A Review of a Bill to Control PFAS Pollution in North Carolina

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I. Introduction

The production, pollution, and containment of per- and polyfluoroalkyl substances ("PFAS") has become a major issue in North Carolina.[1] Since large quantities of the PFAS compound GenX were discovered in 2017 in the Cape Fear River, Wilmington's drinking water source,[2] there has been mounting pressure to address PFAS water pollution.[3] The movement in North Carolina mirrors a larger national trend of increasing concern over PFAS pollution.[4] The Environmental Protection Agency ("EPA") has issued stark warnings of potential health implications of human exposure to PFAS,[5] and many states have passed legislation limiting PFAS pollution to varying degrees.[6] In the 2022 legislative session, the North Carolina legislature considered a bill that would have a profound impact on PFAS pollution in the State.[7] This paper considers how effective this legislation, if enacted, would be for protecting North Carolinians from the harmful effects of PFAS pollution in drinking water.

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[1] *See* Analies Dyjak, *North Carolina's Drinking Water Crisis*, HYDROVIV (July 22, 2022), https://www.hydroviv.com/blogs/water-smarts/north-carolinas-pfas-pollution.
[2] *See* Vaughn Hagerty, *Toxin Taints CFPUA Drinking Water*, STAR NEWS (June 7, 2017), https://www.starnewsonline.com/story/news/environment/2017/06/07/toxin-taints-cfpua-drinking-water/20684831007/.
[3] *See, e.g.*, Corrine Bell, *North Carolinians Deserve Stronger Protections from PFAS*, NAT'L RES. DEF. COUNCIL (Sept. 8, 2020), https://www.nrdc.org/experts/corinne-bell/north-carolina-announces-pfas-investigation.
[4] *See Per- and Polyfluoroalkyl Substances (PFAS): State Legislation and Federal Action*, NAT'L CONF. OF STATE LEGISLATURES (July 25, 2022), https://www.ncsl.org/research/environment-and-natural-resources/per-and-polyfluoroalkyl-substances-pfas-state-laws.aspx (finding that state legislatures considered at least 196 bills regulating PFAS in 2021).
[5] *See Our Current Understanding of the Human Health and Environmental Risks of PFAS*, ENV'T PROTEC. AGENCY (March 16, 2022), https://www.epa.gov/pfas/our-current-understanding-human-health-and-environmental-risks-pfas.
[6] *See PFAS Update: August 2022 State-by-State PFAS Drinking Water Standards*, BRYAN CAVE LEIGHTON PAISNER LLP (Aug. 31, 2022), https://www.bclplaw.com/en-US/insights/august-2022-pfas-drinking-water-standards.html.
[7] *See* H.B. 1095, 2021-2022 Leg., Reg. Sess. (N.C. 2022).

II. PFAS Characteristics, Uses, and Concerns

PFAS is a broad group of thousands of chemical compounds.[8] There are an estimated 4,000-5,000 unique PFAS compounds, many of which have yet to be developed.[9] PFAS compounds have stable chemical structures—a trait that makes them uniquely persistent in the environment and in organisms, earning them the moniker of "forever chemicals."[10] PFAS compounds have uses in a variety of industries, including applications in military, aerospace, construction, and electronics.[11] They are also found in a wide array of consumer products ranging from non-stick cookware and food wrappers to stain-resistant clothes and furniture.[12]

The widespread use of PFAS has led to extensive pollution, first revealed in a groundbreaking investigation by the CDC in 2003 that found that two common PFAS compounds, PFOA and PFOS, were detectable in the blood of ninety-eight percent of Americans.[13] Although the two largest manufacturers of PFOS and PFOA voluntarily ceased production of the compounds, they are still found in the blood of virtually all Americans two decades later.[14] This astounding statistic raises concerns because of the health risks associated with PFAS compounds. PFOS, for example, has been linked to liver, thyroid, and bladder cancers, as well as to high cholesterol and infertility.[15]

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[8] *PFAS Explained*, ENV'T PROTEC. AGENCY (April 28, 2022), https://www.epa.gov/pfas/pfas-explained.
[9] *Trends in the Regulation of Per- and Polyfluoroalkyl Substances (PFAS): A Scoping Review*, NAT'L LIBR. OF MED. (Oct. 18, 2021), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8536021/.
[10] *Id.*
[11] *Id.*
[12] *Id.*
[13] *Id.*
[14] *Id.*
[15] *A Review of the Pathways of Human Exposure to Poly- and Perfluoroalkyl Substances (PFASs) and Present Understanding of Health Effects*, NAT'L LIBR. OF MED. (Nov. 23, 2018), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6380916/; *Trends in the Regulation of Per- and Polyfluoroalkyl Substances (PFAS): A Scoping Review*, *supra* note 9.

PFAS pollution is of special concern in North Carolina because North Carolina has the third-highest amount of PFAS exposure in the US.[16] PFAS has been detected in twenty public water systems located in eleven counties,[17] and in 2019, Brunswick County had the highest rate of PFAS water contamination in the country.[18] North Carolina is home to production plants for the two largest PFAS producers in the US: Chemours (formerly DuPont) and 3M.[19] These plants have produced a growing variety of PFAS compounds for decades, and pollution around them has been extensive.[20] In 2022, Chemours announced that it intends to expand its Fayetteville Works facility on the Cape Fear River, sparking community outrage.[21] Such public opposition to increased PFAS production and pollution has led to calls for legislation.[22]

III. Key Aspects of House Bill 1095

North Carolina House Bill 1095 is a bill designed to prevent future PFAS pollution in drinking water and compensate victims for past PFAS pollution.[23] Part I authorizes the Environmental Management Commission ("EMC") to establish maximum contaminant levels ("MCLs") for PFAS pollutants in drinking water.[24] Part II authorizes the State to force polluters to pay for the cost of removing PFAS pollution from drinking water.[25]

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[16] Sheena Scruggs, *PFAS — A Problem in North Carolina Drinking Water*, NAT'L INST. OF ENV'T HEALTH SCI. (March 2019), https://factor.niehs.nih.gov/2019/3/feature/2-feature-pfas.
[17] *Id*.
[18] Allison Ballard, *Drinking Water in This NC County Has the Most 'Forever Chemicals' in the US, Study Says*, NEWS & OBSERVER (Jan. 26, 2020), https://www.newsobserver.com/article239611038.html.
[19] *See* Alex Barrett, *US Congress Not Amused with Dupont, Chemours and 3M in PFAS Fiasco*, BIOPLASTICS NEWS (Sept. 15, 2019), https://bioplasticsnews.com/2019/09/15/us-congress-not-amused-with-dupont-chemours-and-3m-in-pfas-fiasco/.
[20] *See, e.g.*, Lisa Sorg, *What To Do About Pollution From "Forever Chemicals"?*, NC POL'Y WATCH (Jan. 9, 2020), https://ncpolicywatch.com/2020/01/09/what-to-do-about-pollution-from-forever-chemicals/.
[21] *Some North Carolinians Outraged by Proposed Chemours Expansion*, WUNC (Sept. 23, 2022), https://www.wunc.org/environment/2022-09-23/some-north-carolinians-outraged-by-proposed-chemours-expansion.
[22] *See, e.g.*, Lisa Sorg, *'We Don't Have Time to Wait': Residents Tell DEQ It Must Quickly Regulate Toxic PFAS in Drinking Water*, NC POL'Y WATCH (Dec. 7, 2021), https://ncpolicywatch.com/2021/12/07/we-dont-have-time-to-wait-residents-tell-deq-it-must-quickly-regulate-toxic-pfas-in-drinking-water/.
[23] *See* H.B. 1095, 2021-2022 Leg., Reg. Sess. (N.C. 2022).
[24] *Id*., sec. 1.(a), § 130A-315.1.
[25] *Id*., sec. 2., § 130A-19.1.

A. Part I of HB 1095: Technologically and Economically Feasible Maximum Contaminant Levels

Part I of the Bill authorizes the EMC to adopt an MCL for any PFAS compound in drinking water.[26] An MCL is an enforceable threshold for contamination which, if exceeded, makes drinking water unacceptable for human consumption.[27] The Department of Health and Human Services will recommend a target MCL at a threshold level "below which there is no known or expected risk to human health."[28] However, the EMC must adjust these target MCLs so that they remain "technologically and economically feasible."[29] Economic feasibility is determined in part by how much compliance with the MCLs would cost to public water systems and their customers.[30]

B. Part II of HB 1095: Cost-Shifting

Part II of the Bill authorizes the State to force polluters to pay for the costs of removing PFAS pollution from drinking water that exceeds a permissible concentration level ("PCL").[31] Each PFAS compound has a default PCL of ten parts per trillion ("ppt") unless the EMC has set a lower MCL under Part I of the Bill.[32] It also provides a total PCL of seventy ppt for all PFAS compounds combined.[33] If the PCL is exceeded for any PFAS compound in the drinking water of a public water system, the State can order the responsible polluter to compensate that public water system for the costs it incurred removing the contamination.[34] For a polluter to be considered responsible, they must have "caused or contributed" to the presence of PFAS in the

[26] *Id*., sec. 1.(a), § 130A-315.1(a).
[27] *Id*.
[28] *Id*., sec. 1.(a), § 130A-315.1(b)(1).
[29] H.B. 1095, 2021-2022 Leg., Reg. Sess., sec. 1.(a), § 130A-315.1(a)(1) (N.C. 2022).
[30] *Id*., sec. 1.(a), § 130A-315.1(a)(2).
[31] *Id*., sec. 2., § 130A-19.1(b).
[32] *Id*., sec. 2., § 130A-19.1(a)(1)a.
[33] *Id*., sec. 2., § 130A-19.1(a)(1)b.
[34] *Id*., sec. 2., § 130A-19.1(b).

public water system.[35] If multiple polluters are responsible, each is jointly and severally liable.[36] This part of the Bill will also apply retroactively to all pollution discharges that occurred since 2017.[37]

IV. The Likely Effectiveness of HB 1095

Because PFAS compounds accumulate in the environment so easily and are very difficult to remove once present,[38] the most important step for reducing PFAS pollution is prevention. That is why the EPA has made this a "foundational element" of its own roadmap for dealing with PFAS pollution.[39] HB 1095 would likely be very effective at reducing PFAS pollution in North Carolina, especially for preventing initial discharges of PFAS pollution, due to its cost-shifting mechanisms and the broad scope of PFAS compounds it covers.

The cost-shifting to industries under Part II will economically incentivize pollution reduction. Shifting the cost of PFAS remediation from water suppliers to polluters will, in theory, motivate PFAS producers to consider the anticipated costs of their pollution, thus internalizing the costs of pollution into each business's cost analyses.[40] Since each polluter would be jointly and severally liable for "all actual and necessary costs imposed" by their pollution,[41] these financial incentives created by the Bill would be strong—especially since the costs of PFAS pollution remediation can be quite large.[42]

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[35] H.B. 1095, 2021-2022 Leg., Reg. Sess., sec. 2., § 130A-19.1(a)(2) (N.C. 2022).
[36] *Id*., sec. 2., § 130A-19.1(c).
[37] *Id*., sec. 4.
[38] *Trends in the Regulation of Per- and Polyfluoroalkyl Substances (PFAS): A Scoping Review*, *supra* note 9.
[39] *PFAS Strategic Roadmap: EPA's Commitments to Action 2021-2024*, ENV'T PROTEC. AGENCY 6-7 (Oct. 2021), https://www.epa.gov/system/files/documents/2021-10/pfas-roadmap_final-508.pdf.
[40] *See generally* Sagarika Gupta, *Controlling Pollution and Externalities: Environmental Economics*, ECON. DISCUSSION (Dec. 31, 2022), https://www.economicsdiscussion.net/environmental-economics/controlling-pollution-and-externalities-environmental-economics/21345 (arguing that businesses change their practices when the costs of pollution are internalized, in this case through a Pigouvian tax).
[41] H.B. 1095, 2021-2022 Leg., Reg. Sess., sec. 2., § 130A-19.1(c) (N.C. 2022).
[42] *See, e.g.*, Emma Dill*, The Results Are In: Wilmington Water Tests PFAS-Free After $43 Million CFPUA Project*, STAR NEWS (Oct. 11, 2022), https://www.starnewsonline.com/story/news/local/2022/10/11/wilmington-water-free-

However, one flaw of the Bill is a lack of compensation to private landowners whose groundwater wells or other drinking-water sources have been polluted by PFAS.[43] With an estimated 3.3 million residents relying on private wells for drinking water, North Carolina has the second-highest number of well-water drinkers in the country.[44] These residents bear the full cost of testing for and removing PFAS pollution from their own well water.[45] The Bill should be strengthened by extending compensation to these parties as well instead of solely to public utilities.

The broad scope of PFAS compounds covered under HB 1095 also makes the Bill effective for preventing PFAS discharges. The Bill provides a default PCL for every PFAS compound[46]—much better than having no default restrictions on the many PFAS compounds that will not be assigned an MCL.[47] Additionally, the total cap of seventy ppt for all PFAS compounds combined[48] greatly limits the total concentration of PFAS compounds allowed in drinking water. Lastly, the Bill allows for these default PCLs to be supplanted by stricter MCLs when necessary,[49] which allows the State to further regulate the most dangerous PFAS compounds.

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of-pfas-genx-local-utility-authority-says/69553249007/ (showing that a water treatment plant serving approximately 160,000 people paid $43 million to install a PFAS filtration system plus $5 million annually to operate the system).

[43] *Compare* N.C. H.B. 1095, sec. 2., § 130A-19.1 (providing no compensation to private well owners or regulation of PFAS contamination in groundwater) *with* Sorg, *supra* note 20 (showing that several states do regulate PFAS groundwater contamination or provide "private well action level[s]").

[44] Molly A. Maupin et al., *Estimated Use of Water in the United States in 2010*, U.S. GEOLOGICAL SURVEY 22 (2014), https://pubs.usgs.gov/circ/1405/pdf/circ1405.pdf.

[45] *See* Catherine Clabby, *Making NC Well Water Safer*, N.C. HEALTH NEWS (July 24, 2017), https://www.northcarolinahealthnews.org/2017/07/24/making-nc-well-water-safer/ ("The current resources in place to assist well owners, especially financially, are inadequate[.]").

[46] N.C. H.B. 1095, sec. 2., § 130A-19.1(a)(1)a (setting a default PCL of 10 ppt for every PFAS compound).

[47] *See To Protect Human Health, PFAS Must Be Managed as a Class*, NAT'L RES. DEF. COUNCIL 1 (Dec. 2021), https://www.nrdc.org/sites/default/files/pfas-managed-class-fs.pdf. *See also* Lisa Friedman, *Biden Administration to Restrict Cancer-Causing 'Forever Chemicals'*, N.Y. TIMES (March 14, 2023), https://www.nytimes.com/2023/03/14/climate/epa-water-pfas-chemicals.html ("We cannot safeguard public health until we get off this toxic treadmill of regulating one PFAS at a time when thousands of other PFAS remain unregulated.").

[48] H.B. 1095, 2021-2022 Leg., Reg. Sess., sec. 2., § 130A-19.1(a)(1)b (N.C. 2022).

[49] *Id*., sec. 2., § 130A-19.1(a)(1)a.

However, the Bill should be strengthened by clearly defining what counts as a PFAS compound. As a scientific term, "PFAS" is quite ambiguous.[50] To be effective, the Bill needs to further define this term. The choice of a definition for "PFAS" has very strong implications for determining how many compounds the regulation will cover.[51] For example, the EPA was criticized for severely undercounting PFAS pollution in its recent Toxic Release Inventories because it used an overly narrow definition of PFAS compounds.[52] By contrast, Maine's recent PFAS ban has been criticized for using an overly expansive definition of PFAS that could inadvertently ban useful, innocuous compounds.[53] Choosing the wording of a PFAS definition carefully is important and legislators should take into account this definition's regulatory purpose.[54] An ideal definition would be expansive enough to give regulators the flexibility to impose additional limitations as we continue to discover new PFAS compounds and learn more about their impacts on humans and the environment.

V. The Necessity of HB 1095

HB 1095 is necessary because existing environmental regulations and enforcement mechanisms fail to adequately address PFAS pollution. While a variety of actions by the EPA, N.C. Department of Environmental Quality ("DEQ"), and N.C. Department of Justice ("DOJ") have created a piecemeal collection of restrictions on PFAS pollution, they are limited in scope

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[50] *See Reconciling Terminology of the Universe of Per- and Polyfluoroalkyl Substances: Recommendations and Practical Guidance*, ORG. FOR ECON. COOP. AND DEV. 32 (2021), https://www.oecd.org/chemicalsafety/portal-perfluorinated-chemicals/terminology-per-and-polyfluoroalkyl-substances.pdf (noting that the term "PFAS" "is a broad, general, non-specific term").

[51] Emily Hammel et al.*, Implications of PFAS Definitions Using Fluorinated Pharmaceuticals*, SCI. DIRECT (April 15, 2022), https://www.sciencedirect.com/science/article/pii/S2589004222002905.

[52] Yiliqi & Anna Reade, *New EPA Data: Huge Amounts of PFAS Underreported and Burned*, NAT. RES. DEF. COUNCIL, (Oct. 21, 2021), https://www.nrdc.org/experts/yiliqi/new-epa-data-huge-amounts-pfas-underreported-and-burned-0.

[53] *Maine First in the Nation to Prohibit Sale of Products Containing PFAS*, EXPONENT (Sept. 1, 2021), https://www.exponent.com/knowledge/alerts/2021/09/maine-first-to-prohibit-sale-of-pfas-products/.

[54] *See generally Reconciling Terminology of the Universe of Per- and Polyfluoroalkyl Substances: Recommendations and Practical Guidance*, *supra* note 50, at 31-34.

and allow much pollution to go unfettered. The Bill would create a comprehensive approach that would limit PFAS pollution much more effectively than the current patchwork of controls.

A. EPA: The Safe Drinking Water Act

The Safe Drinking Water Act ("SDWA") gives the EPA several measures that can address PFAS pollution. It can set national primary drinking water regulations ("NPDWRs"), which limit the amount of contamination allowed in drinking water, as well as unregulated contaminant monitoring rules ("UCMRs") that require the tracking of other unregulated substances.[55] It can also set health advisory levels ("HALs").[56]

i. National Primary Drinking Water Regulations

Under the SDWA, the EPA has the power to create NPDWRs—regulations that create enforceable MCLs for drinking water contaminants within the US.[57] These MCLs must balance human health concerns with the costs and benefits of setting the enforceable standard.[58] Significantly, while the MCLs that can be created under NPDWRs are very similar to those authorized under Part I of HB 1095, the EPA has yet to create any NPDWRs for PFAS compounds,[59] with the sole exception of PFOS and PFOA, which the EPA just recently decided to create NPDWRs for.[60] Even with this change, the effectiveness of NPDWRs are limited because they do not regulate the vast majority of PFAS compounds.[61] Because the proposed NPDWRs currently regulate PFAS compounds individually, this mechanism is not an adequate

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[55] *Drinking Water Standards and Regulations*, ENV'T PROTEC. AGENCY (Aug. 10, 2022), https://www.cdc.gov/healthywater/drinking/public/regulations.html.
[56] *Drinking Water Health Advisories (HAs)*, ENV'T PROTEC. AGENCY (June 15, 2022), https://www.epa.gov/sdwa/drinking-water-health-advisories-has.
[57] *Drinking Water Standards and Regulations*, *supra* note 55.
[58] *Per- and Polyfluoroalkyl Substances (PFAS)*, ENV'T PROTEC. AGENCY (Dec. 8, 2022), https://www.epa.gov/sdwa/and-polyfluoroalkyl-substances-pfas.
[59] *See National Primary Drinking Water Regulations*, ENV'T PROTEC. AGENCY (Jan. 26, 2022), https://www.epa.gov/ground-water-and-drinking-water/national-primary-drinking-water-regulations.
[60] *Per- and Polyfluoroalkyl Substances (PFAS)*, *supra* note 58.
[61] *See National Primary Drinking Water Regulations*, *supra* note 59.

replacement for the blanket PCLs that HB 1095 creates, which would regulate all PFAS compounds collectively.[62]

ii. Unregulated Contaminant Monitoring Rules

The EPA creates UCMRs that require all public water systems nationwide to monitor for certain unregulated compounds in their drinking water.[63] The latest UCMR requires testing for 29 PFAS compounds.[64] However, UCMRs do not prevent PFAS pollutants from reaching consumers because they only require the monitoring, not removal, of contaminants.[65] By contrast, HB 1095's MCLs would require the removal of certain PFAS contaminants.[66]

iii. Health Advisory Levels

The SDWA also authorizes the EPA to set HALs for drinking water contaminants.[67] An HAL represents the amount of drinking water contamination below which no negative health effects are expected.[68] These are not enforceable, but rather are intended to serve a purely informative purpose for state and local governments.[69] For the last decade, the EPA has had HALs for only two PFAS compounds: PFOS and PFOA, each set at seventy ppt.[70] When both compounds are present, the EPA recommended a limit of seventy ppt for the compounds combined.[71]

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[62] H.B. 1095, 2021-2022 Leg., Reg. Sess., sec. 2., § 130A-19.1(a)(1) (N.C. 2022).
[63] *Fifth Unregulated Contaminant Monitoring Rule*, ENV'T PROTEC. AGENCY (Aug. 25, 2022), https://www.epa.gov/dwucmr/fifth-unregulated-contaminant-monitoring-rule.
[64] *Id*.
[65] *See Learn About the Unregulated Contaminant Monitoring Rule*, ENV'T PROTEC. AGENCY (Dec. 16, 2022), https://www.epa.gov/dwucmr/learn-about-unregulated-contaminant-monitoring-rule.
[66] *See* N.C. H.B. 1095, sec. 1.(a), § 130A-315.1(a).
[67] *Drinking Water Health Advisories (HAs)*, *supra* note 56.
[68] *Id*.
[69] *Id*.
[70] *2018 Edition of the Drinking Water Standards and Health Advisories Tables*, ENV'T PROTEC. AGENCY 6 (Mar. 2018), https://www.epa.gov/system/files/documents/2022-01/dwtable2018.pdf.
[71] *Lifetime Health Advisories and Health Effects Support Documents for Perfluorooctanoic Acid and Perfluorooctane Sulfonate*, FED. REG. (May 16, 2016), https://www.federalregister.gov/documents/2016/05/25/2016-12361/lifetime-health-advisories-and-health-effects-support-documents-for-perfluorooctanoic-acid-and.

In 2022, the EPA lowered these HALs to 0.02 ppt for PFOS and 0.004 ppt for PFOA.[72] The changes were based in part on new studies showing that these compounds suppress immune responses to vaccines.[73] At the same time, the EPA released new HALs for two additional PFAS compounds: ten ppt for GenX and 2,000 ppt for PFBS.[74] Although these lower HALs are not insignificant, as HALs serve as useful, informative resources, they provide little legal protection to consumers because they are, by definition, unenforceable.

iv. No Regulation of Private Wells

The SDWA applies only to public utilities.[75] It does not apply to private drinking water wells.[76] In fact, there are no federal regulations at all for private drinking water wells, which leaves owners with the burden of testing, treating, maintaining, and managing their well water themselves.[77] Because the SDWA does not apply to private drinking water wells, it fails to provide protection for well water users in North Carolina.

B. NC DEQ: NPDES Permits

The NC DEQ could use National Pollutant Discharge Elimination System ("NPDES") permits to help control PFAS pollution. NPDES permits, which are required under the federal Clean Water Act for companies with point-source discharges into public waters, can force polluters to limit or monitor certain pollutants.[78] Under the Clean Water Act, the EPA can

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[72] *Technical Fact Sheet: Drinking Water Health Advisories for Four PFAS (PFOA, PFOS, GenX Chemicals, and PFBS)*, ENV'T PROTEC. AGENCY 4 (June 2022), https://www.epa.gov/system/files/documents/2022-06/technical-factsheet-four-PFAS.pdf.
[73] *Questions and Answers: Drinking Water Health Advisories for PFOA, PFOS, GenX Chemicals and PFBS*, ENV'T PROTEC. AGENCY (Dec. 14, 2022), https://www.epa.gov/sdwa/questions-and-answers-drinking-water-health-advisories-pfoa-pfos-genx-chemicals-and-pfbs.
[74] *Technical Fact Sheet: Drinking Water Health Advisories for Four PFAS (PFOA, PFOS, GenX Chemicals, and PFBS)*, *supra* note 72.
[75] *See Drinking Water Standards and Regulations*, *supra* note 55.
[76] *See Private Drinking Water Wells*, ENV'T PROTEC. AGENCY (May 26, 2022), https://www.epa.gov/privatewells.
[77] Crystal Lee Pow Jackson & Max Zarate-Bermudez, *Exposure to Contaminants Among Private Well Users in North Carolina: Enhancing the Role of Public Health*, J. ENV'T HEALTH, April 2019, at 36, 36.
[78] *See* 33 U.S.C. § 1342. *See also NPDES Permit Basics*, ENV'T PROTEC. AGENCY (Sept. 7, 2022), https://www.epa.gov/npdes/npdes-permit-basics.

delegate enforcement power to the states.[79] In North Carolina, the power to issue NPDES permits has been delegated to the DEQ,[80] which requires only the monitoring and reporting of certain PFAS pollutants—not the limitation of PFAS pollution.[81] One notable exception is Chemours's NPDES permit, which requires Chemours to reduce its ongoing PFAS water pollution by ninety-nine percent.[82] However, this requirement was only added after the permit was modified by a consent order stemming from litigation in 2019.[83]

The DEQ does not provide regulatory standards for any PFAS in drinking water, with the sole exception being a limit of 140 ppt for GenX.[84] Rather, the DEQ only provides resources to companies that wish to voluntarily reduce their PFAS pollution levels.[85] The DEQ has recently announced plans to develop standards for PFAS contaminants in groundwater, surface water, and drinking water that will be proposed to the EMC for approval.[86] However, it is not clear how strict these levels will be, how many compounds they will cover, or how long it will take to implement these regulations.[87] Nor is it clear whether the DEQ currently has the authority to even create these standards.[88] HB 1095 would instead guarantee immediate protection for

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[79] *See* 33 U.S.C. § 1342(b).
[80] *See NPDES Program Authorizations*, ENV'T PROTEC. AGENCY (April 8, 2022), https://www.epa.gov/npdes/npdes-program-authorizations.
[81] *See Action Strategy for PFAS*, N.C. DEP'T OF ENV'T QUALITY 4 (June 7, 2022), https://deq.nc.gov/media/30108/open.
[82] *DEQ Issues NPDES Permit to Keep PFAS Out of Cape Fear River and Reduce Downstream Impacts*, N.C. DEP'T OF ENV'T QUALITY (Sept. 18, 2020), https://deq.nc.gov/news/press-releases/2020/09/18/deq-issues-npdes-permit-keep-pfas-out-cape-fear-river-and-reduce-downstream-impacts.
[83] *See id*.
[84] *See Managing Emerging Compounds in Water*, N.C. DEP'T OF ENV'T QUALITY (June 2022), https://deq.nc.gov/news/key-issues/emerging-compounds/managing-emerging-compounds-water#groundwater-and-surface-water-quality-standards-actions.
[85] *See Action Strategy for PFAS*, *supra* note 81, at 8.
[86] *Id.* at 7-8.
[87] *See id.* (providing no indication of how strict these thresholds will be, how long they will take to be implemented, or how many PFAS compounds they will cover).
[88] *See* Sorg, *supra* note 22 ("DEQ will need 'additional authority' to regulate PFAS"—both from the legislature and from the EMC). *But see* Petition for Judicial Review, *Cape Fear River Watch v. N.C. Dep't of Env't Quality* (filed July 13, 2018), https://www.southernenvironment.org/wp-content/uploads/legacy/words_docs/2018-07-13_-_Petition_for_Judicial_Review_-_New_Hanover_Sup_Crt.PDF (arguing that the DEQ has an obligation to prevent

residents of the State by creating a statutory basis for establishing regulations that adequately protect human health against a wide range of PFAS compounds.

C. NC DOJ: Litigation

The NC DOJ may seek damages for PFAS pollution on behalf of the State or its citizens.[89] These lawsuits are more effective with strong legislation providing standing for plaintiffs. Cases brought by the DOJ against PFAS polluters are usually based on common-law torts like negligence or trespass.[90] While it is possible that tort claims based on common law will prevail in court, the liability that Part II of HB 1095 imposes would be a much clearer case for plaintiffs to litigate.[91] Under HB 1095, it is unlikely that polluters would be able to escape liability for their PFAS pollution.[92] By making the deterrent function of civil litigation much stronger, HB 1095 would provide a strong financial disincentive for emitting PFAS pollution.

Additionally, since these lawsuits seek to enforce regulations already set by agencies like the DEQ, the DOJ's ability to limit PFAS pollution is constrained to the extent of these regulations. Essentially, the DOJ cannot enforce laws that do not yet exist. Because the DEQ currently has few regulations on PFAS pollution,[93] HB 1095 will help the DOJ prevent PFAS pollution by providing a new set of MCLs and PCLs that the DOJ could seek to enforce.

PFAS pollution under N.C. Gen. Stat. §143-214.3(a)(12), which requires the DEQ to act if pollution "creates an emergency requiring immediate action to protect the public health and safety").

[89] *See Duties & Responsibilities*, N.C. DEP'T OF JUST. (Dec. 30, 2022), https://ncdoj.gov/about-ncdoj/duties-and-responsibilities/.

[90] *See, e.g.*, Original Complaint at 44-47, *State ex rel. Stein v. E.I. DuPont de Nemours & Co.* (N.C. Super. Ct. 2020) (20 CVS 5612), https://ncdoj.gov/wp-content/uploads/2020/10/Signed-Final-Complaint.pdf, (2021 NCBC 54), https://www.ncappellatecourts.org/show-file.php?document_id=297010.

[91] *See* Amended Complaint, *State of Minnesota, by its Attorney General, Lori Swanson v. 3M Company* (Minn. Dist. Ct., filed 2010) (27-CV-10-28862), https://www.ag.state.mn.us/Office/Cases/3M/docs/Complaint.pdf (suing 3M for PFAS water pollution by alleging violations of specific environmental regulations while also adding allegations of negligence and trespass).

[92] *See 3M Lawsuit*, MINN. ATT'Y GEN.'S OFF. (Dec. 30, 2022), https://www.ag.state.mn.us/Office/Cases/3M/ (imposing liability on 3M using the Minnesota Environmental Response and Liability Act, which has a cost-shifting mechanism similar to Part II of N.C. H.B. 1095).

[93] *See Managing Emerging Compounds in Water*, *supra* note 84 (showing only two regulations for PFAS compounds: 2,000 ppt for PFOA in groundwater and 140 ppt for GenX in drinking water).

VI. Conclusion

HB 1095 will serve an important role in ensuring that PFAS pollution is properly controlled in North Carolina. The Bill has several measures that enhance and build upon existing regulatory and enforcement mechanisms to create an adequate net of protections. The alternatives described above function best as supplements to—not replacements for—HB 1095. Part I of the Bill, which authorizes the creation of MCLs for PFAS compounds in drinking water,[94] is necessary because it will force water utility companies to provide drinking water that is free from dangerous PFAS contamination. Part II of the Bill, which authorizes the State to impose liability upon polluters for the costs of removing PFAS from drinking water,[95] would provide a strong financial incentive for companies to avoid emitting PFAS pollution in the first place.

While the Bill would be quite effective at reducing PFAS pollution in North Carolina, it can be improved. First, it should include a clear definition of "PFAS" that is expansive enough to include all potentially harmful compounds.[96] Second, the Bill should allow private parties who are not utility companies to also receive compensation for the contamination of their drinking-water sources, such as residential drinking water wells. Without such an expansion, the Bill leaves behind private parties who are similarly harmed by PFAS pollution.[97]

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[94] H.B. 1095, 2021-2022 Leg., Reg. Sess., sec. 1.(a), § 130A-315.1 (N.C. 2022).
[95] *Id.*, sec. 2., § 130A-19.1.
[96] *See Reconciling Terminology of the Universe of Per- and Polyfluoroalkyl Substances: Recommendations and Practical Guidance*, *supra* note 50.
[97] *Compare* N.C. H.B. 1095, sec. 2., § 130A-19.1 (providing no compensation to private well owners or regulation of PFAS contamination in groundwater) *with* Sorg, *supra* note 20 (showing that several states do regulate PFAS groundwater contamination or provide "private well action level[s]").