THE PFAS PROBLEM: HOW WETLAND REGULATIONS CAN PROTECT MICHIGAN'S DRINKING WATER FROM CHEMICAL CONTAMINANTS

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I. INTRODUCTION

On May 25, 2023, the Supreme Court issued its decision in *Sackett v. EPA*,[1] prompting outrage and confusion in the environmental law community.[2] In *Sackett*, the Supreme Court narrowed the definition of "waters of the United States," thereby limiting the Environmental Protection Agency's (EPA) power to regulate wetlands.[3] Wetlands control erosion and flooding,[4] as well as treat pollution through chemical and biological processes.[5] Additionally, wetlands serve as breeding and feeding grounds for many endangered species.[6] Without the protection that wetlands previously enjoyed, individuals may dredge, fill, or pollute certain wetlands at any time with no legal consequences.

The state of Michigan is home to a unique and substantial freshwater system, including four out of five Great Lakes, over 11,000 inland lakes and ponds,[7] and wetlands that cover 15% of the state.[8] Wetlands support the other bodies of water in Michigan's freshwater system.[9] Wetlands form just one part of a larger hydrological system, with surface connections and groundwater linking them to other bodies of water.[10] While connections between wetlands and other waters are not always constant, pollution in one area of wetlands can be transferred to another body of water during

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1. Sackett v. EPA, 598 U.S. 651 (2023).

2. Mark Sherman & Jessica Gresko, *Supreme Court Sharply Limited Federal Government's Ability to Police Pollution into Certain Wetlands*, ASSOCIATED PRESS (May 25, 2023, 4:40 PM), https://apnews.com/article/wetlands-business-climate-and-environment-washington-news-41fc297006512e1f507dc12daa44824a [https://perma.cc/N6VE-5JBF].

3. *Sackett*, 598 U.S. 651.

4. MICH. COMP. LAWS § 324.30302(1)(b)(i) (2025).

5. MICH. COMP. LAWS § 324.30302(1)(b)(iv) (2025).

6. MICH. COMP. LAWS § 324.30302(1)(b)(ii) (2025).

7. *Learn about Inland Lakes and Streams*, DEP'T OF ENV'T, GREAT LAKES, & ENERGY, https://www.michigan.gov/egle/public/learn/inland-lakes-and-streams [https://perma.cc/GS2B-863W].

8. Erin A. Lynch & Marcus C. Waldron, *National Water Summary Wetland Resources: Michigan*, U.S. GEOLOGICAL SURV. WATER SUPPLY PAPER 2425, https://www.fws.gov/wetlands/data/Water-Summary-Reports/National-Water-Summary-Wetland-Resources-Michigan.pdf [https://perma.cc/FA5H-ZN5U].

9. *What are Wetlands and Why are they Important?*, DEP'T OF ENV'T, GREAT LAKES, & ENERGY, https://www.michigan.gov/egle/about/organization/water-resources/wetlands/what-are-wetlands-and-why-are-they-important [https://perma.cc/3LCA-BNQG] (explaining that wetlands support other larger bodies of water by providing flood control, recharging groundwater supplies, treating pollution, controlling erosion, and containing nutrients necessary for wildlife).

10. Scott G. Leibowitz, et al., *Connectivity of Streams and Wetlands to Downstream Waters: An Integrated Systems Framework*, 54(2) J. AM. WATER RES. ASS'N. 298–322 (2019).

the time which they are connected.[11] The interconnected nature of the hydrological system means that if one piece of the puzzle is contaminated, that contamination could reach other bodies of water and threaten the entire system.[12]

Polyfluoroalkyl substances (PFAS) currently pose a contamination threat to Michigan's freshwater system.[13] PFAS are toxic chemicals which break down slowly and can accumulate in the human body through food and drinking water to cause serious health consequences.[14] In Michigan, residents get their drinking water from groundwater and surface water sources, both of which can be connected to wetlands.[15] To ensure that Michigan drinking water is safe for consumption, it is imperative that the legal system, and the agencies that administer it, protect wetlands from destruction and pollution.

Michigan has a complicated and distressing history with contaminated drinking water. Beginning in 2014, the city of Flint, Michigan exposed its residents to lead in their drinking water due to corroded pipes.[16] Many years later, Flint residents are suffering from the adverse physical and psychological health effects of lead exposure,[17] as well as reduced economic possibilities.[18] A similar situation occurred in Benton Harbor, Michigan just a few years later.[19] In 2018, residents noticed a weird taste in their water, but it took until 2021 for the EPA to force the city of Benton

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11. *Id.*

12. *Id.*

13. *The PFAS Crisis*, NAT'L WILDLIFE FOUND. https://www.nwf.org/-/media/Documents/PDFs/Waters/The-PFAS-Crisis-Fact-Sheet.ashx?la=en&hash=568B32963BE1B91EF6772A73FDD0C20836BC1E8D [https://perma.cc/S8QZ-TJDG].

14. *PFAS in Michigan*, MICH. ENV'T COUNCIL, https://www.environmentalcouncil.org/pfas_in_michigan [https://perma.cc/ZKV7-BMZ6].

15. *MI Drinking Water Sources*, MICH. DEP'T OF HEALTH & HUM. SERVS., https://www.michigan.gov/mdhhs/safety-injury-prev/environmental-health/topics/care-for-mi-drinking-water/sources [https://perma.cc/88WE-A8NW].

16. Merrit Kennedy, *Lead-Laced Water in Flint: A Step-by-Step Look at the Makings of a Crisis*, NAT'L PUB. RADIO (Apr. 20, 2016, 6:39PM), https://www.npr.org/sections/thetwo-way/2016/04/20/465545378/lead-laced-water-in-flint-a-step-by-step-look-at-the-makings-of-a-crisis [https://perma.cc/6C3T-UGX4].

17. *See generally* Daniel S. Grossman & David J.G. Slusky, *The Impact of the Flint Water Crisis on Fertility*, 56(6) DEMOGRAPHY 2005 (2019); Sam Trejo, Gloria Yeomans-Maldonado, & Brian Jacob, *The Psychological Effects of the Flint Water Crisis on School-Age Children* (Nat'l Bureau of Econ. Rsch., Working Paper 29341, 2021).

18. *See generally* Peter Christensen, David A. Keiser, & Gabriel E. Lade, *Economic Effects of Environmental Crises: Evidence from Flint, Michigan*, 15(1) AMER. ECON. J. 196 (2023).

19. Kyler Sumter, *Addressing Benton Harbor's Lead Water Crisis Took a Village – and Years*, NAT'L RES. DEF. COUNCIL (Aug. 9, 2022), https://www.nrdc.org/stories/addressing-benton-harbors-lead-water-crisis-took-village-and-years [https://perma.cc/3PEU-Q48B].

Harbor to mitigate the situation.[20] Both incidents occurred in communities of color, where at least a third of the population was living below the poverty line.[21] Government officials failed to take important steps to clean their drinking water, allowing vulnerable cities to be poisoned for years.[22] Michigan residents should not have to live through another potentially deadly contamination of their drinking water.

First, this Note will address whether federal regulations are sufficient to protect Michigan waters from further PFAS contamination. Second, this Note will examine whether state regulations are sufficient to protect Michigan waters from further PFAS contamination. This Note will then argue that federal regulations are insufficient to protect Michigan wetlands. Instead, the Michigan legislature should amend several parts of the Michigan Wetland Protection Act (WPA) to prevent PFAS from entering the hydrological system and corrupting drinking water in the first place. First, the WPA should require environmental assessments in all permit applications. The environmental assessments should include an analysis of the possible effects of the proposed action on drinking wells in the area. Second, the WPA should require the Michigan Department of Environment, Great Lakes, and Energy (EGLE) to consider the impacts of the proposed action on drinking water. Finally, EGLE should require the worst PFAS polluters in Michigan to conduct wetland mitigation and restoration activities as a condition to their permits. Michigan's PFAS Action Response Team should conduct further inquiries into the worst PFAS polluters in Michigan and use that information to aid EGLE in regulating waste from those industries.

II. BACKGROUND

A. The Clean Water Act

In 1972, Congress passed substantial amendments to the Federal Water Pollution Control Act, creating what is now commonly known as

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20. *Id.*

21. *See QuickFacts – Benton Harbor City, Michigan*, U.S. CENSUS BUREAU, https://www.census.gov/quickfacts/fact/table/bentonharborcitymichigan/PST045222 [https://perma.cc/DD5N-2DKQ]; *QuickFacts – Flint City, Michigan*, U.S. CENSUS BUREAU, https://www.census.gov/quickfacts/fact/table/flintcitymichigan/PST045223 [https://perma.cc/D86R-HV2F] (showing that majority of residents in both cities with high lead levels in their drinking water were people of color).

22. *See* Kennedy, *supra* note 16; Sumter, *supra* note 19 (detailing the steps that Government officials failed to take in Flint and Benton Harbor to mitigate the high lead levels in drinking water).

the Clean Water Act (CWA).[23] The amendments dictated that individuals cannot discharge pollutants or other materials into navigable waters without a permit from the EPA, the Army Corps of Engineers (Army), or an authorized state agency.[24] Specifically, the CWA granted the EPA authority to issue permits allowing the discharge of certain pollutants into navigable waters,[25] and granted the Army the authority to issue permits for depositing dredged or fill material into navigable waters.[26] The CWA defines "navigable waters" merely as "waters of the United States."[27]

Because the EPA and the Army (the Agencies) must utilize the same CWA definition of "navigable waters" when issuing their respective permits, both organizations jointly promulgate definitions that reflect their interpretation of "waters of the United States."[28] The CWA does not define the term "waters of the United States" but nevertheless granted authority to the Agencies to promulgate definitions of "waters of the United States" for use when making permit decisions.[29] The Agencies define "waters of the United States" by detailing which bodies of water are included or not included.[30] The Agencies generally describe bodies of water using characteristics such as type, use, and proximity to other waters.[31] Some examples from the Agencies' August 2015 definition of "waters" included intrastate lakes,[32] waters used for interstate or foreign commerce,[33] and wetlands adjacent to other waters.[34]

If the Agencies deny a permit, the applicants sometimes challenge the decision by attacking the Agencies' interpretation of "waters of the United States."[35] Even if the Agencies have not denied a permit, an individual or an organization might bring a suit to clarify the Agencies' jurisdiction over

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23. *History of the Clean Water Act*, EPA, https://www.epa.gov/laws-regulations/history-clean-water-act (June 12, 2024) [https://perma.cc/3NPS-XDME].

24. 33 U.S.C. § 1251(d).

25. *Id.*

26. § 1344(a).

27. § 1362(7).

28. *Definition of "Waters of the United States" Under the Clean Water Act*, E.P.A., https://www.epa.gov/cwa-404/definition-waters-united-states-under-clean-water-act (Dec. 2, 2024) [https://perma.cc/MU83-U63N].

29. *Id.*; 33 U.S.C. § 1344(g–h).

30. *See* Definition of "Waters of the United States", 33 C.F.R. § 328.3(a) (Aug. 2015).

31. *Id.*

32. § 328.3(a)(3).

33. § 328.3(a)(1).

34. § 328.3(a)(7).

35. *See* United States v. Riverside Bayview Homes, Inc., 474 U.S. 121 (1985); Rapanos v. United States, 547 U.S. 715 (2006); Sackett v. EPA, 598 U.S. 651 (2023) (demonstrating examples of cases in which the Agencies denied a permit and the unsuccessful applicant brought suit challenging the Agencies' interpretation of the statute).

a specific body of water or source of pollution.[36] The Agencies must periodically amend their definitions to conform with the Supreme Court's rulings in these challenges to the interpretation of the Clean Water Act.[37]

The Agencies' definition of "waters of the United States" has changed drastically due to varied Supreme Court interpretations of the term in the years since Congress expanded the CWA.[38] Initially, the Court deferred to the Agencies' interpretation, finding their interpretation to be mostly reasonable because defining "waters of the United States" is a difficult task and the Agencies were in the best position to make that determination based on their resources and expert knowledge in the field.[39] However, over time, the Court has narrowed the definition of "waters of the United States" by striking down the Agencies' interpretations and replacing them with the Court's own understanding of the term,[40] resulting in the Agencies no longer having the authority to regulate pollution and dredging in certain wetlands and streams which are not closely connected larger bodies of water.[41]

B. History of Federal Wetland Protection Law

Since Congress significantly expanded the CWA in 1972, four significant wetlands and groundwater regulations cases have varied the scope of CWA jurisdiction. In each of these four major cases, the Supreme Court defined "waters of the United States" and other related terms differently, resulting in varying levels of legal protection for U.S. waters since 1972.

1. United States v. Riverside Bayview Homes, Inc.

The Supreme Court case *United States v. Riverside Bayview Homes, Inc.*[42] was the first in a series of federal cases challenging the Agencies' jointly promulgated definition of "waters of the United States." In 1976, Riverside Bayview Homes, Inc. deposited fill material on its low-lying

36. *See* Cty. of Maui v. Haw. Wildlife Fund, 140 S. Ct. 1462 (2020) (demonstrating an example of a case in which several environmental groups sued Maui Country, asking the Court to decide whether the CWA had the jurisdiction to regulate certain pollutants based on their distance from navigable waters).

37. *Definition of "Waters of the United States" Under the Clean Water Act*, *supra* note 28.

38. *See* United States v. Riverside Bayview Homes, Inc., 474 U.S. 121, (1985); Rapanos v. United States, 547 U.S. 715 (2006); Sackett v. EPA, 598 U.S. 651 (2023); *Maui*, 140 S. Ct. 1462.

39. *Riverside*, 474 U.S. at 135.

40. *Sackett,* 598 U.S. at 671–73.

41. *Id.* at 676.

42. *Riverside*, 474 U.S. 121.

property in Michigan to construct a housing development.[43] The Agencies classified Riverside's land as "adjacent wetlands" under its definition of "waters of the United States," then sued Riverside to prevent it from filling the wetlands without a permit from the Agencies.[44]

In *Riverside*, the Supreme Court found that the Agencies' definition of "waters of the United States" was a valid interpretation of the CWA.[45] The Supreme Court held that it was reasonable for the Agencies to conclude that "waters of the United States" included "all wetlands adjacent to other bodies of water."[46] In holding as it did, the Court utilized the framework developed in *Chevron U.S.A. Inc. v. Natural Resources Defense Counsil, Inc.*, which opined that a federal agency's interpretation of a statute is entitled to judicial deference as long as the interpretation is reasonable and does not conflict with Congress' intent in passing the statute.[47]

The Court recognized that defining wetlands is a challenging task as the difference between dry land and wet land is often complicated by the complex interconnected systems of traditional waters as well as swamps, marshes, and wetlands.[48] Additionally, the Court acknowledged that Congress's broad and comprehensive intent to protect water quality across the nation implies that it is reasonable to conclude, as the Agencies did, that the CWA's protection of "waters of the United States" would extend to wetlands adjacent to those waters.[49]

2. Rapanos v. United States

In the 2006 case *Rapanos v. United States*,[50] the Supreme Court narrowed the definition of "adjacent" by declaring that wetlands "adjacent" to "waters of the United States" are ones which have a "continuous surface connection" to bodies of water that fall under the Agencies' classification of "waters of the United States" on their own.[51] This is significant because the CWA only regulates wetlands adjacent to "waters of the United States."[52] Under the Court's ruling, a wetland must

43. *Id.* at 124.
44. *Id.*
45. *Id.* at 135.
46. *Id.*
47. *Id.* at 131; *see also* Chevron, U.S.A., Inc. v. Nat. Res. Def. Council, Inc., 467 U.S. 837, 842–45 (1984).
48. *Riverside*, 474 U.S. at 132.
49. *Id.* at 132–33.
50. Rapanos v. United States, 547 U.S. 715 (2006).
51. *Id.* at 717.
52. 33 U.S.C. § 1344(g)(1).

have a "continuous surface connection" to a body of water that the CWA already classifies as a "water of the United States" in order for the Agencies to have jurisdiction to regulate.[53] Additionally, the Supreme Court clarified that "'waters of the United States' include only relatively permanent, standing or flowing bodies of water," not intermittent or "ephemeral flows of water."[54]

In *Rapanos*, the Court examined whether the CWA could regulate certain Michigan wetlands located near ditches or drains that empty into navigable waters.[55] John Rapanos deposited fill material into those wetlands without a permit and the United States sued Mr. Rapanos for violating the CWA.[56] The Court ultimately found that the Agencies' definition of "waters of the United States" was too expansive.[57] The Court was divided in this case, with four justices joining Justice Scalia's plurality opinion, and four justices joining Justice Stevens' dissent.[58] Additionally, Chief Justice Roberts wrote a concurrence, Justice Kennedy wrote a concurrence in judgment, and Justice Breyer wrote a dissent.[59] Relevant for the purposes of this Note are Justice Scalia's plurality opinion and Justice Kennedy's concurrence because the Court returns to them in subsequent cases in which the Court attempts to define "waters of the United States."[60]

Justice Scalia's plurality opinion dissected the dictionary definition of "waters" and examined previous case law dealing with the definition of "waters of the United States" to reach the conclusion that "waters of the United States" under the CWA does not include temporary flows of water such as wetlands.[61] The plurality opinion reasoned that "the" before "the waters" refers not to water in general but "more narrowly to . . . bodies . . . such as oceans, rivers, [and] lakes,' or 'the flowing or moving masses, as of waves or floods, making up such streams or bodies.'"[62] Thus, according to the plurality opinion, "waters of the United States" must only refer to "relatively permanent, standing or flowing bodies of water," which excludes "transitory puddles or ephemeral flows of water" such as wetlands.[63] The plurality opinion found that the Agencies' construction of

53. *Rapanos,* 547 U.S. at 732.
54. *Id.*
55. *Id.* at 729.
56. *Id.*
57. *Id.* at 716.
58. *Id.* at 715.
59. *Rapanos*, 547 U.S. at 715.
60. *See* Sackett v. EPA, 598 U.S. 651, 684 (2023).
61. *Rapanos*, 547 U.S. at 732–34.
62. *Id.* at 732.
63. *Id.*

"waters of the United States" was not a reasonable one, and therefore not entitled to judicial deference under the *Chevron* doctrine.[64]

Next, the *Rapanos* plurality opinion looked to prior case law to define "waters of the United States."[65] The plurality opinion concluded that the *Riverside* holding, that the Agencies have CWA regulatory authority over all wetlands adjacent to "waters of the United States," [66] was inherently ambiguous.[67] According to the plurality opinion, the inherent ambiguity in the Riverside holding led to the Agencies resolving any confusion in favor of regulating all wetlands, relying on ecological considerations to tip the scales towards regulation.[68] Instead, the plurality opinion preferred a clearer standard. [69] Thus, the plurality opinion determined that "only those wetlands with a continuous surface connection to bodies that are 'waters of the United States' in their own right, … are 'adjacent to' such waters and covered by the Act."[70]

In Justice Kennedy's concurring opinion, he argued that no support exists in the statutory language, the CWA's purpose, or cases interpreting the CWA, for the plurality's limitations of the CWA.[71] Justice Kennedy opined that the Agencies' construction of "navigable waters" was not owed the deference of the *Chevron* doctrine, as the construction does not give the proper significance to the word "navigable." [72] Instead, the Justice offered an alternative statutory interpretation of the term.[73] In the Justice's concurring opinion, he argued that the Agencies should have jurisdiction over wetlands when a "significant nexus exists between the wetlands in question and navigable waters in the traditional sense."[74] Additionally, according to Justice Kennedy, the Court should view the test in light of Congress's intent in creating the CWA—to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters."[75] The opinion clarifies that when wetlands "significantly affect the chemical, physical, and biological integrity" of the United States' navigable waters,

64. *Id.* at 752; *see generally*, Chevron, U.S.A., Inc. v. Nat. Res. Def. Council, Inc., 467 U.S. 837, 842–45 (1984).
65. *Rapanos*, 547 U.S. at 741.
66. United States v. Riverside, 474 U.S. 121, 135 (1985).
67. *Rapanos*, 547 U.S. at 742.
68. *Id.*
69. *Id.*
70. *Id.*
71. *Id.* at 768.
72. *Id.* at 778–79.
73. *Rapanos*, 547 U.S. at 779.
74. *Id.*
75. *Id.*; *see also* 33 U.S.C. § 1251(a).

they possess the significant nexus required for the Agencies to regulate them.[76]

3. Maui v. Hawaii Wildlife Fund

After reviewing the Agencies' jurisdiction over wetlands in *Riverside* and *Rapanos*, the court considered CWA jurisdiction over pollutants in groundwater in *Maui v. Hawaii Wildlife Fund*.[77] In *Maui*, the County of Maui discharged partially treated sewage into underground wells which emptied into groundwater and eventually the ocean.[78] The CWA forbids discharging pollutants "from a 'point source' to 'navigable waters' without the appropriate permit from the [EPA]."[79] The Hawaii Wildlife Fund and other environmental groups sued the County of Maui, asking the Court to decide whether the CWA has jurisdiction over pollutants originating from a point source but that a non-point source conveyed to navigable waters.[80] The CWA defines a point source as any defined conveyance which discharges, or may discharged, pollutants.[81] A conveyance could be a pipe, channel, tunnel, well, ditch, or container, or any other connection to navigable waters.[82]

In *Maui*, the Court held that the CWA requires a permit if the act of discharging the pollutants into groundwater is "the functional equivalent of a direct discharge from the point source into navigable waters."[83] This requirement means that if the discharge of pollutants into groundwater results in pollutants tainting a body of "navigable water," the CWA mandates the individual or organization conducting that discharge to obtain a permit. The Court did acknowledge that the Agencies' construction of the statute is generally entitled to judicial deference under the *Chevron* doctrine.[84] However, in this instance, the Court determined that the Agencies' reading was in conflict with the Congress' intent in promulgating the statute.[85]

The parties, amicus briefs, and dissents all offered varying interpretations of the CWA's language, but the Court found that each

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76. *Rapanos*, 547 U.S. at 780.
77. Cty. of Maui v. Haw. Wildlife Fund, 140 S. Ct. 1462 (2020).
78. *Id.* at 1469.
79. *Id.* at 1468; *see also* 33 U.S.C. § 1311(a).
80. *Maui*, 140 S. Ct. at 1468.
81. 33 U.S.C. § 1362(14).
82. *Id.*
83. *Maui*, 140 S. Ct. at 1468.
84. *Id.* at 1474; *see generally*, Chevron, U.S.A., Inc. v. Nat. Res. Def. Council, Inc., 467 U.S. 837, 842–45 (1984).
85. *Maui*, 140 S. Ct. at 1474.

construction was too extreme.[86] Instead, the Court aimed to create a middle ground that reflected Congress's intent to prevent pollution to waters on a national scale without encroaching on states' authority to regulate their own land and groundwater.[87] Thus, the Court concluded that the CWA requires a permit when there is either a "direct discharge from a point source into navigable waters" or "the functional equivalent of a direct discharge."[88]

In *Maui*, the Court provided some practical guidance to aid in the analysis of whether the Agencies have jurisdiction to regulate pollution from a particular point source.[89] Under the holding in *Maui*, the EPA should regulate pollution into point sources which are "physically close" to navigable waters and will impact navigable waters soon.[90] The Court did not create any concrete guidelines for what "physically close" means, however it did indicate that several factors would be relevant in deciding which point sources the EPA should regulate.[91]

The Court indicated that time and distance between the point source and navigable waters are usually the most important factors.[92] However, future fact finders should consider many other relevant factors, especially in cases where time and distance do not provide clarity on whether the discharge requires a permit.[93] Those factors include the amount of pollution which reaches navigable waters, the possible dilution or chemical change of a pollutant as it travels towards navigable waters, the way in which the pollutant enters navigable waters, and the kind of material the pollutant travels through.[94] Finally, the Court advised that though this approach may not clearly decide every case, the standard will become more refined, and therefore more useful, as courts continue to decide cases like *Maui*.[95]

4. Sackett v. EPA

Just three years after *Maui*, the Supreme Court further narrowed the CWA's jurisdiction over wetlands. In *Sackett v. EPA*, the Supreme Court held that the EPA cannot regulate wetlands unless the wetlands are

86. *Id.* at 1476.
87. *Id.*
88. *Id.*
89. *Id.*
90. *Id.*
91. *Maui*, 140 S. Ct. at 1476.
92. *Id.* at 1476–77.
93. *Id.* at 1476.
94. *Id.* at 1476–77.
95. *Id.* at 1477.

"indistinguishably part of a body of water that itself constitutes 'waters' under the [Clean Water Act]."[96] In 2004, the Sacketts bought property near a lake in Idaho which they filled with dirt and rocks in preparation for building their home.[97] The EPA informed the Sacketts that their backfilling violated the CWA because of wetlands on their property, and that they must take action to restore their land.[98] The Sacketts sued the EPA, alleging that the wetlands on their land were not "waters of the United States," therefore the EPA had no authority over them.[99] In *Sackett*, the Court adopted the plurality opinion from *Rapanos* in its holding, finding that CWA protection only extends to wetlands that have a "continuous surface connection to bodies that are 'waters of the United States' in their own right."[100]

The Court echoed the reasoning of the *Rapanos* plurality opinion when defining "waters of the United States."[101] The Court concluded that Congress's use of the plural "waters" was intended to reference permanent and continuously flowing bodies of water like rivers, lakes, and oceans, based on the dictionary definition of "waters."[102] The Court further justified its holding by indicating that the traditional meaning of "navigable" aligns with the same types of bodies of water as "waters."[103] Finally, the Court pointed to other instances where Congress used the term "waters" to refer only to bodies of open water such as rivers, lakes, and oceans.[104]

After defining "waters of the United States," the Court confirmed that the CWA protects some wetlands, but only those which are indistinguishably part of a body of water that itself constitutes "waters" under the Act.[105] The CWA declares that states can permit discharge into "(1) any waters of the United States, (2) except for traditional navigable waters, (3) 'including wetlands adjacent' thereto."[106] The Court interpreted this provision to mean that the CWA only regulates discharges into wetlands adjacent to "waters of the United States."[107] Similarly, the Court reasoned that the CWA and state and federal agencies do not protect any

96. Sackett v. EPA, 598 U.S. 651, 676 (2023).
97. *Id.* at 662.
98. *Id.*
99. *Id.* at 663.
100. *Id.* at 684.
101. *Id.* at 671.
102. *Sackett,* 598 U.S. at 671.
103. *Id.* at 672.
104. *Id.* at 672–73.
105. *Id.* at 676.
106. *Id.* at 675; *see also* 33 U.S.C. § 1344(g)(1).
107. *Sackett,* 598 U.S. at 676.

wetlands not adjacent to "waters of the United States."[108] The Court once again turned to the dictionary, utilizing the dictionary definition of "adjacent" as either "contiguous" or "near" to support its conclusion that wetlands must be indistinguishably part of the "waters of the United States."[109]

In *Sackett*, the Supreme Court declined to defer to the EPA's construction of "waters of the United States."[110] While the Court did not discuss the *Chevron* doctrine explicitly, the Court's refusal to accept the Agencies' definition indicates an unwillingness to grant judicial deference towards the Agencies' definition.[111] Although the Court did not formally overturn *Chevron*, the future of agency deference after *Sackett* was uncertain.[112]

C. The Deterioration of Chevron Deference Following the Sackett Ruling

After *Sackett v. EPA*, many scholars expressed concern about the state of *Chevron* deference.[113] *Chevron* deference, a doctrine first formally described in *Chevron, U.S.A., Inc. v. Natural Resources Defense Council, Inc.*, affords judicial deference to a government agency's statutory interpretation of a statute Congress charged them with enforcing.[114] Under the doctrine, when an individual challenges an agency's interpretation of a statute, courts defer to an agency's interpretation of a statute and rule in the agency's favor.[115] By granting an agency the authority to administer and interpret a statute, Congress implicitly proclaimed a preference for agencies to make decisions, rather than judges.[116] Under *Chevron*, courts generally respected an agency's interpretation of an ambiguous statute, as long as the interpretation is reasonable and the agency has gone through the proper channels to promulgate its definition.[117]

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108. *Id.*

109. *Id.*

110. *Id.* at 679.

111. *See generally Sackett,* 598 U.S. at 679; *See generally* Chevron, U.S.A., Inc. v. Nat. Res. Def. Council, Inc., 467 U.S. 837 (1984).

112. *Id.*

113. Monika U. Ehrman & Robin K. Craig, *The Supreme Court's Wetland Saga Continues*, REGUL. REV. (July 13, 2023), https://www.theregreview.org/2023/07/13/ehrman-craig-the-supreme-courts-wetland-saga-continues/ [https://perma.cc/7M7J-J92N].

114. *Chevron,* 467 U.S. at 837.

115. *Id.*

116. *See* Kristin E. Hickman & Aaron L. Nielson, *Narrowing Chevron's Domain*, 70 DUKE L.J. 931 (2021).

117. *Id.* at 931–32; *See also* United States v. Mead Corp., 533 U.S. 218, 229–30 (2001) (explaining that courts often utilize *Chevron* deference in cases where agency interpretations were adopted by formal procedures, such as notice-and-comment

While the Court did not explicitly overturn *Chevron* in *Sackett*, the Court's refusal to defer to the Agencies in *Sackett* and other recent cases created the potential for future cases to formally overturn it.[118] In June 2024, the Supreme Court formally overruled *Chevron* in the landmark *Loper Bright v. Raimando* (*Loper Bright*) case.[119] Now, in place of agency deference, the Court can use its own judgment to decide if an agency acted within the authority granted by a statute.[120] Instead of the Court granting the Agencies the benefit of the doubt as it did for many years, the Court is now playing a much more active role in interpreting statutory definitions. The Court can now decide cases which seriously impact how agencies apply statutes in practice, even though the agencies have more expert knowledge and experience in their own respective industries than the Court.

D. Federal Wetland Regulations After the Sackett Ruling

Just a few months before the *Sackett* ruling, the Agencies released a revised definition of "waters of the United States" effective on March 20, 2023.[121] Under their definition, "waters of the United States" included "interstate wetlands."[122] The Agencies defined adjacent wetlands as those "bordering, contiguous, or neighboring" to other "waters of the United States."[123] The definition further described adjacent wetlands as wetlands that man-made barriers, dunes, or areas of raised ground separated from waters of the United States.[124] The Agencies' definition also protected tributaries, streams flowing into lakes or larger streams,[125] of "waters of the United States."[126] This version of the definition broadly covered large

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rulemakings and formal adjudications); *See also* Skidmore v. Swift & Co., 323 U.S. 134, 140 (1944) (explaining that courts generally apply the *Skidmore* standard, a less deferential standard, to agency interpretations put forward through informal mechanisms such as policy statements or interpretive rules).

118. Ehrman & Craig, *supra* note 113 (noting that *Sackett* is not the first case where the Supreme Court has refused to defer to the agencies interpretation of a statutory definition, which suggests a weakening of *Chevron* deference); *see also* West Virginia v. EPA, 597 U.S. 697, 700 (2022) (reducing EPA authority to devise caps on emissions under the Clean Air Act).

119. Loper-Bright Enters v. Raimondo, 603 U.S. 369 (2024).

120. *Id.*

121. Revised Definition of "Waters of the United States," 88 Fed. Reg. 11 (Mar. 20, 2023); 33 C.F.R. pt. 328; 40 C.F.R. pt. 120.

122. 33 C.F.R. § 328.3(a)(1)(iii) (Mar. 2023).

123. § 328.3(c)(2).

124. *Id.*

125. *Tributary*, MERRIAM-WEBSTER, https://www.merriam-webster.com/dictionary/tributary [https://perma.cc/LMB6-CVXW].

126. 33 C.F.R. § 328.3(a)(3) (Mar. 2023).

bodies of waters, interstate wetlands, tributaries, and wetlands located close to large bodies of water.[127]

In May 2023, the Supreme Court's ruling in *Sackett*[128] forced the Agencies to revise their definition of "waters of the United States."[129] The Agencies' March 2023 definition provided wider coverage of wetlands than the *Sackett* ruling, thus the March 2023 definition was invalid under the *Sackett* ruling.[130] While the Agencies' definition protected wetlands even when not directly and permanently connected to larger "waters of the United States,"[131] the Court in *Sackett* found that Congress only intended the CWA to protect wetlands which were permanently and indistinguishably part of "waters of the United States."[132] Thus, the Agencies had to redraft its definition, and those revisions became effective on September 8, 2023.[133]

The Agencies' revised definition states that "waters of the United States" do not include "interstate wetlands."[134] The revised definition only protects tributaries of "relatively permanent, standing or continuously flowing" bodies of water, as opposed to all tributaries of "waters of the United States."[135] Adjacent wetlands are now simply wetlands which have "a continuous surface connection" to waters of the United States.[136] Thus, the current definition of "waters of the United States" excludes all wetlands that are not continuously connected to relatively permanent bodies of water.[137] In addition to the federal regulations under the CWA, many states have built their own statutory scheme for regulating the use and abuse of intrastate waters.

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127. § 328.3.

128. Sackett v. EPA, 598 U.S. 651, 676 (2023).

129. *Revising the Definition of "Waters of the United States,"* EPA, https://www.epa.gov/wotus/revising-definition-waters-united-states (Feb. 21, 2025) [https://perma.cc/B54Z-V8J7].

130. *Id.*

131. 33 C.F.R. § 328.3(c)(2) (Mar. 2023).

132. *Sackett*, 598 U.S. at 676.

133. *Id.*

134. 33 C.F.R. § 328.3(a)(1)(iii) (Sept. 2023).

135. 33 C.F.R. § 328.3(a)(3) (Sept. 2023); *See* 33 C.F.R. § 328.3(a)(3) (Mar. 2023); *see* 33 C.F.R. § 328.3(a)(1)(iii) (Mar. 2023).

136. 33 C.F.R. § 328.3(c)(2) (Sept. 2023).

137. § 328.3.

E. Michigan Wetland Regulations

1. Protected Wetlands

The Geomare-Anderson Wetlands Protection Act of 1980 (WPA) governs wetland regulation in the state of Michigan.[138] The WPA begins by providing examples of the important services that wetlands provide for Michigan residents including: flood control, wildlife habitats and breeding grounds, subsurface water resource preservation, pollutant removal, erosion protection, and nutrients important for the water cycle.[139] The WPA defines a wetland as a "land or water feature, commonly referred to as a bog, swamp, or marsh, inundated or saturated at a frequency and duration sufficient to support, and that under normal circumstances does support, hydric soils and a predominance of wetland vegetation or aquatic life."[140] The WPA further describes whether a land or water feature is a wetland using proximity standards, numerical values, and even endangered wildlife presence as defining metrics.[141]

If an individual wants to dredge, deposit fill material, construct, operate, maintain any use, develop, or drain surface water from state wetlands, they must first obtain a permit from EGLE.[142] The WPA defines "fill [m]aterial" as any kind of material that displaces soil or water or that reduces the wetland's ability to retain water.[143] The fill material could be sand, rocks, soil, or other waste which dislocates the soil or water in a wetland.[144]

Michigan cases interpreting or challenging the language of WPA are rare, and not relevant to the topic of this Note.[145]

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138. MICH. COMP. LAWS § 324.30304 (2019).
139. § 324.30302(1)(b)(i–vi).
140. § 324.30301(1)(n).
141. § 324.30301(1)(n)(i–v).
142. § 324.30304.
143. § 324.30301(1)(d).
144. *Id.*
145. *See generally* People v. Kozak, 2008 WL 2468469 (2008) (holding that the language of the WPA providing common examples of wetlands, such as bogs, swamps, marshes, was not unconstitutionally vague, but instead was intended to aid the reader in understanding the types of land covered under the statute); Dep't of Env't Quality v. Morley, 314 Mich. App. 306, 885 N.W.2d 892 (2015) (concluding that Michigan's WPA regulations did not constitute a governmental taking because the property in question retained some value, the homeowner was aware of the regulations, and the regulations did not single out the plaintiff's property to bear the weight of the public interest in preserving wetlands).

2. EGLE Permit Procedures

Before EGLE can grant a permit to dredge or fill a wetland area, it must first discern whether the permit is otherwise lawful, whether the permit is necessary to reap the benefits of that activity, and whether issuing the permit is in the public interest.[146] The extraction of nonfuel minerals such as sand or silt[147] is an example of an activity that could require a permit to reap the benefits of the activity,[148] as it may not be possible to utilize the minerals without dredging the wetland. To decide whether a permit is in the public interest, EGLE balances the benefits and detriments of the proposed activity and reflects upon the state and federal concern for protecting natural resources.[149] The WPA even lists specific factors which EGLE should consider when making its decision.[150] These factors contemplate the benefits and consequences to all involved parties, as well as the actual need for the proposed action, and any feasible alternatives.[151]

EGLE may not issue a permit unless the applicant can show no unacceptable disruption to the aquatic resources that wetlands provide,[152] such as pollution treatment,[153] erosion control,[154] and nutrients for wildlife.[155] Unless the applicant can prove that the activity must occur in a

146. MICH. COMP. LAWS § 324.30311(1) (2013); *see also State and Federal Wetland Regulations*, DEP'T OF ENV'T, GREAT LAKES, & ENERGY, https://www.michigan.gov/egle/about/organization/water-resources/wetlands/state-and-federal-wetland-regulations [https://perma.cc/P7U2-SXR7].

147. *Classification and Types of Wetlands*, EPA, https://www.epa.gov/wetlands/classification-and-types-wetlands#undefined (Feb. 5, 2025) [https://perma.cc/W7F3-M7NP] (explaining that minerals like sand and silt often exist in certain kinds of wetlands).

148. MICH. COMP. LAWS § 324.30302(1)(d) (2013) (providing an example of a situation in which a permit to dredge or fill a wetland may be necessary to reap the benefits of the proposed activity).

149. § 324.30311(2).

150. § 324.30311(2)(a–i) (declaring that EGLE should consider the following criteria when making permitting decisions: extent of need, both public and private, for the proposed activity, availability of feasible alternative locations and methods to achieve the same benefit, permanence and extent of both the positive and negative effects the proposed activity could have, probable effects of the proposed activity in relation to existing and anticipated activities at the same site, probable effects on various aspects of the value of public health, fish, and wildlife, the wetland size, how much wetland remains in the area, proximity of the site to waterways, and the economic value of the land after the proposed activity alters it).

151. *Id.*

152. § 324.30311(4); *see also State and Federal Wetland Regulations*, DEP'T OF ENV'T, GREAT LAKES, & ENERGY, https://www.michigan.gov/egle/about/organization/water-resources/wetlands/state-and-federal-wetland-regulations [https://perma.cc/P7U2-SXR7].

153. § 324.30302(1)(iv).

154. § 324.30302(1)(v).

155. § 324.30302(1)(vi).

wetland or no plausible alternatives exist to the proposed course of action, EGLE cannot issue a permit.[156] In order for EGLE to issue the permit, it must be otherwise lawful under other provisions of the WPA, there must be no feasible alternatives to avoid impacting wetlands, and the applicant must use all realistic means to reduce harmful impacts to wetlands.[157] Even if EGLE issues a permit, EGLE may still require mitigation efforts to ensure the activity does not cause overall loss of wetlands.[158] Applicants can mitigate their impacts on wetlands by restoring existing wetlands, creating new wetlands, acquiring credits from the wetland mitigation bank, or preserving current wetlands.[159] Restoration, meaning reestablishing the wetland to its original characteristics and functions, is the preferred method of mitigation.[160]

3. International Treaties

While various international agreements such as the Great Lakes Water Quality Agreement[161] and the Boundary Waters Treaty of 1909 aim to protect Michigan's freshwater system,[162] they do not provide any specific regulations related to wetland protection.[163] Even after the governments of Canada and the United States revised the Great Lakes Water Quality Agreement (Agreement) in 2012, specific protections for wetlands are still notably absent.[164] The Agreement merely includes a general objective to promote healthy wetlands as a habitat for native species.[165]

F. Overlap Between Federal Wetland Regulations and Michigan Wetland Regulations

Federal and state wetland regulations, as well as the agencies which administer them, have varying levels of authority over different sizes of wetlands in the state of Michigan. The Agencies may delegate their permit-issuing power to any state which proposes a program to regulate its own waters.[166] The state's program must comply with the federal CWA

156. § 324.30311(4)(a–b).
157. *See* MICH. ADMIN. CODE § 281.925(2)(a–c) (2024).
158. § 281.925.
159. § 281.925(4)(a–d).
160. § 281.925(5).
161. Great Lakes Water Quality Agreement, Can.-U.S., Nov. 22, 1978, 23.1 U.S.T. 301.
162. Boundary Waters Treaty, Gr. Brit. (for Can.)-U.S., Jan. 11, 1909, 36 Stat. 2448.
163. *See id.*; *see also* Great Lakes Water Quality Agreement *supra* note 161.
164. Great Lakes Water Quality Agreement, Can.-U.S, Nov. 22, 1978, 23.1 U.S.T. 301, Art. 2(1)(b) (amended 2012).
165. *Id.* at 2(1)(a)(v).
166. 33 U.S.C. § 1344(g–h).

guidelines, but is not limited to those guidelines, meaning a state can choose to regulate more than the CWA but not less.[167] In 1984, the federal government authorized Michigan to administer Section 404 of the CWA regulating dredged and fill material into navigable waters in most areas across the state.[168] This authorization means that in Michigan, anyone who wishes to conduct prohibited activities under the CWA only has to submit one application for approval to EGLE, whereas in other states applicants must submit applications to both their state permitting agencies and the Agencies.[169] The Agencies still receive notice and a copy of each permit application, but they waive federal review for most projects.[170]

Nonetheless, the Agencies must still review certain larger projects.[171] Examples of larger projects include ones that impact critical environment areas, involve major discharges, have the potential to affect threatened or endangered species, involve interstate discharges, or contain toxic or hazardous pollutants.[172] Notably, projects which affect more than one acre of wetland require the Agencies' approval.[173] When reviewing applications for dredging or filling wetlands, EGLE considers whether the application is one which will need federal approval, and alerts the Agencies if necessary. [174] While EGLE can approve permits for smaller projects without federal review from the Agencies, EGLE cannot issue permits for larger projects that require federal authority if the Agencies object to the issuance of the permit.[175] Finally, some waters in Michigan require applicants to submit permit applications to both EGLE and the Agencies.[176] An individual cannot can create an obstruction to or modify the course of waters of the United States without permits from the Agencies and the state.[177]

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167. § 1344(h)(1)(A)(i).

168. *State and Federal Wetland Regulations*, DEP'T OF ENV'T, GREAT LAKES, & ENERGY, https://www.michigan.gov/egle/about/Organization/Water-Resources/Wetlands/state-and-federal-wetland-regulations [https://perma.cc/Y9NB-555J].

169. *Id.*

170. 33 U.S.C. § 1344(h)(1)(D); *see also* State and Federal Wetland Regulations, *supra* note 168.

171. State and Federal Wetland Regulations, *supra* note 168.

172. *Id.*

173. *Id.*

174. *Id.*

175. *Id.*

176. 33 U.S.C. § 403; *See also* State and Federal Wetland Regulations, *supra* note 170.

177. 33 U.S.C. § 403a.

G. The PFAS Problem

Polyfluoroalkyl substances (PFAS) are various manufactured chemicals that companies use in industry or consumer products, which fracture into microscopic pieces that break down extremely slowly and have contaminated much of the environment.[178] PFAS pose a serious threat when humans come into contact with them too often, as they can accumulate in the human body.[179] Research suggests that accumulation of PFAS can create adverse health consequences such as decreased fertility, increased cancer risk, reduced immune system, increased cholesterol, and interference with natural hormones.[180] Furthermore, PFAS exposure may delay children's development.[181]

Since the 1940s, a wide variety of industries have used PFAS, including manufacturing and chemical production, food packaging, and household and personal care products.[182] The automotive, construction, aerospace, and electronic industries also frequently use PFAS.[183] PFAS can leak into water, soil, and air, and they break down incredibly slowly[184]—taking almost four years to reduce by half in the human body.[185] Notably, PFAS can move easily through the groundwater,[186] which is used by 44% of Michigan residents for their drinking water.[187] The other 56% of Michigan residents use surface water such as lakes, rivers, streams, creeks, and reservoirs for drinking water.[188] Groundwater, surface water, and wetlands can all connect to each other, so PFAS could travel between different bodies of water during the time they are connected.[189] For these reasons, individuals can be exposed to PFAS in

178. *Our Current Understanding of the Human Health and Environmental Risks of PFAS*, EPA, https://www.epa.gov/pfas/our-current-understanding-human-health-and-environmental-risks-pfas (Nov. 26, 2024) [https://perma.cc/79BW-PMHP].

179. *Id.*

180. *Id.*

181. *Id.*

182. *Id.*

183. *Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS)*, NAT'L INST. ENV'T HEALTH SERVS., https://www.niehs.nih.gov/health/topics/agents/pfc#:~:text=PFAS%20are%20used%20in%20the,soil%2C%20water%2C%20and%20air (Jan. 6, 2025) [https://perma.cc/WQ49-AUWJ].

184. *Id.*

185. *PFAS Fact Sheet*, PENN. DEP'T OF HEALTH, https://www.health.pa.gov/topics/Documents/Environmental%20Health/PFAS%20Fact%20Sheet.pdf [https://perma.cc/W3HU-YBDE].

186. *Drinking Water and Wells*, MICH. PFAS ACTION RESPONSE TEAM, https://www.michigan.gov/pfasresponse/drinking-water#:~:text=PFAS%20move%20easily%20through%20the,for%20private%20drinking%20water%20wells [https://perma.cc/FCQ2-WRYS].

187. *MI Drinking Water Sources*, *supra* note 15.

188. *Id.*

189. Leibowitz, *supra* note 10.

their food or drinking water, by using products made with PFAS, working in a facility that manufactures PFAS, or even by breathing PFAS-contaminated air.[190]

Most United States residents have been exposed to PFAS, usually at low levels.[191] Certain groups of people are at higher risk of being exposed to PFAS or will be more negatively impacted by contact with PFAS than other groups.[192] Industrial workers who help process PFAS-containing products and people who live close to one of those facilities are exposed to PFAS at high levels every day.[193] Pregnant women, who tend to drink more water during pregnancy, amass more PFAS than an average person.[194] More PFAS-contaminated water sites exist in more racially diverse and poorer ZIP codes than in other neighborhoods.[195]

PFAS are a serious problem in many states, but especially in Michigan.[196] EGLE estimates that over 1.5 million of Michigan's roughly 10 million residents drink PFAS-contaminated water.[197] As of 2019, at least 46 sites in Michigan had levels of PFAS in the groundwater that exceed the EPA's guidelines.[198] Many bodies of water already have "do not eat" advisories for fish taken from those waters because of extremely

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190. *Our Current Understanding of the Human Health and Environmental Risks of PFAS*, *supra* note 178; *see Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS)*, *supra* note 183.

191. *Our Current Understanding of the Human Health and Environmental Risks of PFAS, supra* note 178.

192. *Id.*

193. *Id.*

194. *Id.*

195. Amanda Hernandez & Mark Nichols, *How PFAS are Entering America's Water Supply*, ABC NEWS (Apr. 21, 2023, 6:01 AM), https://abcnews.go.com/US/pfas-entering-americas-water-supply/story?id=98479678 [https://perma.cc/V7P8-ADVT].

196. *PFAS Chemicals, Mapping the PFAS Contamination Crisis*, ENV'T WORKING GROUP, https://www.ewg.org/areas-focus/toxic-chemicals/pfas-chemicals [https://perma.cc/54UY-EZXT] (showing three PFAS contamination maps—PFAS contamination, suspected industrial discharges of PFAS, and military sites known or suspected of PFAS contamination—which each exhibit high levels of known or suspected PFAS contamination in Michigan).

197. *PFAS in Michigan*, MICH. ENV'T COUNCIL, https://www.environmentalcouncil.org/pfas_in_michigan#:~:text=According%20to%20the%20Michigan%20Department,PFAS%20may%20have%20been%20used [https://perma.cc/4YYD-B7QG]; *see Quick Facts, Michigan*, U.S. CENSUS BUREAU, https://www.census.gov/quickfacts/fact/table/MI/PST045223 [https://perma.cc/4JVP-NNNP].

198. Keith Matheny, *PFAS contamination is Michigan's Biggest Environmental Crisis in 40 Years*, DET. FREE PRESS (Apr. 25, 2019, 7:45AM), https://www.freep.com/in-depth/news/local/michigan/2019/04/25/pfas-contamination-michigan-crisis/3365301002/#:~:text=The%20Michigan%20Department%20of%20Environmental,stations%2C%20wastewater%20treatment%20plants%2C%20old [https://perma.cc/88GW-QMAH].

high levels of PFAS in the fish.[199] One study from the Ecology Center conducted in the Huron and Rouge rivers found that all 100 fish sampled contained PFAS chemicals, all at potentially dangerous levels for human consumption.[200] Michigan even issued a "do not eat" advisory for deer found with elevated PFAS levels within a certain radius.[201] The worst PFAS contaminators in Michigan are military sites, wastewater treatment plants, landfills, industrial sites, fire stations municipal airports, petroleum stations, and certain industrial sites.[202]

H. Drinking Water Regulations

In 1974, Congress passed the Safe Drinking Water Act (SDWA) to assure safe drinking water throughout the U.S.[203] Under the SDWA, the EPA can issue national regulations for contaminants it finds may adversely affect public health.[204] In 2023, the EPA finally proposed PFAS regulation for drinking water.[205] The proposed regulation would monitor levels of six kinds of PFAS in public drinking water systems, notify the public if the system exceeds the permitted PFAS levels, and take action to reduce PFAS levels.[206] The regulations are currently under interagency review.[207]

The EPA may also delegate primary enforcement responsibility to states that have drinking water regulations at least as strict as the federal SDWA.[208] Michigan gained primary enforcement authority, also called "primacy," by enacting the Michigan Safe Drinking Water Act (MI

199. *Id.*

200. Tom Perkins, *All Fish Tested from Michigan Rivers Contain 'Forever Chemicals', Study Finds*, GUARDIAN (Feb. 24, 2023, 9:35 AM), https://www.theguardian.com/environment/2023/feb/24/pfas-michigan-rivers-fish-study [https://perma.cc/6DCD-7ZGG].

201. *Id.*

202. Matheny, *supra* note 198.

203. H.R. REP. No. 93-1185 (1974).

204. 42 U.S.C. § 300g-1(b)(1)(A).

205. *Proposed PFAS National Primary Drinking Water Regulation*, EPA, https://www.epa.gov/sdwa/and-polyfluoroalkyl-substances-pfas (Jan. 16, 2025) [https://perma.cc/V9ZR-XPS5] (URL has been updated but this Note is citing to the original page listed in the perma link).

206. *Id.*

207. *Id.*

208. 42 U.S.C. § 300g-2(a)(1).

SDWA) in 1974.[209] The MI SDWA only applies to public water systems.[210]

In 2017, Michigan Governor Rick Snyder created the Michigan PFAS Action Response Team (MPART) to combat the growing PFAS contamination threat.[211] MPART provides recommendations to various state agencies regarding PFAS standards and coordinates efforts to mitigate PFAS' harmful effects across those agencies.[212] MPART also frequently submits comments on national drinking water regulations, to protect Michigan and the entire country from the deadly threat of PFAS.[213]

In 2020, thanks to the work of MPART, EGLE began regulating PFAS in public drinking water supplies.[214] EGLE established maximum contaminant levels (MCLs) for seven different PFAS compounds using its authority under the MI SDWA.[215] If a certain water supply exceeds these limits, the water supply must take action to notify the public and treat the water to reduce contaminants.[216] Violation of safe drinking water standards in the MI SDWA can result in a misdemeanor charge, punishable by up to $5,000 per day of violation, or up to a year in jail, or both.[217] The attorney general may bring an SDWA action, either injunctive or otherwise, at the request of EGLE.[218] For example, in 2017, when the City of Flint refused to approve a plan to switch to a safer drinking water source for their residents, EGLE requested that the Michigan attorney general file an action against the city under the MI SDWA, seeking an injunction that would force Flint to agree to use the safe drinking water source that was available to the city.[219]

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209. *Who Regulates my Water Quality?*, DEP'T OF ENV'T, GREAT LAKES, & ENERGY, https://www.michigan.gov/egle/public/learn/drinking-water/who-regulates-water-quality#:~:text=The%20Michigan%20SDWA%2C%20Public%20Act,water%20program%20in%20the%20state [https://perma.cc/YLL6-2ALA]; *See also* MICH. COMP. LAWS §§ 325.1001–1023.

210. MICH. COMP. LAWS § 325.1001a.

211. STATE OF MICH., EXEC. OFFICE, EXEC. DIRECT. NO. 2017-4, Michigan PFAS Action Response Team (2017).

212. *Id.*

213. *Letters and Congressional Testimonies*, MICH. PFAS ACTION RESPONSE TEAM, https://www.michigan.gov/pfasresponse/about/letters-testimonies [https://perma.cc/4X88-4WH2].

214. *Drinking Water and Wells, supra* note 186.

215. *Maximum Contaminant Levels (MCLs)*, MICH. PFAS ACTION RESPONSE TEAM, https://www.michigan.gov/pfasresponse/drinking-water/mcl [https://perma.cc/WF2N-BPQ4].

216. MICH. COMP. LAWS § 325.1019; MICH. COMP. LAWS § 325.1015.

217. § 325.1021(1).

218. § 325.1022.

219. Mich. Dep't Env't Quality v. City of Flint, 282 F.Supp.3d 1002, 1010 (E.D. Mich. 2017).

III. ANALYSIS

A. Whether Federal Regulations are Sufficient to Protect Michigan Waters from Further PFAS Contamination

Just 13 years after Congress expanded the CWA to regulate dredging and polluting the United States' waters,[220] the Supreme Court reduced the national protections of wetlands, an integral piece of the water system.[221] While the Supreme Court has broadened and narrowed the scope of wetland protection since 1985,[222] the most recent wetland protection case, *Sackett v. EPA*, reduced the EPA's discretion to regulate wetland pollution and dredging to its most limited form yet.[223] After *Sackett*, the Agencies can only regulate wetlands which are indistinguishably connected to bodies of water which are "waters of the United States."[224] Following *Loper Bright*, federal administrative agencies such as the EPA have lost the judicial presumption that their statutory interpretations are valid, meaning the agencies are powerless to expand the definition approved in *Sackett*.[225]

The Agencies have more freedom to regulate groundwater pollution, following the decision in *Maui*.[226] In *Maui*, the Court declared that a CWA permit is necessary when a discharge of pollutants is the "functional equivalent" of a direct discharge into navigable waters.[227] However, instead of clearly defining "functional equivalent," the Court created a list of several factors that the Agencies should consider in deciding whether a specific discharge requires a CWA permit.[228] In the four years since the *Maui* decision, lower courts have applied the standard inconsistently.[229] Certain circuits apply the functional equivalent standard more broadly or

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220. *Clean Water Laws, Regulations, and Executive Orders Related to Section 404*, EPA, https://www.epa.gov/cwa-404/clean-water-laws-regulations-and-executive-orders-related-section-404#:~:text=The%20basis%20of%20the%20CWA,name%20with%20amendments%20in%201972 (July 1, 2024) [https://perma.cc/2CR8-G4J5].

221. United States v. Riverside Bayview Homes, Inc., 474 U.S. 121 (1985).

222. *See* United States v. Riverside Bayview Homes, Inc., 474 U.S. 121, (1985); Rapanos v. United States, 547 U.S. 715 (2006); Sackett v. EPA, 598 U.S. 651 (2023); Maui v. Haw. Wildlife Fund, 140 S. Ct. 1462 (2020).

223. *Sackett*, 598 U.S. 651.

224. *Id.*

225. Loper-Bright Enterprises v. Raimondo, 603 U.S. 369 (2024).

226. Cty. of Maui v. Haw. Wildlife Fund, 140 S. Ct. 1462 (2020).

227. *Id.* at 1468.

228. *Id.* at 1476–77.

229. Ellie Maltby, *The Dysfunctional "Functional Equivalent" Standard: Regulations of Groundwater Discharges since* County of Maui v. Hawaii Wildlife Fund, 2023 U. CHI. LEGAL F. 385, 387 (2023).

narrowly than others, or weigh scientific evidence differently.[230] Scholars have argued that the standard itself is incompatible with the goals of the CWA, as it does not protect all of the nation's waters, only those which happen to fall within the court's standard.[231]

In 2024, federal regulations are not sufficient to protect the United States' wetlands or Michigan's wetlands. The CWA does not protect any wetland which is not indistinguishably connected to a permanent and constantly flowing body of water or groundwater that is too far removed from navigable waters.[232] In Michigan, the Agencies maintain jurisdiction over CWA permits for pollution and dredging of larger wetlands – those that are one acre or more.[233] If the Agencies' allow the worst PFAS industries to continue polluting larger wetlands, even the smaller wetlands that EGLE has the authority to protect will not be enough to adequately protect drinking water for Michigan residents. All wetlands can connect to the rest of the water system through groundwater or smaller, less permanent tributaries when the water level increases.[234] When PFAS enters a wetland, that contamination has the potential to ripple through the hydrological system to groundwater and surface water, and eventually reach drinking water.[235] Thus, threats to wetlands, no matter their size, permanence, or proximity to other bodies of water, represent threats to human health.[236]

Federal wetland and groundwater regulations are insufficient to protect Michigan wetlands from PFAS. There are gaps in the CWA which allow PFAS contamination to occur without requiring a permit or an investigation from the Agencies, notably, in wetlands not indistinguishably connected to navigable waters[237] and in groundwater too far removed from navigable waters.[238] Even if the Agencies still had the benefit of *Chevron* deference, the Agencies' authority to grant permits that

230. *Id.* at 396–401 (providing examples of how different courts have applied the functional equivalent standard).

231. *Id.* at 387.

232. 33 C.F.R. § 328.3 (Sept. 2023); *Maui*, 140 S. Ct. at 1468.

233. *State and Federal Wetland Regulations*, *supra* note 168.

234. Leibowitz, *supra* note 10.

235. *See id.*; *see also MI Drinking Water Sources, supra* note 15 (noting that 56% of Michigan residents get their drinking water from surface water such as lakes, rivers, streams, creeks, and reservoirs, while the other 44% of Michigan residents get their drinking water from groundwater).

236. *See* Leibowitz, *supra* note 10; *MI Drinking Water Sources, supra* note 15.

237. Sackett v. EPA, 598 U.S. 651 (2023).

238. Cty. of Maui v. Haw. Wildlife Fund, 140 S. Ct. 1462 (2020).

allow some level of pollution[239] leaves open the possibility that individuals will dump PFAS into wetlands and groundwater under the protection of the agency approval. Under the federal system of wetland protection, there are far too many opportunities for PFAS to enter drinking water and threaten the health of Michigan residents.

B. Whether State Regulations are Sufficient to Protect Michigan Waters from Further PFAS Contamination

The Supreme Court's decision in *Sackett* did not change Michigan wetland law, because even before the Sackett ruling, the WPA included a much more robust and comprehensive definition of what constitutes wetlands than the CWA. Thus, in Michigan, the existing WPA framework covered the gaps in wetland protection the Court created in *Sackett*. While the CWA defines regulated wetlands as ones which are adjacent to "waters of the United States,"[240] the WPA provides detailed metrics relating to proximity, size, and presence of endangered wildlife to define wetlands protected from filling and dredging.[241] The WPA's detailed and unambiguous definition[242] leaves less room for court interpretation, thereby making it a more reliable form of protection. After the *Sackett* ruling reduced federal protections for wetlands, the Michigan WPA continued to preserve wetlands, regardless of whether the wetlands were indistinguishably connected to "waters of the United States."[243]

Michigan residents may view this broader coverage as a sigh of relief.[244] However, more work is needed to protect Michigan waters sufficiently. Wetland regulation is imperative to protecting drinking water, specifically private drinking water sources, from dangerous and deadly PFAS contamination.[245] As the WPA states, wetland conservation is important because "a wetland of 1 county may be affected by acts on a

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239. *See generally* 33 U.S.C. § 1251(d); 33 U.S.C. § 1344(a) (authorizing the Agencies to allow the dredging, filling, or pollution of a water body by granting a permit to an applicant).

240. 33 U.S.C. § 1362(7).

241. MICH. COMP. LAWS § 324.30301(1)(n)(i–v) (2019).

242. *Id.*

243. *See generally* Sackett v. EPA, 598 U.S. 651 (2023); § 324.30301(1)(n)(i–v).

244. Garret Ellison, *Michigan Law Shields Wetlands from Supreme Court Decision Impacts*, MLIVE (June 13, 2023, 6:00 AM), https://www.mlive.com/public-interest/2023/06/michigan-law-shields-wetlands-from-supreme-court-decision-impacts.html [https://perma.cc/EY2G-8GR9].

245. *See* Leibowitz, *supra* note 10; *MI Drinking Water Sources*, *supra* note 15 (explaining that wetlands are interconnected with other bodies of water and drinking water sources, thus pollutants such as PFAS can travel through wetlands to contaminate Michigan's drinking water).

river, lake, stream, or wetland of other counties."[246] The Michigan legislature should bolster state regulations to adequately protect Michigan's drinking water from harmful, cancer-causing chemicals.

The SDWA's minimal PFAS regulations govern public water supplies at both the state and federal levels, however no federal or state law governs private drinking water supplies.[247] About a quarter of Michigan residents obtain their drinking water from private wells.[248] Residents who utilize a private drinking water source are left with the tall task of checking their own water, something they may never think to do, not know how to do properly, or not have the funds to accomplish.[249] Unlike other water contaminants, PFAS have no obvious taste or smell and are of microscopic size, thus it is nearly impossible to detect them unless an individual performs specific testing procedures.[250]

Residents utilizing private drinking wells also have the option of installing a filter to remove PFAS from their drinking water.[251] Again, this course of action is costly and complicated, requiring review of various filter types, purchase of the filter, and testing after the installation to ensure the filter is working properly.[252] Although it is not statutorily obligated to do so, the Michigan PFAS Action Response Team (MPART), has begun to investigate private wells across Michigan to determine which ones may be impacted by PFAS.[253] It is unclear how far MPART has made it into this endeavor, and whether there are opportunities for residents to request to have their homes tested for free.[254]

While the Michigan legislature could propose an amendment to the MI SDWA that provides regulation of private drinking water supplies, that course of action could place a massive financial and administrative burden

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246. MICH. COMP. LAWS § 324.30302(1)(a) (1995).

247. 42 U.S.C. § 300g-1(b)(1)(A); MICH. COMP. LAWS § 325.1001a.

248. *Drinking Water and Wells, supra* note 186.

249. *Home Sampling Guidance*, MICH. PFAS ACTION RESPONSE TEAM, https://www.michigan.gov/pfasresponse/drinking-water/sampling [https://perma.cc/9EN8-M6EY] (providing guidelines for homeowners utilizing private drinking wells to test their own water); *see also Certified PFAS Laboratories*, MICH. PFAS ACTION RESPONSE TEAM, https://www.michigan.gov/pfasresponse/-/media/Project/Websites/PFAS-Response/Drinking-Water/Certified-PFAS-Labs.pdf?rev=7873a56f173c4dff9aec70d7391502e6&hash=C0558A3953B8045E17A735CAA044D063 [https://perma.cc/RZ86-PXLE] (providing homeowners with links to certified PFAS-testing labs ranging in cost from $250-$531 per analysis).

250. *PFAS in Drinking Water*, MINN. DEP'T OF HEALTH, https://www.health.state.mn.us/communities/environment/water/docs/contaminants/pfas.pdf [https://perma.cc/5NFT-8JB2].

251. *Home Filters*, MICH. PFAS ACTION RESPONSE TEAM, https://www.michigan.gov/pfasresponse/drinking-water/filters [https://perma.cc/TD4Y-LVL5].

252. *Id.*

253. *Drinking Water and Wells, supra* note 186.

254. *Id.*

on EGLE which may be a barrier to passing the amendment. Either MPART or EGLE would need to expand its private well testing efforts and acquire funds to install filters in each home or at each private drinking well, in addition to monitoring the sites for compliance in the future.[255] The addition of so many responsibilities for MPART would increase costs, and take time to implement – time for PFAS to further accumulate in the bodies of Michigan residents and cause severe health consequences such as cancer, decreased fertility, and diminished childhood development.[256] Instead, the Michigan legislature should create stricter wetland permit standards under the WPA to prohibit PFAS from entering the water system at all.

It would be more efficient and less costly to create stricter permit regulations than to regulate an entirely new type of drinking well. EGLE has already undertaken the responsibility of reviewing WPA applications for pollution into wetlands, so it would not take much more effort or funding for EGLE to continue reviewing permit applications but use stricter standards.[257] The financial burden on EGLE for training it's employees on the stricter permit application standards would be minimal in comparison to the financial burden to MPART or EGLE if it were statutorily obligated to ensure the compliance of every private drinking water well in the state given the cost of testing and the amount of private drinking wells in Michigan.[258]

Presently, applicants for WPA permits are only required to submit an environmental assessment if EGLE requests one.[259] That assessment must review the effects the proposed action would have on various aspects of the wetlands, including the water quality.[260] The Michigan legislature should amend the WPA statute to require environmental assessments in all applications. In addition, the environmental assessment should include a section that explains the effects the proposed action will have on drinking water sources in the area, both public and private. With more information on the risks associated with a specific application, EGLE is in a better position to make informed decisions about permits. Specifically, EGLE can prevent drinking water contamination before it happens, if it has an

255. *See generally id.*

256. *See Our Current Understanding of the Human Health and Environmental Risks of PFAS*, *supra* note 178.

257. MICH. COMP. LAWS § 324.30304 (2019).

258. *See Home Sampling Guidance*, *supra* note 249 (explaining that testing for an individual private drinking well can cost anywhere between $250–531 per well); *see also Drinking Water and Wells*, *supra* note 186 (explaining that roughly a quarter of Michigan residents relying on private drinking wells).

259. MICH. COMP. LAWS § 324.30306(1)(f) (1995).

260. *Id.*

environmental assessment that contemplates the possible harm to water sources around the area of the proposed action.

Additionally, the Michigan legislature should amend the WPA so that EGLE must consider more factors in deciding whether to grant permits that allow pollution and destruction of wetlands. The WPA already authorizes EGLE to consider factors such as the public interest and feasible alternatives.[261] It also places high emphasis on whether the proposed action would disrupt aquatic resources when making permit decisions.[262] Michigan's aquatic resources supply the state's drinking water, [263] and state regulations should neutralize any potential threat to the integrity of the aquatic resources as much as possible. Therefore, the Michigan legislature should amend the WPA to require EGLE to consider whether the location of the proposed action has the potential to contaminate a public or private drinking water supply when determining if an action would disrupt aquatic resources.

Either MPART or another committee in a similar fashion should determine how pervasive a contaminant in one wetland could be, to ascertain when EGLE should grant a permit based on this new factor. EGLE should err on the side of denying permits if the proposed activity could contaminate a public or private drinking water supply. At a minimum, EGLE should force the applicant to find an alternative that would not contaminate the drinking water supply.

Finally, EGLE should force the industries responsible for PFAS contamination to engage in mitigation activities as a condition on any future permits. EGLE has the authority to impose wetland mitigation on any permit under the WPA,[264] and it should exercise that power on the industries that created the PFAS problem. Examples of some of the worst offenders in Michigan include wastewater treatment plans, landfills, industrial sites, and petroleum stations.[265] The MPART should determine which industries, and to the extent feasible – which specific companies, are most responsible for PFAS contamination in Michigan to aid EGLE in determining when it should make wetland mitigation a condition of an approved permit. Because Michigan created the MPART to combat the PFAS threat,[266] it should be within the team's purview to determine where

261. MICH. COMP. LAWS § 324.30311(2)(a–i) (2013).

262. § 324.30311(4).

263. *MI Drinking Water Sources, supra* note 15 (explaining that 56% of Michigan's drinking water comes from surface water sources, while the other 44% comes from groundwater).

264. MICH. COMP. LAWS § 324.30311d(1) (1995).

265. Matheny, *supra* note 198.

266. STATE OF MICH., EXEC. OFFICE, EXEC. DIRECT. NO. 2017-4, *supra* note 211.

the PFAS are originating and pass that information to EGLE for future restoration orders.

Even after the *Sackett* ruling, Michigan's detailed definition of wetlands under the WPA maintained important protections for Michigan wetlands.[267] Nevertheless, Michigan must further bolster wetland and groundwater regulations to protect its residents from the dangerous threat of PFAS. The Michigan legislature should amend the WPA to require environmental assessments that analyze the proposed action's potential impact on drinking water sources, both public and private. Furthermore, the Michigan legislature should also amend the WPA to allow EGLE to consider the impacts of a proposed action on drinking water sources when deciding whether to approve a permit. Finally, EGLE should exercise its authority to make wetland mitigation activities a condition of a WPA permit for all of the worst PFAS contaminating industries in Michigan. The MPART can supplement EGLE'S efforts to combat PFAS contamination using these new tools by conducting research on the worst offending industries in Michigan, the most dangerous PFAS chemicals, and lobbying for regulations on more types of PFAS chemicals. These amendments would prevent PFAS from entering the water system in the first place, stopping the problem at its source and protecting Michigan residents from the harmful, long-lasting health impacts of PFAS exposure.

IV. CONCLUSION

Michigan is home to one of the largest freshwater sources on the planet—the Great Lakes.[268] Wetlands are connected to and form an integral part of Michigan's hydrological system.[269] PFAS presents a serious threat to Michigan wetlands, the animals which inhabit them, and the humans who rely on Michigan's freshwater system to sustain their food and drink.[270] It is imperative that the federal and state governments take action swiftly and harshly to reduce the threat of PFAS to the U.S.

Wetland protection is an important way in which Michigan can preserve its drinking water and protect its citizens from the threat of PFAS exposure. The most efficient way to prevent further PFAS contamination is to eliminate it at the source—the wetlands where industries dump their

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267. *See* MICH. COMP. LAWS § 324.30301 (2019); *see also* MICH. COMP. LAWS § 324.30304 (2019).

268. *The World's Fresh Water Sources*, THE 71 PERCENT, https://www.the71percent.org/the-worlds-fresh-water-sources/ [https://perma.cc/583D-RX8R].

269. *See generally* Leibowitz, *supra* note 10.

270. *Our Current Understanding of the Human Health and Environmental Risks of PFAS*, *supra* note 178 (detailing the threats that PFAS contamination pose to humans and animals).

waste. First, the Michigan legislature should amend the WPA to require environmental assessments for all permits, not just when EGLE requests them. The environmental assessments should include a detailed analysis of the potential effects of the proposed action on drinking water sources, both public and private. Next, the Michigan legislature should amend the WPA to allow EGLE to consider the harmful impacts of the proposed action on drinking water sources when making permitting decisions. EGLE should be overly cautious in granting permits that have the potential to contaminate the drinking water system, given Michigan residents' many tumultuous experiences with harmful drinking water in the past.[271] Finally, EGLE should make wetland mitigation a condition of any future permits for the industries that contaminated Michigan's drinking water with PFAS.

The MPART can aid EGLE in a few ways. MPART should determine exactly which industries are contributing to PFAS contamination in Michigan. With that information, MPART can make recommendations both to the state and federal legislatures on how to best regulate waste from those industries to protect the drinking water supply. MPART should also take note of which PFAS are commonly found in Michigan drinking water that are not currently regulated either at the state or federal level. This will help MPART continue its efforts to create guidelines for more types of PFAS.

Michigan's residents have suffered through poorly managed, contaminated drinking water too many times.[272] They deserve clean, safe drinking water. It is only fair and just that MPART, EGLE, and the Michigan legislature take the steps outlined in this Note to prevent further PFAS contamination and provide environmental justice for their citizens.

271. *See* Kennedy, *supra* note 16; Sumter, *supra* note 19.
272. *Id.*