants.

The Department responded that Blue Water Baltimore's data is unreliable, *first* because it lacks any causation analysis within that data that support the conclusion that declining trends are due to alternative BMPs. The Department argues the Environmental Advocates "fail to account for other sources of pollution," which is why they can only "suggest[]" the data support their conclusions. The Department insists that the data lacks any causal connection demonstrating that the trends are attributable to the City's or County's enforcement of the permits, especially when the data accounts for such a vast area. In its Response to Comments, the Department responded specifically that "alternative BMPs are often an effective and necessary tool to address local flooding. . . . Keeping storm drain systems free of debris improves the capture and conveyance of runoff and effectively reduces local flooding."

Second, the Department cites an expert panel report on street sweeping and storm drain cleaning that forecasts estimated *future* reduction in pollution and recommendations for counting credits for street and storm drain cleaning. Recommendations of the Expert Panel to Define Removal Rates for Street and Storm Drain Cleaning Practices (May 19, 2016). The expert report noted "a strong empirical basis for modeling how solids are transported from the street to the storm drain" and that "[s]treet cleaning may be an excellent strategy to reduce the toxic inputs from urban portions of the Chesapeake Bay watershed." *See also Anacostia Riverkeeper*, 447 Md. at 107–09, 177 n.107 (use of monitoring, modeling, and "efficiency estimates" comply with the MEP standard).

The Environmental Advocates view the Department's rejection of their data as arbitrary and capricious. But the Department had a rational basis to reject Blue Water Baltimore's speculation that the alternative BMPs failed to manage stormwater and improve water quality. Water quality standards in the MS4 context are "like the MEP standard, flexible as to how a permitting authority complies" with its obligation "to establish effluent limitations that take into account WLAs[.]" *Anacostia Riverkeeper*, 447 Md. at 134–35. Here, "the EPA set a minimal, flexible requirement in which the permitting authority is to design a scheme where effluent limits are compatible or in agreement with WLAs." *Id.* at 136. Although we agree that the Environmental Advocates offered data to back their claims, the Department wasn't required absolutely to follow it, and we must be "extremely deferential" to an agency with respect to this scientific matter committed to its discretion. *Carroll County*, 465 Md. at 202 (cleaned up). The Department did not act arbitrarily and capriciously in rejecting Blue Water Baltimore's conclusions about the effectiveness of the alternative BMPs under these circumstances.

We take the Environmental Advocates' concerns seriously, and they have raised genuine factual disputes about the future efficacy of the permit conditions. But the Department resolved those disputes on the merits against the Advocates' position, and the law affords the Department wide flexibility in choosing "best management practices" that are "consistent" with WLAs—flexibility to which we, as a reviewing court, defer so long as there was substantial evidence to support it, which there was. "The fact that an agency does not change a proposed action . . . in light of comments requesting a change does not mean that the process lacked a meaningful opportunity for comment or that the agency

failed to consider those comments." *Carroll County*, 465 Md. at 226. And because there was competent, substantial evidence for the Department to conclude that the permits comply with applicable state and federal water quality standards, we uphold the permits.

C. The Permits Do Not Constitute Unlawful Backsliding.

The Environmental Advocates' *second* contention is that the permits violate the Clean Water Act's "anti-backsliding" provision, 33 U.S.C. § 1342(o), because "the current permit's requirement to restore a total of only 10% of additional impervious surface over the next permit term" is less than the prior permit's twenty percent restoration requirement.

The relevant statute, 33 U.S.C. § 1342(o)(1), provides that in general, future NPDES permits may not "contain effluent limitations which are less stringent than the comparable effluent limitations in the previous permit." The statute continues, however, that "in the case of effluent limitations established on the basis of section 1311(b)(1)(C) or section 1313(d) or (e) of this title, 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 *except in compliance with section 1313(d)(4) of this title*." (Emphasis added.) And section 1313(d)(4) allows revisions to effluent limitations for waters with corresponding TMDLs so long as "the cumulative effect" will attain water quality standards:

> where the applicable water quality standard has not yet been attained, any effluent limitations based on a [TMDL] or other [WLA] established under this section may be revised only if . . . the cumulative effect of all such revised effluent limitations based on such [TMDL] or [WLA] will assure the attainment of such water quality standard . . . .

The Department offers two responses: *first*, although the last permits required twenty percent restoration, the new permits require each jurisdiction to continue "annually at the same level of implementation" any alternative practices they used to meet its previous restoration requirements. Thus, the Department argues, "the Permits' effluent limitations are additional and cumulative effluent limitations on top of previous effluent limitations, an approach that generates additional pollution reductions." *Second*, the Department points out that the exception in 33 U.S.C. § 1313(d)(4)(A) applies because even if the restoration requirements were "less stringent" than the previous permits, they nevertheless are designed to attain water quality standards.

We agree with the Department. The permits are cumulative and their new requirements add to the requirements from earlier permits, so they aren't "less stringent than the comparable effluent limitations in the previous permit." In addition, as we held with respect to the Environmental Advocates' first question, the Department had a rational basis to conclude that the "cumulative effect" of the ISR strategy would attain the water quality standard for the applicable WLAs, in compliance with 33 U.S.C. § 1313(d)(4)(A). The Environmental Advocates may disagree, but the Department's conclusion is rational and there's substantial evidence in the record to support it.

D. The Permits Were Not Arbitrary And Capricious For The Department's Failure To Consider "The Totality Of Information."

The Environmental Advocates' *final* contention is that "the Department has issued inappropriately segmented permits" that fail to comply with state and federal law. This issue really re-casts the first issue, that the permits are ineffective, and our discussion about

the Department's broad discretion over MS4 permitting addresses it generally. But the Environmental Advocates raise several additional problems with the permits that, they conclude, cause the permits to fall short on water quality and the MEP standards. Given the flexible legal standards and our deferential standard of review, we see no basis to reject these permits.

The Environmental Advocates argue that "[t]he Department's decision to consider the Baltimore County and Baltimore City MS4 Jurisdiction separately harms the environment and produces inequitable results." The Department and City both respond that the Environmental Advocates failed to preserve this argument because it was never raised in the administrative proceedings. Md. Rule 8-131(a) ("[o]rdinarily, an appellate court will not decide any other issue unless it plainly appears by the record to have been raised in or decided by the trial court"). Although the Environmental Advocates attacked the permits for taking a "separate and fragmentary" approach to the permits, we don't read their brief as raising the specific error that there needed to be a single permit for both Baltimore City and Baltimore County. Rather, the Environmental Advocates assert generally that the Department failed to consider the permits holistically.

First, the Clean Water Act authorizes the Department to impose controls on a "jurisdiction-wide basis." 40 C.F.R. § 122.26; 33 U.S.C. § 1342(p)(3)(B)(i). And the Environmental Advocates' position disregards the context of the NPDES program, TMDLs, and MS4 permitting. The permits incorporate by reference statewide (the Maryland WIPs) and regional (*e.g.*, the Bay TMDL) strategies in enforcing the Clean Water Act, which is itself implementing a national policy. The county-level permits feed

this broader objective, and to the extent that the Environmental Advocates view them as falling short regionally, those complaints raise essentially the same attack on the efficacy of the permit conditions that we addressed above.

Second, the Environmental Advocates argue that "[t]he Department's failure to consider increased rainfall data and Baltimore County's contribution to the City's Stormwater Burden disproportionately impacts Baltimore City residents." The crux of this argument is that "the final permits lack any meaningful controls or changes to address these fundamental stormwater management issues," and therefore that the permits as a whole lack a rational basis. The Department responds that it did "consider[] flooding concerns because the practices approved by the [Bay] Program already account for stormwater volume and provide the City and County with the flexibility to address local conditions . . . ."[10]

The Department responds that it considered increased rainfall and its impact on the discharge of pollutants in "several ways," chiefly through the Design Manual, which devises restoration practices that manage both pollutants and water volume. *See Anacostia Riverkeeper*, 447 Md. at 112, 123–25 (discussing the Design Manual, which implements

[10] In support of this contention, the Environmental Advocates cite repeatedly to affidavits admitted by the circuit court for the limited purpose of establishing standing in the circuit courts below. The affidavits themselves were not part of the administrative record before the Department in its decision-making subject here for review, so we don't consider them as such. *See* EN §§ 1-601(d), 1-606(c). But at oral argument the Environmental Advocates stated that the *fact* of urban flooding was before the Department, as were comments offered by some of the same affiants, and the record supports this assertion. So the assertions contained in the affidavits are part of the record we review, if not the affidavits themselves.

the ISR requirement "to abate[] the increase in stormwater runoff and the discharge of pollutants because of the increase in impervious surfaces"). In light of the flexibility afforded jurisdictions in managing MS4 discharges within the statutory scheme, the Department's rationale in affording the City flexibility in managing stormwater is reasonable. "[U]rban restoration is difficult due to available space and construction costs. Thus, instead of mandating certain kinds of restoration, the Department chose to incentivize certain stormwater infrastructure projects, such as those that control stormwater volume and mitigate flooding"—to include street sweeping and storm drain cleaning which help to manage both pollution and volume. (Citation omitted.) Moreover, the permit requires the City to solicit public input to address urban flooding. In its Response to Comments, the Department contends that it worked to "incentivize[] and support[] actions by local governments and community leaders that collaborate to prioritize restoration in marginalized communities."

Finally, the Environmental Advocates argue that the permits are ineffective because the Department failed to include "climate change related conditions." The Department responds first that the "adequate supporting data simply did not exist" in the administrative record the time the permits were issued. Efforts to address effects of climate change in the State are ongoing, *see* EN § 4-203,[11] and the Department insists "the State will update the

[11] This statute imposes a duty on the Department to "review and update" stormwater management regulations "at least once every 5 years . . . using the most recent precipitation data available[.]" EN § 4-203(b)(3). Accordingly, "[a]fter November 1, 2021, the Department shall report to the General Assembly . . . on any revisions the

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Design Manual and practices to account for increased precipitation" when more data is reported. For that reason, the permits contain "reopener clause[s]" that will allow modification based on new information (specifically, Part IV.D.1). The flexible, iterative approach complies with the MS4 legal framework. *See Anacostia Riverkeeper*, 447 Md. at 135.

We affirm the Department's decision to issue the 2021 MS4 permits to Baltimore City and Baltimore County. The Department complied with 33 U.S.C. § 1342 in implementing MS4 permits with controls designed to reduce the discharge of pollutants to the maximum extent practicable, and the Department did so in a way that is consistent with the assumptions and requirements of applicable WLAs. The cumulative nature of the ISR requirement satisfies 33 U.S.C. § 1342(o)(1) and the permits are valid.

JUDGMENTS OF THE CIRCUIT COURTS FOR BALTIMORE COUNTY AND BALTIMORE CITY AFFIRMED. APPELLANTS TO PAY COSTS.

Department intends to make" to stormwater management regulations. EN § 4-203(b)(4). Of course, the permits at issue were effective November 5, 2021, and the Department insists the Environmental Advocates "put[] the cart before the horse" in seeking to require that the permits account for increased precipitation relating to climate change.