

PUBLISHED

UNITED STATES COURT OF APPEALS
FOR THE FOURTH CIRCUIT

No. 25-1924

WEST VIRGINIA RIVERS COALITION, INC.,

Plaintiff - Appellee,

and

LITTLE HOCKING WATER ASSOCIATION, INC.,

Intervenor/Plaintiff - Appellee,

v.

THE CHEMOURS COMPANY FC, LLC,

Defendant - Appellant.

CHAMBER OF COMMERCE OF THE UNITED STATES OF AMERICA;
AMERICAN CHEMISTRY COUNCIL,

Amici Supporting Appellant.

Appeal from the United States District Court for the Southern District of West Virginia, at
Charleston. Joseph R. Goodwin, District Judge. (2:24-cv-00701)

Argued: March 19, 2026

Decided: June 3, 2026

Before NIEMEYER, QUATTLEBAUM, and RUSHING, Circuit Judges.

Vacated by published opinion. Judge Quattlebaum wrote the opinion, in which Judge Niemeyer and Judge Rushing joined.

ARGUED: Allon Kedem, ARNOLD & PORTER KAYE SCHOLER LLP, Washington, D.C., for Appellant. Derek Owen Teaney, APPALACHIAN MOUNTAIN ADVOCATES, INC., Lewisburg, West Virginia, for Appellee. Justin Derek Newman, ALTMANNEWMAN CO. LPA, Cincinnati, Ohio, for Intervenor. **ON BRIEF:** Joseph A. Ford, Clifford F. Kinney, Jr., Niall A. Paul, James A. Walls, SPILMAN, THOMAS & BATTLE, PLLC, Morgantown, West Virginia; Allison B. Rumsey, Elisabeth S. Theodore, Dirk C. Phillips, ARNOLD & PORTER KAY SCHOLER LLP, Washington, D.C., for Appellant. Amanda Demmerle, APPALACHIAN MOUNTAIN ADVOCATES, INC., Lewisburg, West Virginia; James M. Hecker, Daniel Snyder, PUBLIC JUSTICE, Washington, D.C., for Appellee. D. David Altman, ALTMANNEWMAN CO. LPA, Cincinnati, Ohio; Kirk R. Auvil, THE EMPLOYMENT LAW CENTER, PLLC, Parkersburg, West Virginia, for Intervenor. Andrew R. Varcoe, Audrey Dos Santos, UNITED STATES CHAMBER LITIGATION CENTER, Washington, D.C., for Amicus Chamber of Commerce of the United States of America. Elliott Zenick, AMERICAN CHEMISTRY COUNCIL, Washington, D.C., for Amicus American Chemistry Council. Sean Marotta, HOGAN LOVELLS US LLP, Washington, D.C., for Amici Curiae.

QUATTLEBAUM, Circuit Judge:

The district court preliminarily enjoined The Chemours Company from releasing more hexafluoropropylene oxide dimer acid (HFPO-DA) from its Washington Works plant in Parkersburg, West Virginia, than its Clean Water Act permit allows. Chemours challenges the preliminary injunction on two grounds. First, Chemours contends that the plaintiff that sought the preliminary injunction—West Virginia Rivers Coalition, Inc. (Rivers Coalition)—lacks Article III standing. Second, Chemours claims that the district court erred in finding irreparable harm, which, of course, is required to obtain a preliminary injunction. As to standing, we disagree. At least at this stage of this proceeding, Rivers Coalition has satisfied the Article III case-or-controversy requirement. But we agree that the district court’s irreparable harm analysis rested on legal and factual errors. So, we vacate the preliminary injunction.

I.

We begin with a brief discussion of the statutes relevant to this appeal before describing the factual and procedural history. Be forewarned—there’s a lot of statutory and regulatory jargon in this opinion, along with some chemistry. We’ve tried to keep things simple. But to the extent it’s still tedious, hang in there; it’s important to our analysis.

A.

This appeal involves a permit issued under the Clean Water Act (CWA), Pub. L. 95-217, 91 Stat. 1566 (1977) (codified as amended in scattered sections of 33 U.S.C.). Enacted in 1972, the CWA prohibits “the discharge of any pollutant by any person,” 33 U.S.C. § 1311(a), into “navigable waters from any point source,” 33 U.S.C. § 1362(12)(A).

But the Environmental Protection Agency (EPA)—or, with the EPA’s approval, a state authority—may issue a “permit for the discharge of any pollutant, or combination of pollutants.” 33 U.S.C. § 1342(a)(1). And “[a]ny citizen” may sue a permit violator so long as the citizen gives the EPA and the state authority 60 days’ notice and neither entity “has commenced and is diligently prosecuting a civil or criminal action in a court of the United States, or a State to require compliance with” the permit. 33 U.S.C. §§ 1365(a), (b)(1).

While this is a CWA case, the Safe Drinking Water Act (SDWA), 42 U.S.C. § 300f *et seq.*, plays a part in this appeal, too. Under the SDWA, the EPA can set maximum contaminant levels (MCLs) and maximum contaminant level goals (MCLGs) for pollutants. 42 U.S.C. § 300g-1. An MCL is “the maximum permissible level of a contaminant in water which is delivered to any user of a public water system.” 42 U.S.C. § 300f(3); 40 C.F.R. § 141.2. An MCLG is “the maximum level of a contaminant in drinking water at which no known or anticipated adverse effect on the health of persons would occur” and is “a nonenforceable health goal.” § 141.2. The MCL and MCLG are based on “an estimate of the amount of a chemical a person can ingest daily over a lifetime,” which the EPA estimates at 70 years, “that is unlikely to lead to adverse health effects.” J.A. 824.

B.

Until 2015, E.I. DuPont de Nemours & Company owned and operated Washington Works. Washington Works manufactures “high-performance” polymers. J.A. 701. A polymer is a type of molecule. As you may remember from grade school chemistry, an atom is the smallest building block of matter, and a molecule is a group of atoms stuck

together. W.A.H. SCOTT, COLLINS GEM CHEMISTRY BASIC FACTS 22, 168 (HarperCollins 1996). For example, a water molecule is made of two hydrogen atoms and one oxygen atom. *Id.* at 262. But molecules vary in size and complexity. A polymer is a large molecule composed of repeating groups of atoms. *Id.* at 206. For an analogy, think of a bracelet with identical beads.

Some polymers occur naturally. Examples of naturally occurring polymers are DNA, proteins and cellulose.¹ Some are manmade. One manmade, or synthetic, polymer manufactured at Washington Works is polytetrafluoroethylene (PTFE), marketed under the brand name Teflon. Other polymers made at Washington Works are used to produce semiconductors, electronics and batteries.

To produce polymers, Washington Works uses chemicals called “processing aid[s].” J.A. 701. Processing aids are not ingredients in a polymer. They are chemicals used to improve the polymer manufacturing process—for example, by reducing energy consumption or increasing production speed.² DuPont initially used perfluorooctanoic acid (PFOA) as a processing aid at Washington Works. But starting in 2013, DuPont phased out PFOA in favor of a chemical it developed itself—HFPO-DA.

¹ *Natural vs Synthetic Polymers*, LEONARD GELFAND CTR., CARNEGIE MELLON UNIV., <https://www.cmu.edu/gelfand/k12-educational-resources/polymers/natural-synthetic-polymers/index.html> [<https://perma.cc/9S3W-LP2C>] (last visited May 20, 2026).

² *What are Polymer Processing Aids? Classification and Applications*, US MASTERBATCH (Dec. 22, 2025), <https://usmasterbatch.com/news/what-are-polymer-processing-aids-classification-and-applications.html> [<https://perma.cc/3WLZ-USF3>].

In 2015, DuPont spun off its Performance Chemicals division, which included Washington Works, into a separate company called The Chemours Company.³ By the time Chemours began operating Washington Works, the facility had completely replaced PFOA with HFPO-DA. Like PFOA, HFPO-DA is part of “the large chemical class of per- and polyfluoroalkyl substances (PFAS).” J.A. 823. Critics call PFAS “forever chemicals” because “they break down very slowly and can accumulate over time in people, animals, and the environment.” J.A. 823.

Since HFPO-DA is used in Washington Works’ manufacturing processes, the facility’s wastewater contains HFPO-DA. And because Chemours releases that wastewater into the Ohio River, it had to obtain a CWA permit. West Virginia was concerned about the potential health effects of those HFPO-DA emissions, so the permit it issued limited Washington Works’ emissions from two outfalls into the Ohio River.⁴ Starting in 2022, Chemours could not emit wastewater that contained more than 2,300 parts per trillion (ppt) of HFPO-DA from either outfall on any given day. And it could not emit wastewater with a monthly average concentration of HFPO-DA greater than 1,100 ppt from one outfall and 1,400 ppt from the other.

³ *DuPont Completes Spin-off of The Chemours Company*, PR NEWSWIRE (July 1, 2015), <https://www.prnewswire.com/news-releases/dupont-completes-spin-off-of-the-chemours-company-300107397.html> [<https://perma.cc/RQU2-T6LB>].

⁴ “Outfall” means “outlet.” See *Outfall*, MERRIAM-WEBSTER, <https://www.merriam-webster.com/dictionary/outfall> [<https://perma.cc/Y6ZV-NAWN>] (last visited May 20, 2026).

To set these limits, West Virginia worked backwards. It determined that 140 ppt of HFPO-DA was “the appropriate level necessary to protect human health and the environment.” J.A. 90. Obviously, there’s a large gap between the permit limits and this goal. That’s because the state knew that, thanks to municipal water treatment facilities and dilution, the HFPO-DA concentration would decrease from the time wastewater was discharged from Washington Works to when West Virginians could be exposed to it. *See* J.A. 516 (Chemours’ expert explaining that the HFPO-DA concentrations in “[o]utfalls discharging from an active facility are not reflective of what a person might ingest at drinking water, or waters where recreation is possible”).

Since 2022, Chemours has at times exceeded its permit limits for HFPO-DA emissions at Washington Works. For example, in 2024, Chemours exceeded at least one of its limits in January, May, June, July, August, September, October, November and December. Chemours entered into an administrative consent order with the EPA in April 2023 “for the purpose of addressing . . . permit compliance issues” at Washington Works. J.A. 684. In April 2025, Chemours predicted that it “could construct, commission, and optimize its proposed treatment systems” that would reduce HFPO-DA discharges “within 27 months of agency approval.” J.A. 685. In July 2025, Chemours reported that the EPA “conditionally approved the PFAS abatement projects” Chemours had proposed and that Chemours had resultantly complied with its permit limits since that time. J.A. 1512–13.

While everyone agrees that Chemours has previously violated its permit, the effects of its permit violations are less clear. Lubeck, West Virginia—which draws 39 percent of its public water supply from the Ohio River less than three miles downstream from

Washington Works—tested its treated tap water for HFPO-DA. In those tests, Lubeck’s tap water never exceeded the 140 ppt HFPO-DA goal that West Virginia set. However, in 2024, the EPA used its authority under the SDWA to set a 10 ppt MCL and MCLG for HFPO-DA, the MCL to be enforced no earlier than April 2029. PFAS National Primary Drinking Water Regulation, 89 Fed. Reg. 32532, 32533, 32581 (April 26, 2024) (to be codified at 40 C.F.R. pts. 141, 142).⁵ While that regulation is not yet enforceable, Lubeck’s tap water sometimes exceeded its mark.⁶

C.

In December 2024, despite the EPA and Chemours having entered into an administrative consent order, Rivers Coalition sued Chemours under the CWA’s citizen-suit provision, alleging that Chemours was engaged in a “continuing violation” of its

⁵ In another case, the EPA has moved to vacate the 10 ppt HFPO-DA MCL and MCLG on procedural grounds. *See* Mot. to Vacate, *Am. Water Works Ass’n v. U.S. Env’t Prot. Agency*, No. 24-1188 (D.C. Cir. Sept. 11, 2025).

⁶ You might wonder why that matters, since the 10 ppt limit isn’t enforceable until at least 2029. The fact that the SDWA limits aren’t yet enforceable means that Chemours cannot be sued under the SDWA. But it doesn’t mean those limits are irrelevant to whether a consumer of tap water exceeding them has suffered an injury in fact or irreparable harm. To explain, imagine a state has no blood alcohol level that it uses to enforce a driving-under-the-influence charge. It decides to adopt one effective in one year. Within that year, a drunk driver crashes into another vehicle, injuring himself and the passengers. During the course of his treatment, the hospital determines the driver’s blood alcohol level was greater than the not-yet-enforceable standard. He might not be subject to criminal liability for exceeding the standard. But the passengers of the other car could use it in a suit against the driver to say his negligence caused them damages.

permit.⁷ J.A. 32. Rivers Coalition is “a nonprofit organization” with “approximately 1,000 members” that “works to promote the overall health of West Virginia’s waters and their downstream benefits.” J.A. 23. Shortly after filing this suit, Rivers Coalition moved for a preliminary injunction.

In August 2025, the district court granted the motion. First, the district court determined that Rivers Coalition established Article III associational standing through one of its members, Charlise Robinson. Then, although it expressed doubt about the need to apply the preliminary injunction factors set out in *Winter v. Natural Resources Defense Council, Inc.*, 555 U.S. 7 (2008), in the CWA context, it determined that Rivers Coalition made the necessary showing on the *Winter* factors. So, the district court enjoined Chemours “from discharging HFPO-DA in excess of the effluent limits set by its Permit” and ordered it to take “any measures necessary to achieve and maintain compliance, including but not limited to production changes, process modifications, off-site treatment, or temporary cessation of operations.” J.A. 1645.

Chemours timely appealed the district court’s decision.⁸ On appeal, Chemours challenges two of the district court’s determinations—that Rivers Coalition had Article III standing to pursue an injunction and that it sufficiently showed irreparable harm.

⁷ Recall that the CWA’s citizen-suit provision bars citizen suits where the EPA or a state “has commenced and is diligently prosecuting a civil or criminal action in a court of the United States, or a State to require compliance with [a] standard, limitation, or order.” 33 U.S.C. § 1365(b)(1)(B). Chemours doesn’t argue that the administrative consent order bars Rivers Coalition’s suit.

⁸ We have appellate jurisdiction under 28 U.S.C. § 1292(a)(1).

II.

We start with standing.⁹ A plaintiff must satisfy three elements to establish standing—an injury in fact, traceability and redressability. *Lujan v. Defs. of Wildlife*, 504 U.S. 555, 560–61 (1992). At the preliminary injunction stage, a plaintiff must show “a substantial likelihood that [it has] standing.” *Delmarva Fisheries Ass’n, Inc. v. Atl. States Marine Fisheries Comm’n*, 127 F.4th 509, 514 (4th Cir. 2025). So, we must determine whether Rivers Coalition made that showing.¹⁰

Rivers Coalition seeks to meet Article III’s jurisdictional requirements through associational standing. Under that theory, an organization can assert standing as the representative of its members if “(a) its members would otherwise have standing to sue in their own right; (b) the interests it seeks to protect are germane to the organization’s purpose; and (c) neither the claim asserted nor the relief requested requires the participation of individual members in the lawsuit.” *Students for Fair Admissions, Inc. v. President & Fellows of Harvard Coll.*, 600 U.S. 181, 199 (2023) (quoting *Hunt v. Wash. State Apple*

⁹ “[W]e review the district court’s factual findings” underlying standing “for clear error” and then consider “the legal question of whether the [plaintiff] possesses standing to sue as a de novo matter.” *Piney Run Pres. Ass’n v. Cnty. Comm’rs of Carroll Cnty.*, 268 F.3d 255, 262 (4th Cir. 2001).

¹⁰ By the time the district court granted the preliminary injunction, it had allowed a second plaintiff, Little Hocking Water Association (Little Hocking), to intervene. But only Rivers Coalition moved for a preliminary injunction. And we assess standing for each form of relief sought. *DaimlerChrysler Corp. v. Cuno*, 547 U.S. 332, 352 (2006). So, while we would consider Little Hocking if we were deciding whether to dismiss this case for lack of standing, Little Hocking is irrelevant to whether there is standing to seek a preliminary injunction.

Advert. Comm'n, 432 U.S. 333, 343 (1977)).¹¹ Of those requirements, only one is at issue here—whether one of Rivers Coalition’s members, Charlise Robinson, would have standing to sue in her own right.¹²

On appeal, Rivers Coalition argues that Robinson would have standing because she “refrains from boating” in the polluted portion of the Ohio River. Resp. Br. at 32.¹³ Robinson said in her deposition that she had boated on the Ohio River before. She did so as recently as 2024 with an environmental group to test for PFAS upstream of Washington Works. Additionally, Robinson said she has kayaked and canoed in other bodies of water.

¹¹ Associational standing has its critics. Justice Thomas said that it “appears to create serious problems, both constitutional and otherwise.” *Food & Drug Admin. v. All. for Hippocratic Med.*, 602 U.S. 367, 403 (2024) (Thomas, J., concurring). Some scholars think the Supreme Court “might . . . be better served by abandoning the doctrine.” Michael T. Morley & F. Andrew Hessick, *Against Associational Standing*, 91 U. CHI. L. REV. 1539, 1601 (2024). But the Court hasn’t done that, so we apply it here.

¹² Rivers Coalition meets the other two requirements. This case is germane to Rivers Coalition’s interest in “the overall health of West Virginia’s waters and their downstream benefits.” J.A. 23. And neither the CWA nor preliminary injunction caselaw requires the participation of individual organization members.

¹³ Rivers Coalition didn’t make this argument below, perhaps because Robinson didn’t mention boating in her preliminary injunction declaration. Robinson first mentioned boating when deposed ahead of the parties’ cross-motions for summary judgment. So, has Rivers Coalition forfeited this argument? It might seem so. After all, while a defendant cannot waive or forfeit a challenge to standing, *United States v. Hays*, 515 U.S. 737, 742 (1995), a plaintiff can forfeit a standing theory, e.g., *Penegar v. Liberty Mut. Ins. Co.*, 115 F.4th 294, 301 n.7 (4th Cir. 2024) (finding that the plaintiff had “forfeited any potential argument for derivative standing” when she “only vaguely gestured towards this theory of standing” below). But while Chemours noted in its reply brief that the boating argument wasn’t raised below, Chemours didn’t argue that Rivers Coalition had forfeited it. So, “[b]y making no such argument in its brief, [Chemours] has forfeited any such forfeiture argument.” *United States v. Newby*, 91 F.4th 196, 200 n.* (4th Cir. 2024).

Finally, Robinson said she hasn't boated on the Ohio River more often "[b]ecause of [her] knowledge of the violations at the Chemours facility," J.A. 1543, but she would go boating more often on the Ohio River with greater enjoyment if Chemours complied with its permit.

Chemours says Robinson's boating avoidance theory ought to fail for two reasons, one relating to injury and the other to traceability. Starting with injury, under Supreme Court precedent, a plaintiff who reasonably avoids an activity because of the defendant's conduct has suffered an Article III injury. In *Friends of the Earth, Inc. v. Laidlaw Environmental Services (TOC), Inc.*, the Court recognized such an injury for plaintiffs who claimed that they would recreate by the North Tyger River near Spartanburg, South Carolina, if Laidlaw didn't pollute it. 528 U.S. 167, 182–83 (2000). It determined that it was "entirely reasonable" for the plaintiffs to "curtail their recreational use of that waterway" in light of Laidlaw's "continuous and pervasive illegal discharges." *Id.* at 184–85; accord *Friends of the Earth, Inc. v. Gaston Copper Recycling Corp.*, 204 F.3d 149, 156–57 (4th Cir. 2000) (en banc) (finding that a plaintiff who testified that "he and his family swim less in and eat less fish from [their] lake" because of fears that were "reasonable and not based on mere conjecture" had "plainly demonstrated injury in fact").¹⁴

¹⁴ Showing standing by avoidance has its critics, too. Concurring in the judgment of *Gaston Copper*, Judge Niemeyer said that "the decision in *Laidlaw* represent[ed] a sea change in constitutional standing principles." 204 F.3d at 164 (Niemeyer, J., concurring in the judgment). Maybe it was not a change for the better. Justice Scalia argued that the *Laidlaw* majority made "the injury-in-fact requirement a sham" by "accepting plaintiffs' vague, contradictory, and unsubstantiated allegations of 'concern' about the environment as adequate to prove injury in fact." 528 U.S. at 201 (Scalia, J., dissenting). Moreover, even

Chemours says Robinson hasn't suffered an injury because she faces no "meaningful health risk" from boating in the Ohio River. Reply Br. at 16. Chemours essentially asks us to conclude that Robinson's avoidance of boating is unreasonable because water samples taken from the Ohio River haven't exceeded West Virginia's 140 ppt goal for HFPO-DA concentration and West Virginia deemed that figure "'protective' of river uses, including recreation." *Id.* (quoting J.A. 703). Rivers Coalition asks us to consider the concentration of HFPO-DA in the Ohio River as well. But it urges us to measure that concentration against the SDWA's not-yet-enforceable 10 ppt "health standard in the MCLG" rather than the 140 ppt West Virginia goal. Resp. Br. at 33.

We agree with Rivers Coalition that Robinson's avoidance of the Ohio River for boating is reasonable—but not because of the concentration of HFPO-DA in the Ohio River on some particular day. We observed in *Gaston Copper* that no circuit nor the Supreme Court "required additional scientific proof," including "evidence of the actual level of pollution in the waterway" the plaintiff sought to use, "where there was a direct nexus between the [plaintiff] and the area of environmental impairment." 204 F.3d at 159–60. And we have that direct nexus here. Chemours has violated its HFPO-DA permit. One designated use for the Ohio River in Wood County, where Lubeck is located, is "water contact recreation." See W. VA. CODE R. § 47-02 app. D. And Lubeck is just miles

a scholar who found it "both reasonable and beneficial" to "allow standing for virtually any allegation of statutory violations" where the statute has a citizen-suit provision concluded that *Laidlaw* "expand[ed] the definition of injury to the point of irrelevance." David N. Cassuto, *The Law of Words: Standing, Environment, and Other Contested Terms*, 28 HARV. ENVTL. L. REV. 79, 97, 122 (2004). But like associational standing, the Court has not abandoned the theory of standing articulated in *Laidlaw*.

downstream from Washington Works. Given these facts, we cannot say that Robinson's decision to avoid boating in the Ohio River was unreasonable.

We turn next to traceability. To meet the traceability requirement, a plaintiff must show "a causal connection between the injury and the conduct complained of." *Lujan*, 504 U.S. at 560. Chemours says Robinson has boated in the Ohio River too infrequently for us to conclude that Robinson has avoided boating because of Chemours' conduct. In support of this argument, Chemours points out that the *Gaston Copper* plaintiff and his family used their lake more often than Robinson has boated on the Ohio River. That's true. *See Gaston Copper*, 204 F.3d at 153. So, if *Gaston Copper* turned on how often the plaintiff used his lake before it was polluted, Chemours might have a point. But it didn't. And neither did *Laidlaw*, where, as Justice Scalia observed in dissent, one plaintiff "admitted that he had not been to the river" he sought to use "since he was a kid" and another "had been to the river only twice, once in 1980 . . . and once after [*Laidlaw*] was filed." 528 U.S. at 200 (Scalia, J., dissenting) (citation modified). Robinson testified that she had boated in the Ohio River before and still boats elsewhere. She also testified that she would boat in the Ohio River if the permit violations stopped. So, at this early stage of the proceedings, Rivers Coalition has shown that Robinson's avoidance of boating in the river is traceable to Washington Works' emission of HFPO-DA into the Ohio River in excess of the

permitted limits.¹⁵ We conclude that on this basis, Rivers Coalition has demonstrated a substantial likelihood of standing to seek injunctive relief.¹⁶

III.

With standing established, we consider whether the district court properly granted a preliminary injunction. We review the grant of a preliminary injunction for abuse of discretion. *Mountain Valley Pipeline, LLC v. W. Pocahontas Props. Ltd. P'ship*, 918 F.3d 353, 366 (4th Cir. 2019). Under that standard, we review the factual findings underlying the ruling for clear error and the legal conclusions de novo. *Id.* “A plaintiff seeking a preliminary injunction must establish that he is likely to succeed on the merits, that he is likely to suffer irreparable harm in the absence of preliminary relief, that the balance of equities tips in his favor, and that an injunction is in the public interest.” *Winter*, 555 U.S. at 20. A plaintiff must make a “clear showing” on each factor to prevail. *Id.* at 22; *see Real*

¹⁵ That leaves redressability. Chemours doesn't dispute that this injury is redressable with a preliminary injunction. Injunctive relief can only remedy an injury caused by “a continuing violation or the imminence of a future violation.” *Steel Co. v. Citizens for a Better Env't*, 523 U.S. 83, 108 (1998). The district court concluded, and Chemours does not dispute, that Chemours has committed a continuing violation of its permit. And Robinson testified in her deposition that she would go boating again with greater enjoyment if Chemours “stopped permanently violating” its permit. J.A. 1551. Thus, Rivers Coalition has demonstrated that Robinson's injury is redressable.

¹⁶ Rivers Coalition presses two other standing theories on appeal—that Robinson “reasonably avoids using [her tap water] for drinking and cooking” and that she “is still exposed to that water when she bathes, brushes her teeth, and eats her homegrown vegetables.” Resp. Br. at 26. We need not, and thus do not, address those theories since Rivers Coalition's avoidance of boating theory suffices. Nor do we consider the district court's determination that Robinson suffered an aesthetic injury, particularly since Rivers Coalition only cursorily defends that theory on appeal. *See Steves & Sons, Inc. v. JELD-WEN, Inc.*, 988 F.3d 690, 727 (4th Cir. 2021) (treating a “perfunctory and undeveloped argument” as waived).

Truth About Obama, Inc. v. Fed. Election Comm'n, 575 F.3d 342, 347 (4th Cir. 2009) (noting that “each [*Winter* requirement] must be satisfied as articulated”), *vacated*, 559 U.S. 1089 (2010), *reissued in relevant part*, 607 F.3d 355 (4th Cir. 2010).

Chemours doesn’t challenge the district court’s determinations on likelihood of success on the merits,¹⁷ balance of equities or public interest. Instead, it solely argues that the district court erred in finding irreparable harm. So, we limit our discussion to that factor.

A.

The district court made three legal errors in its irreparable harm analysis.

1.

First, the district court concluded that irreparable harm includes irreparable harm to the public. It acknowledged that *Winter*, “[o]n its face . . . forecloses consideration of the irreparable harm to the *public*” by requiring that the plaintiff himself “is likely to suffer irreparable harm in the absence of preliminary relief.” J.A. 1628 (emphasis in original) (quoting *Winter*, 555 U.S. at 20). Nonetheless, the district court said this could not be because *Winter*’s facts are distinguishable. The district court added that the CWA prohibits unlawful discharge of pollutants because “those discharges cause real, physical harm to human health and the environment.” J.A. 1629. And looking at harm that way, the district court determined that “there is no risk that this analysis inappropriately broadens the

¹⁷ A plaintiff must “show a substantial likelihood that [it has] standing” as part of its broader burden of showing “a substantial likelihood of success on the merits.” *Delmarva*, 127 F.4th at 514. By challenging Rivers Coalition’s standing, Chemours challenged the district court’s determination on the first *Winter* factor. But we’ve already addressed standing, so we won’t repeat that discussion here.

plaintiffs before the court” since Article III standing and the statutory requirement that a citizen be adversely affected are “high barriers” to suit, “preliminary injunction analyses consider the public harm in a variety of ways” and “there is no overlap between this analysis and the other elements of a preliminary injunction.” J.A. 1629–31.

But that’s not correct. *Winter*’s statement that “[a] plaintiff seeking a preliminary injunction must establish . . . that he is likely to suffer irreparable harm in the absence of preliminary relief,” 555 U.S. at 20, was not limited to the facts of that case; it was a general statement about the requirements for a preliminary injunction. Also, public harm is a separate *Winter* factor, so considering public harm in the irreparable-harm inquiry would double-count it. *See Beber v. NavSav Holdings, LLC*, 140 F.4th 453, 463 (8th Cir. 2025) (“The irreparable-harm factor is about the individual interests of each movant. The public-interest factor is about the good of society as a whole. Both factors are components of the preliminary injunction test, but they are not interchangeable.”); *see also Nat’l Wildlife Fed’n v. Nat’l Marine Fisheries Serv.*, 886 F.3d 803, 822 (9th Cir. 2018) (“Plaintiffs seeking injunctive relief must show that *they themselves* are likely to suffer irreparable harm absent an injunction.” (emphasis added) (citing *Winter*, 555 U.S. at 20)).

In support of the district court’s statement, Rivers Coalition claims public harm satisfies *Winter*’s irreparable harm requirement under our case law. It cites *Hazardous Waste Treatment Council v. South Carolina*, 945 F.2d 781 (4th Cir. 1991) (HWTC), as an example of a case in which our circuit “assessed irreparable harm to . . . the public in the context of injunctive relief.” Resp. Br. at 38 (emphasis omitted). But that misreads *HWTC*. There, we said that:

if litigation were to take so long that the absence of a new facility to handle waste, including out-of-state waste, would create irreparable harm, *not only to HWTC* but to the public, because of the possible creation of additional untreated waste, then the balance might tip the other way on a reapplication for temporary injunctive relief.

HWTC, 945 F.2d at 788 (emphasis added). In *HWTC*, we merely recognized that in that case, the showing of the movant's irreparable harm also established public harm. But we did not say that public harm alone sufficed. So, *HWTC* does not support the district court's conclusion.

Rivers Coalition also cites *East Tennessee Natural Gas Co. v. Sage*, 361 F.3d 808 (4th Cir. 2004), but that decision does not help it either. True, we said in that case that the movant's "inability to satisfy [its contractual] commitments would have negative impacts on its customers and the consumers they serve." *Id.* at 829. But we were simply observing that there was a downstream effect of a harm to the movant—that "[w]ithout a preliminary injunction, [the movant] would be forced to breach these contracts." *Id.* Irreparable harm to the public, without irreparable harm to the movant, is not enough.

2.

Second, the district court claimed that where there is "[a] continuing violation of federal environmental law," we should "presume irreparable harm." J.A. 1622. In explaining that statement, it reasoned that "[t]he Supreme Court said injunctions are 'extraordinary,' but Congress already made the judgment that clean water is an extraordinary priority." J.A. 1622. But the Supreme Court's holding in *Weinberger v. Romero-Barcelo*, 456 U.S. 305 (1982), which involved this very statutory scheme, forecloses such a presumption. There, the court of appeals had determined that a district

court “erred in undertaking a traditional balancing of the parties’ competing interests” where the defendant had violated the CWA. *Id.* at 310–11.¹⁸ The Supreme Court reversed, noting that in the CWA context, “a federal judge sitting as chancellor is not mechanically obligated to grant an injunction for every violation of law.” *Id.* at 313; *see also Amoco Prod. Co. v. Vill. of Gambell*, 480 U.S. 531, 542–44 (1987). The Court explained that “Congress may intervene and guide or control the exercise of the courts’ discretion” in granting preliminary injunctions. *Weinberger*, 456 U.S. at 313. But it emphasized that, without Congress doing so, “we do not lightly assume that Congress has intended to depart from established principles.” *Id.*

And Congress knows how to alter the traditional preliminary injunction analysis when it wants to. For example, it has said that a plaintiff seeking a preliminary injunction based on a Lanham Act violation “shall be entitled to a rebuttable presumption of irreparable harm . . . upon a finding of likelihood of success on the merits.” 15 U.S.C. § 1116(a); *cf. Custis v. United States*, 511 U.S. 485, 492 (1994) (“The language of [21 U.S.C.] § 851(c) shows that when Congress intended to authorize collateral attacks on prior convictions at the time of sentencing, it knew how to do so. Congress’ omission of similar language in [18 U.S.C.] § 924(e) indicates that it did not intend to [authorize the same] under this statute.”); *United States v. Roof*, 10 F.4th 314, 390 (4th Cir. 2021) (“[B]ecause

¹⁸ The Court referred to “the 1972 Amendments” to the Federal Water Pollution Control Act (FWPCA), not to the CWA. *Weinberger*, 456 U.S. at 319. But these are one and the same. The CWA was enacted as a 1972 amendment to the FWPCA. *See* Pub. L. 92-500, 86 Stat. 816 (1972) (amending the Federal Water Pollution Control Act); *see also* Clean Water Act of 1977, Pub. L. 95-217, § 518, 91 Stat. 1566 (1977) (amending the FWPCA to recognize that it is “commonly referred to as the Clean Water Act”).

we take it as a given that Congress knows how to say something when it wants to, its silence controls when it chooses to stay silent.”).

Following *Weinberger*, Congress’s decision not to alter the preliminary injunction analysis in the context of a CWA violation means district courts should apply the *Winter* factors as they otherwise would. Said differently, courts may not presume irreparable harm solely because there has been a CWA violation.

3.

Third, the district court claimed that an “excess discharge of HFPO-DA,” without more, “clearly causes irreparable harm.” J.A. 1625. But just as violating a permit doesn’t give rise to a presumption of irreparable harm, violating a permit cannot automatically constitute irreparable harm. That would contradict a requirement we’ve just discussed—that a movant must show irreparable harm *to the movant*.

B.

Our analysis doesn’t end there, however. That’s because independent of these legal errors, the district court determined that Robinson would suffer irreparable harm without a preliminary injunction.¹⁹ It observed that Robinson was exposed to HFPO-DA through her tap water and then found that “HFPO-DA in the body is dangerous” since it “disrupts liver function, gene expression, cellular pathways, and fetal development.” J.A. 1625–26. The

¹⁹ The district court was right to focus on whether Robinson would suffer irreparable harm. *See N.C. State Conf. of the NAACP v. Raymond*, 981 F.3d 295, 310 n.9 (4th Cir. 2020) (noting that when a court finds associational standing, it should “consider whether the . . . members of the organization[] would suffer irreparable harm in the absence of an injunction”).

district court characterized this harm as “difficult to quantify” but “certain.” J.A. 1626. It claimed that “a single exposure [to HFPO-DA] is likely to lead to at least one identified adverse health effect—that is, fatty liver, as studied in human exposure to PFOAs.” J.A. 1627. So, the district court said, “each incremental exposure to HFPO-DA” was irreparable harm. J.A. 1626.²⁰

In concluding that Robinson was likely to suffer irreparable harm, the district court depended heavily on the declaration and testimony of Rivers Coalition’s expert, Dr. Jennifer Schlezinger. The district court said that Dr. Schlezinger testified that “a single exposure” to HFPO-DA at a concentration above 10 ppt was “likely to lead to at least one identified adverse health effect.”²¹ J.A. 1627. And indeed, that’s what Dr. Schlezinger initially said:

²⁰ It might seem odd that this theory of irreparable harm is based on different facts than the theory of Article III injury we found sufficient. “[T]he requirements for standing and irreparable harm are similar, and courts often discuss them together.” *Reading v. N. Hanover Twp.*, 124 F.4th 189, 196 (3d Cir. 2024). But not every Article III injury is irreparable harm—for example, an injury that “can be remedied by an award of money damages at judgment” generally isn’t irreparable harm. *Hughes Network Sys., Inc. v. InterDigital Commc’ns Corp.*, 17 F.3d 691, 693 (4th Cir. 1994). And not every irreparable harm is an Article III injury. *See, e.g., In re Navy Chaplaincy*, 534 F.3d 756, 762–63 (D.C. Cir. 2008) (rejecting a rule “defining automatic injury-in-fact for every plaintiff who claims an Establishment Clause violation” while acknowledging that such an allegation “is always sufficient to show irreparable harm”). So, cognizant that these requirements “do distinct work,” *Reading*, 124 F.4th at 196, we evaluate them separately.

²¹ This seems inconsistent with the EPA’s statement that the MCLG is based on “an estimate of the amount of a chemical a person can ingest *daily over a lifetime*.” J.A. 824 (emphasis added). In fact, the EPA has said that it lacks evidence to calculate a concentration limit for HFPO-DA that would be “protective of noncancer effects for up to 1 day of exposure.” OFF. OF WATER, U.S. ENV’T PROT. AGENCY, DOCUMENT NO. EPA/822/R-22/005, DRINKING WATER HEALTH ADVISORY: HEXAFLUOROPROPYLENE

Q. . . . Can we quantify a point? At what point? Like does [Robinson] have to consume water with HFPO-[DA] in it 13 times on a daily basis . . . for it to be likely that she's going to suffer a really adverse health effect?

A. One time. One day.

Q. One day?

A. That's what the MCLG stands for.

J.A. 1353–54.

But moments later, Dr. Schlezinger conceded that drinking water with more than 10 ppt of HFPO-DA only increases the risk of harm by some uncertain amount:

Q. Let's say that I've never . . . had a drop of [HFPO-DA] in my life except yesterday. I had a glass of water and it had [HFPO-DA] in it with levels in excess of 10 [ppt]. . . . Are you telling me that in your expert opinion, it's now likely that I'm going to develop liver disease?

A. It increases the risk of you --

Q. That is absolutely -- we have missed each other.

A. No. I understand what you're saying.

Q. I agree with you, there's an increased risk. . . . You can't tell me how much it is, right?

A. I cannot.

Q. Okay. And what I want to know is, how many times do I have to drink water? Say I've never had it before, [HFPO-DA]. And are you telling me that

OXIDE (HFPO) DIMER ACID (CASRN 13252-13-6) AND HFPO DIMER ACID AMMONIUM SALT (CASRN 62037-80-3), ALSO KNOWN AS "GENX CHEMICALS" 13, 15 (June 2022), <https://www.epa.gov/system/files/documents/2022-06/drinking-water-genx-2022.pdf> [<https://perma.cc/47PC-6QRY>]. Perhaps that calls the reliability of Dr. Schlezinger's testimony into question. But Chemours hasn't challenged Dr. Schlezinger's testimony under *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993). So, that issue is not before us.

if I have it one time in 63 years that it is likely that I am going to suffer a liver disease?

A. No.

J.A. 1354–55.

As a matter of law, the risk Dr. Schlezinger described isn't irreparable harm. "The Supreme Court has held that the irreparable harm must be 'likely,' not merely possible." *Int'l Refugee Assistance Project v. Trump*, 883 F.3d 233, 270 (4th Cir.) (quoting *Winter*, 555 U.S. at 22), *vacated on other grounds*, 585 U.S. 1028 (2018). Likely means more likely than not. See *Veterans Guardian VA Claim Consulting LLC v. Platkin*, 133 F.4th 213, 218 (3d Cir. 2025). Dr. Schlezinger testified that drinking water with more than 10 ppt of HFPO-DA made harm likelier, not more likely than not. So, the district court improperly relied on her testimony to conclude that a plaintiff who consumed water exceeding 10 ppt of HFPO-DA once was likely to suffer irreparable harm.

There's more. To grant the preliminary injunction, the district court couldn't just conclude that a hypothetical person would suffer irreparable harm without a preliminary injunction—it had to conclude that Robinson would. And according to her declaration, Robinson does not drink or cook with her tap water. She only uses it for activities "like brushing [her] teeth, bathing, laundry, cleaning, and watering [her] plants." J.A. 920. When the district court asked Dr. Schlezinger whether that affected whether Robinson would suffer irreparable harm, Dr. Schlezinger said she couldn't answer that question:

THE WITNESS: My opinion is that if Ms. Robinson continues to be exposed to HFPO-DA in her drinking water at levels . . . above the MCLG, that she will experience harm.

THE COURT: She said she stopped drinking the water. She brushes her teeth and so forth. Does that change your opinion?

THE WITNESS: That would limit her exposure. That would limit her exposure.

THE COURT: Would it change your opinion?

THE WITNESS: I cannot come to a conclusion based -- because I don't -- I don't know what her -- the contribution of her brushing her teeth and washing her -- you know, in washing her vegetables and cooking her, you know, food in that water, the relative source contribution of that versus how much drinking water she would have drank.²²

J.A. 1332–33 (footnote added). This testimony is critical. The only witness the district court relied on for its determination that Robinson would suffer irreparable harm said she lacked the information to answer that question.

Rivers Coalition says we should discount that testimony because it was merely “Dr. Schlezinger’s immediate response” and she later clarified it. Resp. Br. at 47. It points us to two statements Dr. Schlezinger made on cross-examination—answering affirmatively when asked if Robinson was “going to suffer harm” if she “continue[d] to be exposed to the levels of [HFPO-DA] in her drinking water that [she had] been exposed to in the past, let’s say 24 months,” J.A. 1334, and answering affirmatively when asked whether exposure to HFPO-DA above 10 ppt was harmful to Robinson, who “lived [in Lubeck] and had blood levels from the [PFOA] studies,” J.A. 1341. But neither of those questions was couched in the context of Robinson’s undisputed testimony that she no longer uses the tap water for drinking or cooking. And neither of those questions told Dr. Schlezinger how

²² Even at this point, Dr. Schlezinger apparently hadn’t realized that Robinson did not use her tap water for cooking.

much tap water Robinson was using for activities like brushing her teeth—information Dr. Schlezinger said she needed to opine on whether Robinson would suffer irreparable harm. So, neither of Dr. Schlezinger’s responses affected her admission that she couldn’t determine the effects of HFPO-DA on Robinson given that Robinson wasn’t drinking or cooking with her tap water. Nonetheless, without addressing that admission, the district court concluded that “Robinson and all those who use the Ohio River[] suffer irreparable harm with each incremental exposure to HFPO-DA.” J.A. 1626.

Recall that we review factual findings for clear error. That standard of review is highly deferential to district courts. We do not find clear error simply because “we would have reached a different result had we considered the question in the first instance.” *Sky Angel U.S., LLC v. Discovery Commc’ns, LLC*, 885 F.3d 271, 278–79 (4th Cir. 2018) (citing *Provident Life & Accident Ins. Co. v. Cohen*, 423 F.3d 413, 418 (4th Cir. 2005)). Instead, we only find clear error in a district court’s factual findings when we are “left with a definite and firm conviction that a mistake has been committed.” *Id.* at 279. And that’s what we have here. To find irreparable harm, the district court relied on Dr. Schlezinger’s testimony that the permit violations only increased the risk of harm, not that the violations made harm more likely than not. And the district court found irreparable harm although Dr. Schlezinger admitted she couldn’t opine on the harm Robinson would suffer since she didn’t use her tap water for drinking or cooking. Thus, even under clear error review, the record does not support a finding that Robinson would more likely than not suffer irreparable harm without an injunction.

To sum up, the district court's finding of irreparable harm was incorrect for multiple independent reasons. It made legal errors and clearly erroneous findings of fact. As a result, the district court abused its discretion in granting a preliminary injunction to Rivers Coalition.

IV.

A Clean Water Act violation is serious. That's why Chemours has entered an administrative consent order with the EPA. That's also why Rivers Coalition may bring a citizen suit against Chemours. But on the record below, a preliminary injunction is a step too far. For that reason, we vacate the district court's entry of a preliminary injunction.

VACATED