Post-*Maui* Survey of "More Stringent Than" States

Prepared for the National Association of Clean Water Agencies and the New York City Law Department

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This multi-state survey memorandum was prepared exclusively by Brooklyn Law School and Fordham Law School students for the New York City Law Department and the National Association of Clean Water Agencies (NACWA), as clients under Town+Gown:NYC's experiential learning component, and does not represent the positions of either the New York City Law Department or NACWA.

In this experiential learning project, Town+Gown:NYC worked with Brooklyn Law School's clinic program and the New York City Law Department worked with Fordham Law School's clinic program. These in-kind exchanges, where students provide their newly learned skills and practitioners provide real problems with real data and other information to produce knowledge, are a vital component of the Town+Gown:NYC program, providing benefits to both students and practitioners. This multi-state survey memorandum is the students' work product, which they can use as written materials when seeking employment.

A. Question Presented

Under the federal Clean Water Act ("CWA"), discharges of pollutants from point sources to navigable waters generally require "National Pollutant Discharge Elimination System" ("NPDES") permits.[1] The term "navigable waters" is defined as "the waters of the United States" ("WOTUS") and has long been interpreted to exclude groundwater.[2] Despite the CWA's broad regulatory reach over the navigable waters in the country, questions have arisen about whether the CWA NPDES program extends to situations where groundwater functions as a hydrological connection between a discharge and navigable waters. This question was addressed in the recent Supreme Court decision in *County of Maui v. Hawai'i Wildlife Fund*.[3]

This memorandum analyzes the states in which all or some of the NPDES requirements applicable to point source discharges into WOTUS are applied to other discharges, either those into non-WOTUS or non-point source pollution ("more stringent than" states). Further, this memorandum analyzes when and to what extent these more stringent than states cover discharges to groundwater and/or from point sources reaching WOTUS via groundwater under the respective states' NPDES programs.[4] For each more stringent than state, there will be an analysis of the relevant statutes and caselaw and an analysis applying the law to the scenarios listed in Appendix A. Lastly, we will address the likely path forward for regulation by the "no more stringent than" states under the CWA and its new interpretation in the *Maui* decision.

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[1] Federal Water Pollution Control Act Amendments of 1972 (Clean Water Act) 33 U.S.C. § 1311(a) (2012). This project does not focus on discharges of dredge and fill materials, which are regulated under 33 U.S.C. § 1344, nor on the details or history of how "Waters of the United States" are defined.

[2] 33 U.S.C.§ 1362(7) (2012).

[3] *Cty. of Maui, Haw. v. Haw. Wildlife Fund*, 140 S. Ct. 1462, 1469 (2020) ("The question here, as we have said, is whether, or how, this statutory language applies to a pollutant that reaches navigable waters only after it leaves a "point source" and then travels through groundwater before reaching navigable waters").

[4] EPA, *NPDES State Program Information*https://www.epa.gov/npdes/npdes-state-program-information (last visited Jul. 9, 2020). New Hampshire, Massachusetts, and New Mexico have not sought NPDES delegation. Nevertheless, this memorandum analyzes New Hampshire and Massachusetts because even though neither has sought NPDES delegation, both have regulations that are more stringent than those of the CWA.

In *Maui*, the Court held that the CWA requires a NPDES permit when there is a direct discharge from a point source into a navigable water or when there is the "functional equivalent" of such discharge.[5] In arriving at its decision, the Court acknowledged that this new standard does not "clearly explain how to deal with middle instances."[6] Rather, the Court identified several factors relevant to the "functional equivalent" test, including: "(1) [the pollutant's] transit time, (2) distance traveled, (3) the nature of the material through which the pollutant travels, (4) the extent to which the pollutant is diluted or chemically changed as it travels, (5) the amount of pollutant entering navigable waters relative to the amount of [it] that leaves the point source, (6) the manner by or area in which the pollutant enters the navigable waters, and (7) the degree to which the pollution (at that point) has maintained it specific identity."[7] These factors vary depending on the specific circumstances of the case and are expansive, underscoring the imprecise nature of the standard established in the *Maui* decision.[8] Also importantly, the Court stressed that "Congress left general groundwater regulatory authority to the States," and that the scope of the NDPES program should not be extended "in a way that could interfere seriously with States' traditional regulatory authority."

In a post-*Maui* world, while the direct regulation of groundwater resources will remain subject to state authority, certain discharges from "point sources" traveling through groundwater to "navigable waters" will be subject to the NPDES program. The CWA allows states to seek

[5] *Id.* The Court declined to determine if the specific pollution at issue in *Maui,* which includes effluent seepage from a wastewater reclamation facility's underground injection wells that travels approximately half a mile via groundwater flow to the Pacific Ocean, is the "functional equivalent" of a direct "point source" discharge requiring a permit, and remanded the case back to the Ninth Circuit for further adjudication. The Ninth Circuit, in turn, remanded the case to the district court for a determination of the facts under this new test.
[6] *Id.* at 1486 (Alito, J., dissenting).
[7] *Id.* at 1476-1477 (majority opinion).
[8] *Id*.

delegation from the EPA to administer the NPDES permit program. A state seeking delegation must demonstrate to EPA that it has adequate legal authority to implement the federal program.

Delegated states differ on how they implement the NPDES program through state laws. The CWA expressly provides that states can impose stricter standards than those required by the CWA.[9] Some states, however, have enacted legislation requiring that state standards be "no more stringent than" federal standards – that is, meeting the minimum threshold for delegation,[10] while other states implement permit programs that are "more stringent than" federal standards.[11] We identified these more stringent than states by evaluating (1) whether or not each state's statutory definition of regulated waters is more expansive than the CWA's definition of navigable waters, (2) whether or not each state's statutes explicitly and specifically regulate discharges into groundwater, and (3) whether or not each state's statutes include provisions requiring states to justify adoption of regulations that are more stringent than federal ones. The more stringent than states fitting into the categories arising out of these considerations are listed in Appendix B.

Most states regulate discharges of pollutants into groundwater in some fashion, and some states that allow for more stringent requirements already regulate certain discharges into groundwater or into groundwater reaching navigable waters under their state NPDES programs.

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[9] 33 U.S.C. § 1370 (Except as expressly provided in this chapter, nothing in this chapter shall (1) preclude or deny the right of any State or political subdivision thereof or interstate agency to adopt or enforce (A) any standard or limitation respecting discharges of pollutants, or (B) any requirement respecting control or abatement of pollution; except that if an effluent limitation, or other limitation, effluent standard, prohibition, pretreatment standard, or standard of performance is in effect under this chapter, such State or political subdivision or interstate agency may not adopt or enforce any effluent limitation, or other limitation, effluent standard, prohibition, pretreatment standard, or standard of performance which is less stringent than the effluent limitation, or other limitation, effluent standard, prohibition, pretreatment standard, or standard of performance under this chapter; or (2) be construed as impairing or in any manner affecting any right or jurisdiction of the States with respect to the waters (including boundary waters) of such States.)

[10] ENVTL. LAW INST., STATE CONSTRAINTS: STATE-IMPOSED LIMITATIONS ON THE AUTHORITY OF AGENCIES TO REGULATE WATERS BEYOND THE SCOPE OF THE FEDERAL CLEAN WATER ACT 11 (2013).

[11] *Id*. at 1.

For these states, state law may provide guidance as to how discharges to groundwater and/or discharges to groundwater that reaches navigable waters ought to be regulated. The guidance provided by these requirements is not necessarily clear, as implementation of groundwater regulations might be contingent on a variety of factors such as quantity or quality standards for discharges, receiving groundwaters, and/or other indirectly affected water entities. The analysis of Appendix A scenarios is intended to provide a preliminary evaluation of how, now that every state is covered by the functional equivalent test, the *Maui* decision will affect each more stringent than state's existing requirements.

Some more stringent than state statutes provide further specificity regarding discharges caused by the three scenarios listed in Appendix A. Others do not, implicating potential "gaps" in existing state coverage of certain scenarios impacted by the *Maui* decision. Close examination of more stringent than state statutes and caselaw with respect to the Appendix A scenarios is necessary to analyze this potential gap. In some states, application of the functional equivalent test might not require practical alterations to more stringent than regulations, aside from EPA oversight of NPDES permitting for discharges indirectly reaching navigable waters covered by the new standard. In other states, application of the functional equivalent test will require practical alterations to more stringent than regulations of discharges that are now fully covered by NPDES permits. Application of the functional equivalent test in states with no more stringent than regulations will also likely require expanded NPDES coverage.

B. State-by-State Analysis

I. California

a. Statutory Regulation

California defines "waters of the state" as "any surface water or groundwater, including saline waters, within the boundaries of the state."[12] Furthermore, water pollution is partially regulated by Section 13304 (a) of the California Water Code.[13] In part, Section 13304 (a) holds that any person who causes or even threatens to cause the discharge of any waste that will or probably will cause "a condition of pollution or nuisance."[14] The provisions of Section 13304 are enforced by nine different regional water quality control boards.[15] Section 13200 also empowers regional water quality control boards to take or order a variety of remedial measures, including ordering "cleanup and abatement efforts."[16] The rest of Section 13304 enumerates the powers of the regional water quality control boards, including the power to contract with other state agencies to investigate "existing or threatened groundwater pollution or nuisance."[17]

In relation to federal regulation under the Clean Water Act, California should be considered a "more than stringent" state in accordance with the criteria outlined above. Groundwater is explicitly mentioned in the statute that defines "waters" that are regulated. This means that Rhode Island's regulations are more stringent than the CWA because it includes a more expansive definition of "waters."

b. Caselaw

An examination of the case law surrounding Section 13304 of the California water code can illuminate California's post-*Maui* path regarding how the NPDES will be implemented. For

[12] CAL. WATER CODE §13050 (e) (West 2015).
[13] CAL. WATER CODE §13304(a) (West 2015).
[14] *Id.*
[15] CAL. WATER CODE §13200 (West 2015).
[16] *Id.*
[17] CAL. WATER CODE §13304(b)(4) (West 2015).

instance, in *People v. General Motors Corp.*, the court of appeal ruled that adherence to the NPDES permit does not preclude liability for an unlawful discharge under the Californian Fish and Game code.[18] In this case, GM was granted a permit by one of California's Regional Water Quality Control Boards for the wastewater GM was discharging from one of its factories.[19] When GM decided to shut down that particular factory, GM workers released 1,500 gallons of wastewater from a cooling tower, which leaked into the storm drain system.[20] The NPDES permit issued to GM allowed the company to discharge up to 84,500 gallons of wastewater into a specific depository, which was considered the point source for GM's NPDES permit.[21]

When a local resident alerted the Los Angeles Fire Department to a reddish liquid present in the control channel, the LAFD, alongside a hazardous materials unit and a warden from the Department of Fish and Game.[22] Samples were taken at the storm drain location, but not the "outfall" which was designated as the point source for the plant's NPDES permit.[23] The sample showed a pH of 9, while the sample taken directly from the cooling tower where the wastewater originated show a pH of 10.[24] With this evidence, GM was charged with four misdemeanor counts brought by the Los Angeles City Attorney's Office.[25]

The prosecutor, without pH samples from the point source, decided not to bring charges claiming GM violated their NPDES permit on the basis of excess pH levels.[26] Instead, the charges brought against GM were:

> (1) discharging cooling tower waste containing a corrosive and scale inhibitor in violation of its permit (Water Code, § 13387, subd. (a)(4)); (2) failing to report

[18] People v. General Motors Corp., 51 Cal. Rptr. 2d 651,653 (Cal. Ct. App. 1997).
[19] *Id.* at 655.
[20] *Id.*
[21] *Id.*
[22] *Id.* at 656.
[23] *Id.*
[24] *Id.*
[25] *Id.*
[26] *Id.*

> the discharge (Water Code, §§ 13387, subd. (a)(1), 13376);5 (3) discharging "refuse" into state waters (Fish & G.Code, § 5650, subd. (b)); and (4) discharging a substance "deleterious to fish, plant life or bird life" (Fish & G.Code, § 5650, subd. (f)).[27]

The first two charges hinged upon the prosecutor successfully making the argument that the discharge of any substance that was not specified in the permit constituted a violation of the permit, since the only evidence of the discharge at the point source was that the wastewater was of a pinkish color not specified in the permit.[28]

The fourth charge required the prosecutor to prove that the discharge made by GM was "deleterious to fish, plant life or bird life."[29] However, as the discharge went into a dry, concrete storm drain where there was no evidence of fish, plant, or bird life, this charge was dismissed, with the trial court concluding that there needed to be some evidence of wildlife near the point of discharge.[30]

That left the third charge against GM, which held that GM was in violation of the Fish and Game code for discharging refuse into state waters (which, again, statutorily include groundwater).[31] While GM argued that since it complied with the terms of their permit it was immune from additional fines from the state legislature, the trial court disagreed and found GM guilty of violating Fish and Game Code section 5650.[32]

On appeal, GM argued that the Fish and Game Code contradicts the CWA and the state statute that incorporates the CWA.[33] The Fish and Game Code section in question states the following:

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[27] *Id.*
[28] *Id.* at 657.
[29] *Id.*
[30] *Id.*
[31] *Id.*
[32] *Id.*
[33] *Id.*

> It is unlawful to deposit in, permit to pass into, or place where it can pass into the waters of this State any of the following…(b) Any refuse, liquid or solid, from any refinery, gas house, tannery, distillery, chemical works, mill or factory of any kind...."[34]

The statute by its language confers liability on any and all discharges, which GM argued is inherently incongruous with the CWA, which shields entities from liability for discharges that are within the limits of a NPDES permit.[35] GM argued that because of this linguistic incongruency, the state Fish and Game Code and the federal CWA (and the state law that incorporates the CWA's provisions to California) could not coexist and liability for the discharge was precluded.[36] However, the court found that the CWA did not preempt criminal liability under the Fish and Game Code.

First, the court highlighted the different intentions of the different pieces of legislation.[37] The Fish and Game Code was enacted to reach both individuals and corporations while the CWA was enacted to regulate corporate entities' behavior.[38] According to the court, this made the statutory regimes different enough to prevent preemption.[39] The court also rejected GM's arguments that the Fish and Game Code's statute was too vague to be enforced.[40] Additionally, the court highlighted the fact that the CWA was not intended to shield polluters from state criminal liability.[41]

However, the most relevant argument put before the court by GM was the argument that the two provisions needed "an interpretation to harmonize the apparent conflicts" between

[34] *Id.*
[35] *Id.*
[36] *Id.* at 661.
[37] *Id.*
[38] *Id.*
[39] *Id.*
[40] *Id.* at 662.
[41] *Id.*

them.[42] GM argued that the inconsistencies seemingly inherent in the language of the statutes would require a process of statutory interpretation by the court in order to sort out the differences between the two pieces of legislation.[43] However, the court reasoned that the CWA did not intend to regulate "all pollutants potentially in a permittee's discharge."[44] Instead, the court pointed to the fact that the CWA explicitly authorizes stricter regulation of pollution via state law to show that the Fish and Game Code was merely an example of that stricter state regulation.[45] By illustrating the history of California courts ruling that state criminal prosecutions are not precluded by the CWA, the court reinforced the notion that California is a "more than" stringent state when it comes to water pollution.[46] In the end, the court upheld the criminal conviction of GM or violating Section 5650 (b) of the Fish and Game Code.[47]

Some conclusions about the future of California's post-*Maui* NPDES enforcement can be drawn from *People v. General Motors*. First, the court's decision showed that even if a discharge is not proven to be in violation of a party's NPDES permit, a court can find the party liable for that discharge under a state statute that acts as a blanket restriction against pollutant discharges of any type into the waters of California. This means that regardless of how the CWA is molded by judicial interpretation, a dogged prosecution can still pin liability on an individual for a permitted discharge.

Second, this decision also highlights just how broad California's statutory protections of its waters are. Not only does the definition of "waters" include "any surface or groundwater" within the boundaries of California, it also encompasses public and private waters whether or not

[42] *Id.* at 661.
[43] *Id.*
[44] *Id.*
[45] *Id.*
[46] *Id.*
[47] *Id.* at 666.

they are carried by artificial or natural river channels.[48] This means any discharge that may possibly enter into any waters may render an individual liable.[49]

These two takeaways from this case synthesize to form a cohesive conclusion about NPDES permits in California. No matter if the discharge is permitted under NPDES or is deposited into an artificial well of sorts, as long as that discharge has a chance of being detrimental to wildlife, criminal liability can be attached to an individual defendant. Thus, even if California did not include groundwater in its definition of "waters," the status of NPDES enforcement would probably stay the same after *Maui*, as California has a proven history of going around the CWA to attach liability for discharges.

c. Appendix A Scenarios

Scenario 1) Municipal Wastewater Management

Section 2511 of the California Code of Regulations lists the types of discharges exempt from the regulation of waste discharge requirements by California law.[50] Subsection b exempts certain discharges of wastewater to land, which ostensibly discharges into groundwater sources.[51] Other than this limited list of exemptions on wastewater discharges, municipalities need to conform with the conditions listed in their NPDES permits issued by the State Water Quality Control Board. Since California already statutorily includes groundwater in its definitions of waters of the state, municipalities must receive permits for any discharges from their wastewater systems if those discharges do not fit the limited exemption criteria.

[48] *Id.* at 664.
[49] *Id.*
[50] 23 CAL. CODE REGS. § 2511 (West 2020).
[51] *Id.*

Scenario 2) Stormwater Management: Green Infrastructure (GI)

Section 1339 of Chapter 5.9 of the California Water Code (also known as the Storm Water Enforcement Act of 1998) governs the quality of stormwater and, consequentially, discharges into stormwater.[52] The regional water quality control boards in California are tasked with determining which dischargers of stormwater are not covered under an appropriate NPDES permit.[53] Further, any person who discharges, proposes to discharge, or is suspected of discharging by a regional or the state water quality control board and does not have proper coverage from a NPDES permit must explain themselves to the proper board within 30 days of a letter from the board.[54] If the person fails to do so, they are subject to a range of penalties.[55]

Not mentioned in these statutes is the words "waters of California," which include ground water. Instead, the statutes only refer to the terms of the NPDES, which obviously regulates "waters of the United States."[56] With no explicit reference to the "waters of California" it is nearly impossible to say how *Maui* affects current state regulation of storm water discharge into the waters of California without attempting to draw conclusions by looking at statutes other than.

Interestingly enough, California law explicitly restricts the information gathered by the boards under the statute to "solely regulate" the discharge of storm water "associated with industrial activity. . ."[57] Thus, while it is difficult to forecast how California will regulate those who discharge storm water into groundwater without the Storm Water Enforcement Act mentioning "waters of California" given that California already includes groundwater in its definition of water, it can be assumed that industrial activities that have a proclivity for

[52] CAL. WATER CODE §13399.30 (a)(1) (West 1998).
[53] CAL. WATER CODE §13399.30 (a)(2) (West 1998).
[54] *Id.*
[55] *Id.*
[56] CAL. WATER CODE §13399.43 (West 1998).
[57] CAL. WATER CODE §13399.41 (West 1998).

discharging into groundwater may face a heightened risk of running afoul of their NPDES permit and, consequently, this part of the California Water Code.

Scenario 3) Drinking Water: Water Reuse

Section 13834 of the California Water Code charges the Department of Water Resources with making and enforcing regulations to ensure all Californians have safe and clean drinking water.[58] The California regulations that list the requirements necessary for any public water system aiming to serve domestic households is Section 64552 of Title 22 of the California Environmental Health Regulations.[59] For any municipality that uses a source of groundwater as drinking water for the public, a new and amended permit is required if any change in the quality of the groundwater source occurs.[60] While the bulk of the regulations that govern the municipal water systems of California do not explicitly regulate the discharge of pollutants via groundwater as a separate point source, if there is a discharge of pollutants into the groundwater supply of a municipality, that municipality would need a new permit for their drinking water supply. Thus, in a way, California's current drinking water regulations are congruous with the Supreme Court's decision in *Maui*.

II. Connecticut

a. Statutory Regulation

In Connecticut, the Department of Energy and Environmental Protection (DEEP) implement's the State's version of the Clean Water Act (CWA). Connecticut's statute defines "waters" as "all tidal waters, harbors, estuaries, rivers, brooks, watercourses, waterways, wells, springs, lakes, ponds, marshes, drainage systems and all other surface or underground streams,

[58] CAL. WATER CODE §13834 (West 1984).
[59] CAL. CODE REGS. tit. 16, §64552(a)(1)(A)(2) (2019).
[60] CAL. CODE REGS. tit. 16, §64556(a)(3)(B) (2019).

bodies or accumulations of water, natural or artificial, public or private, which are contained within, flow through or border upon this state or any portion thereof."[61] Further, DEEP regulations, define ground waters as "waters flowing through earth materials beneath the ground surface."[62] While Connecticut defines "waters of the state" more broadly than the CWA defines "waters of the US" in that waters of the state include groundwater, the state utilizes the CWA's definition of "point source.[63]

Connecticut classifies groundwater through a lettering system, with GAA having the most stringent regulation, and GC the least.[64] Different classifications of water carry different allowable discharges under Connecticut law. For example, the DEEP Commissioner (Commissioner) will not issue permits authorizing discharges to GAA or GAAs water, the highest classification, unless the discharge falls under one of the exceptions listed in the statute, which include but are not limited to treated domestic sewage and water treatment waste from public water supply.[65] However, the Commissioner may make exceptions when they deem maintaining natural quality is not technically practicable with respect to a particular pollutant and determines what extent of elimination of the source of pollution is technically practicable.[66]

As groundwaters are included in Connecticut's definition of the "waters of the state," municipalities must receive permits for any eligible discharges from their wastewater systems. Yet, under Connecticut's regulation § 22a-426-7, parties operating a subsurface sewage disposal system may use soil resources and groundwater for treatment if they in an authorized "Zone of Influence" that meets the minimum separating distances.[67]

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[61] Conn. Genn. Stat. § 22a-423.
[62] Regs., Conn. State Agencies § 22a-426-1(34).
[63] *Id*. at (51).
[64] Regs., Conn. State Agencies § 22a-426-7.
[65] *Id*.
[66] *Id*.
[67] Id. at (j) (1); minimum separating distances are defined in Regs., Conn. State Agencies § 19-13-B103.

b. Caselaw

There is no caselaw in Connecticut that addresses indirect discharges to surface waters from polluted groundwater, as discussed in *Maui*. Yet, the state's previous caselaw illustrates that Connecticut has long understood and accepted the concept of hydrological connectivity when adjudicating unpermitted discharges into groundwater.

Connecticut courts have upheld the DEEP commissioner's discretion in requiring additional information, including hydrogeologic studies, prior to approving permits. *In Town of Newtown v. Keeney*, plaintiff applied "for a permit to expand vertically its municipal solid waste disposal area (landfill)."[68] However, at public hearing following the application the record revealed that "the discharge leachate from the landfill site was having a negative impact on both the groundwater and surface water quality."[69] The Commissioner denied the plaintiff Town's permit on two grounds: first it failed to conduct a hydrogeological study as required by state regulations,[70] and second, the town had not illustrated the need for such an expansion.[71] The Connecticut Supreme Court found in favor of the Commissioner, holding that "the regulatory requirement for a comprehensive hydrogeological study as a prerequisite for the granting of a permit, [and] the town's failure to provide such a study serves as substantial evidence in support of the commissioner's decision to deny the town's permit application."[72] Connecticut state courts are clearly willing to uphold and defer to the DEEP commissioner's discretion when regulations are unambiguous. This case also shows that the DEEP commissioner has the authority to require

[68] Town of Newtown, 234 Conn. at 315.
[69] *Id.* at 316.
[70] Regs., Conn. State Agencies § 22a-209-4 (b) (2) (A) (v).
[71] Town of Newtown, *supra* note 22 at 317.
[72] *Id.*

a hydrogeological study prior to issuing permits. Such studies may likely assist in regulating and permitting indirect discharges that need to be enforced under *Maui*.

c. Appendix A Scenarios

Connecticut has a very detailed regulatory scheme for discharges to groundwater that takes hydrologic connections between bodies of water into consideration when categorizing groundwater quality. An entity discharging wastewater or diverting stormwater has to take into consideration the class of the groundwater that receives the discharge.[73] A discharge to GC water would most likely be permitted, while a discharge to GB or higher might not. However, under *Maui*, this will most likely change if there is a probability that a GC or low rated pool of groundwater would likely leach and create a discharge into nearby surface waters.

Scenario 1) Municipal Wastewater Management

Under Connecticut's regulations, the occurrence of a bypass does not amount to permit noncompliance on its face.[74] However, bypasses are only permitted when they are "unanticipated, unavoidable, and necessary to prevent loss of life, personal injury or severe property damage" or if the party receives written permission from the Commissioner.[75] When a bypass occurs, the permittee has an affirmative duty to minimize, to the extent possible, or halt the amount of discharge.[76] Additionally, Connecticut does not mention how bypass upsets may affect groundwater and subsequent indirect discharges into surface waters. However, under the state's regulations, a permittee experiencing a bypass is required to monitor and record the "quality and quantity of the discharge in accordance with its permits terms and conditions."[77]

[73] Regs., Conn. State Agencies, *supra* note 16 at (1).
[74] Conn. Agencies Regs. § 22A-430-3 (e) (1).
[75] *Id*. at (k)
[76] *Id*.
[77] *Id*.

This required monitoring and recording post *Maui* will likely extend to the possibility of indirect discharges into surface waters via groundwater.

Scenario 2) Stormwater Management

Currently, Connecticut does not regulate or require additional permits for indirect discharges to surface water as a result of storm management infrastructure or Green Infrastructure. However, Connecticut's Zone of Influence scheme sets out allowance areas for groundwater to be deteriorated by domestic sewage, agricultural waste and storm water discharges.[78] And, as stated above, the Commissioner may consider the potential for the migration of deteriorated groundwater outside the zone of influence when reviewing a permit under § 22a-430.[79]

Scenario 3) Drinking Water

Pursuant to § 22a-430b, Connecticut provides a General Permit for the Discharge of Groundwater Remediation Wastewater.[80] Under this state General Permit, "Groundwater remediation wastewater" means "wastewater generated in connection with investigating pollution or remediating polluted groundwater, sediment or soil."[81] The eligible activities that may operate under this general permit include discharge of well rehabilitation wastewaters and groundwater remediation recirculating system.[82] The general permit defines groundwater remediation recirculating system as "a system designed to recover groundwater, treat it to an appropriate standard and inject it back to groundwater through a designed infiltration system."[83]

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[78] *Id*. at (j)(3).
[79] Conn. Agencies Regs., *supra* note 21.
[80] General Permit for the Discharge of Groundwater Remediation Wastewater, CONN. DEP'T OF ENERGY & ENVTL. PROT., BUREAU OF MATERIALS MGMT. AND COMPLIANCE ASSURANCE, WATER PERMITTING AND ENF'T DIV., DEEP-WPED-027, (Feb. 21, 2018) https://portal.ct.gov/-/media/DEEP/Permits_and_Licenses/Water_Discharge_General_Permits/gwremedgppdf.pdf.
[81] *Id*. at 2.
[82] *Id*. at 6.
[83] *Id*.

Additionally, Connecticut focuses on educating the public in regular groundwater monitoring to prevent accidental contamination from surrounding groundwater to aquifers and drinking water reserves.[84]

III. Florida

a. Statutory Regulation

In Florida, it is illegal to "cause pollution, except as otherwise provided in this chapter, so as to harm or injure human health or welfare, animal, plant, or aquatic life or property."[85] Further, it is prohibited to "fail to obtain any permit required by this chapter or by rule or regulation."[86] Without written authorization of the Department of Environmental Protection, it is illegal for any individual to "discharge any waste into the waters of the state" that would lower the quality of the water in question.[87] Florida further protects groundwater from unpermitted discharges by prohibiting installations from "directly or indirectly discharg[ing] into groundwater any contaminant that causes a violation of the water quality standards or minimum criteria in the receiving groundwater."[88] The Florida Department of Environmental Protection, in determining the terms of a state-issued discharge permit, takes into consideration groundwater discharge.[89] Further, the FDEP does not require separate permits for groundwater discharge.[90]

In relation to federal regulation under the Clean Water Act, Florida should be considered a "more than stringent" state in accordance with the criteria outlined above. Groundwater is explicitly mentioned in the statute that defines "waters" that are regulated. This means that

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[84] CONN. DEP'T OF ENERGY & ENVTL. PROT., What We Can All Do To Reduce Groundwater Pollution, last accessed 2/28/2021, https://portal.ct.gov/DEEP/Aquifer-Protection-and-Groundwater/Ground-Water/Understanding-Ground-Water/What-we-can-all-do-to-reduce-groundwater-pollution.
[85] FLA. STAT. ANN. § 403.161(1) (2020).
[86] *Id.*
[87] FLA. STAT. ANN. §403.088(1) (2020).
[88] F.A.C.§ 62-520.310(7).
[89] F.A.C.§ 62-520.310(12).
[90] *Id.*

Florida's regulations are more stringent than the CWA because it includes a more expansive definition of "waters."

b. Caselaw

On the state level on Florida, there has not been a case yet that deals directly with groundwater being treated as a point source of discharge. However, dischargers have been held liable for discharge into groundwater that seep into the property of other owners. In *Easton v. Aramark Uniform and Career Apparel, Inc.*, the Florida District Court of Appeals held that Florida law provides for strict liability for property owners who discharge pollutants onto their own property if the pollutants travel via groundwater to an adjacent property owner's property.[91] While this case is an example of public nuisance law and does not deal with NPDES permits or the state equivalent, this case does provide insight into how Florida state courts have interpreted facts involving pollution through groundwater and holding parties responsible for it.

This case arose when Easton, the plaintiff and appellant, sought injunctive relief and damages against Aramark Uniform and Career, the defendant and appellee who owned land adjacent to Easton's commercial property.[92] At the trial level, it was undisputed that Easton's land was damaged solely by chemical solvents that were discharged on the defendant's land that were allowed to seep onto Easton's land via the groundwater on the defendant's land.[93] It was also undisputed that the damage caused by the defendant's pollutants would continue to contaminate the plaintiff's land for years to come.[94] However, the trial court found that since there was no proof that the defendant caused pollution on its land that migrated to the plaintiff's

[91] *Easton v. Aramark Uniform and Career*, 825 So. 2d 996, 997 (Fla. Dist. Ct. App., 2002).
[92] *Id.*
[93] *Id.*
[94] *Id.*

land, the defendant was not liable, regardless of the drop in value of the plaintiff's land.[95] Easton appealed the trial court's decision.[96]

On appeal, the court considered whether Florida law creates a strict liability cause of action for adjacent landowners seeking remedy for pollution caused by their neighbor.[97] The statute in question holds that the party bringing suit for damages caused by the discharge of pollutants can bring suit for all damages caused by the discharge.[98] Further, any potential plaintiff need not plead or prove negligence—all that needs to be shown is that the discharge occurred.[99] Since the statute also references "defenses to such cause of action" in a subsection, the court determined that the legislature created a cause of action through the statute.[100] Thus, Easton only needed to prove that Aramark and their predecessors polluted their property and that the pollution travelled through groundwater to damage his property. The appellate court remanded the case and instructed the trial court to apply Florida statute §376.313 as a strict liability statute.[101]

While this case does not deal with NPDES permits, this case does show that strict liability applies to dischargers whose pollutants travel through groundwater. Groundwater in this case was the conduit through which the defendant's pollutants damaged the plaintiff's land. The plaintiff only had to show that the pollutants had migrated from the defendant's property through groundwater in order to establish liability. While this case dealt with different issues, the parallels between this case and a case like *Maui* exist. Further, while it may be difficult to predict the impact the Supreme Court's decision in *Maui* will have on Florida law based off the

[95] *Id.*
[96] *Id.*
[97] *Id.*
[98] *Id.* at 997 (quoting FLA. STAT. §376.313).
[99] *Id.* (quoting FLA. STAT. §C).
[100] *Id.* at 999.
[101] *Id.*

caselaw, it can be said at the least that Florida's caselaw is not inherently incongruous with *Maui*.

c. Appendix A Scenarios

Scenario 1) Municipal Wastewater Management

Part of Florida's legislative initiative to protect the state's natural aquatic resources includes the Florida Springs and Aquifer Protection Act. Section 807 of this Act outlines the responsibilities of municipalities in protecting outlying Florida springs from non-point source pollution stemming from sewage systems.[102] This section also represents the only legislative regulation of groundwater as a point source of discharge.[103] While groundwater is not explicitly mentioned as a point source of discharge, municipalities in this section are required to mitigate, prevent, account for, and pass legislation to prevent pollution via groundwater.[104] This makes groundwater a *de facto* point source of discharge for purposes of Section 807.

Section 807 holds that the state government along with municipalities must create "basin management action plan" for "Outstanding Florida Springs" that include identifying all wastewater treatment facilities that contribute to discharging pollutants into a natural spring.[105] Further, municipalities must work with the state government in developing pollution reduction measures, programs for modifying onsite sewage treatment plants if necessary, and ordinances that are aimed at keeping sewage treatment up to date.[106]

While Section 807 does not explicitly list groundwater as a point source, municipalities are required to treat any source of groundwater as a potential source of pollution from sewage

[102] FLA. STAT. ANN. §373.807 (West 2016).
[103] *Id.*
[104] FLA. STAT. ANN. §373.807(d)(3) (West 2016).
[105] *Id.*
[106] *Id.*

treatment sites under this Florida law. The law requires municipalities to take into consideration groundwater when designing and permitting sewer treatment sites, and requires municipalities to adopt ordinances that are partly meant to mitigate pollution via groundwater. While this particular law does not mention NDPES permits, it does demonstrate that Florida has some statutory jurisprudence that requires municipalities to treat groundwater as a point source of discharge in some capacity. The Supreme Court's decision in *Maui* will probably not affect these laws.

Scenario 2) Stormwater Management: Green Infrastructure (GI)

Section 4131 of Florida state law regulates stormwater management.[107] In general, the statute grants broad powers to the Department of Environmental Protection to issue permits for stormwater systems and to inspect those systems in order to ensure compliance.[108] The statute also maintains that as long as any given stormwater system operates within the boundaries set by its permits or by statutory exemptions, the "stormwater discharged from the system is presumed not to cause or contribute to violations of applicable state water quality standards."[109] Thus, determining whether or not a particular discharge from a stormwater system is considered a violation of state water quality standards depends on the wording of the particular permit. If the permit protects the "waters of the state" from unpermitted discharge, that would include groundwater, as groundwater is statutorily included in Florida's definition of "waters of the state."[110] However, there is no blanket provision that labels stormwater discharge as inherently illicit.

[107] FLA. STAT. ANN. §373.4131 (1).
[108] FLA. STAT. ANN. §373.4131 (d)(3)(c).
[109] *Id.*
[110] F.A.C.§ 62-520.310(7).

Scenario 3) Drinking Water: Water Reuse

In Florida, the Florida Safe Drinking Water Act regulates drinking water quality standards in the state.[111] Section 853 of the Act outlines the regulations and rules the Department of Health should adopt and promulgate in regards to regulating Florida's drinking water quality.[112] The statute distinguishes between "state primary" drinking water regulations and "state secondary" drinking water regulations while also differentiating between the types of drinking water systems the regulations govern.[113] For state primary drinking water regulations, the Department of Health is required to adopt regulations that are no less stringent than federal primary drinking water regulations. For state primary and secondary regulations that deal with "nontransient noncommunity" water systems and transient noncommunity water systems, the regulations should be no more stringent than prevailing federal primary regulations.[114]

The statute clearly ties the regulation of pollutants in drinking water to the prevailing federal regulation of drinking water. Therefore, the effect *Maui* will have on federal drinking water regulations will reverberate through to the state level in Florida.

IV. Illinois

a. Statutory Regulation

Illinois is in Category 2 because it explicitly regulates discharges to groundwater regardless of a hydrological connection to navigable waters.[115] Illinois has been granted partial authorization to run its own NPDES program, and has separately enacted the Illinois Groundwater Protection Act (IGPA).[116] The goal of the IGPA is to "restore, protect, and enhance

[111] FLA. STAT. ANN. §403.850.
[112] *Id.*
[113] FLA. STAT. ANN. §403.853(1)(a).
[114] FLA. STAT. ANN. §403.853(2)(b).
[115] 415 ILL. COMP. STAT. ANN. 55/5 (LexisNexis 2020).
[116] 55/1.

the groundwaters of the State, as a natural and public resource" and to ensure "that the groundwater resources of the State be utilized for beneficial and legitimate purposes; that waste and degradation of the resources be prevented; and that the underground water resource be managed to allow for maximum benefit of the people of the State of Illinois."[117] Under the IGPA, there is an established Groundwater Advisory Council (GAC) consisting of nine members appointed by the Governor, the job of which is to: (1) tend to existing legislation and recommend new regulations, (2) generally protect the groundwater of the State and evaluating the State's efforts in doing so, (3) make recommendations relating to groundwater research needs and (4) review groundwater data collection and analyses.[118]

Illinois also established the Interagency Coordinating Committee on Groundwater chaired by the Illinois EPA (IEPA).[119] It communicates with the Groundwater Advisory Council and considers the GAC's findings and recommendations. Its main duties are to propose regulatory agendas and reports that systematically consider the groundwater protection aspects of federal and state laws and identify any gaps for improvement. Each report must specify the nature of the provisions being implemented and evaluate the results achieved. [120] A statewide groundwater monitoring network uses testing wells to assess the contamination levels in the groundwater of the State and detects any future degradation of groundwater resources. [121]

The IEPA has a comprehensive permit system that ensures that all federal and state environmental standards are being achieved. While the legislation states that the IEPA issues NPDES permits for the discharge of contaminants from point sources to navigable waters as

[117] *Id.*
[118] 415 ILL. COMP. STAT. ANN. 55/5 (LexisNexis 2020).
[119] 55/4.
[120] *Id.*
[121] 5/13.1.

defined by federal law, it goes on to state that the IEPA "may include…effluent limitations and other requirements under [the] Act, [as well as] Board regulations…." [122] This means that the IEPA may include additional limits in NPDES permits for point source discharges that federal law does not include. The Pollution Control Board (PCB), created under the IEPA, sets Ground Water Quality Standards (GWQS) that classify groundwater into four different classes. Class I is for potable resource groundwater (fit for human consumption); Class II is for general resource groundwater (fit for agricultural, industrial, and recreational use); Class III is for special resource groundwater (a unique and irreplaceable source of groundwater, requiring more stringent water quality standards); and Class IV is for other groundwater (such as groundwater underlying a coal mine refuse disposal area).[123] For each classification, the PCB sets distinct water quality standards.[124] This means that in Illinois, it is possible to be sued by the State or its citizens for groundwater discharge regardless of whether or not it is hydrologically connected to navigable waters if an action violates the GWQS. Attaining a permit to allow for groundwater discharge may require analyses of certain tests and recommendations from the GAC and/or the ICCG. This makes Illinois regulations on groundwater discharge more stringent than the CWA because its separate groundwater laws already require more stringent standards to be met than the NPDES program would alone. In light of *Maui*, the PCB has the power of discretion to fill in a lot of the gaps the decision leaves undefined. Even where NPDES won't apply under Maui, discharges into groundwater will be regulated under all of the NPDES as well as any relevant laws the state has implemented.

[122] 5/39.
[123] 35 ILL. CODE R. 620.201 (LexisNexis 2020).
[124] 620.401.

b. Caselaw

While there is not any Illinois caselaw directly dealing with the issue of groundwater hydrologically connected to navigable waters, there are a handful of cases that deal with groundwater issues generally. The cases further emphasize the fact that discharge into groundwater necessitates a permit regardless of any hydrological connection to navigable waters, and that the IEPA and the PCB have almost complete discretion in determining what constitutes a violation of their statutes. It is not stated whether they factor in possible hydrological connections to navigable waters when making determinations, but if they have not already, they will have to do so following *Maui* decision.

Tri-County Landfill Co. v. Illinois Pollution Control Bd., a case decided years before the IGPA was enacted, established that the PCB may revoke the issuance of a permit at any point it decides that an operation poses an environmental hazard to water supplies. Here, the evidence showed that some groundwater and an aquifer were polluted in violation of the CWA, and that there was a risk that the town's drinking water could be polluted in the future.[125] Petitioners attempted to estop the PCB from asserting that the petitioners violated the CWA because the IEPA's "predecessors" pre-approved the landfill sites. [126] The PCB rebutted that, although petitioners complied with federal laws in good faith, as well as some state laws, the initial permit issued to petitioners provided that they must still comply with additional state and local laws.[127] The court decided that "to allow estoppel here would be to permit the people of Illinois to be denied their constitutional right to a healthful environment because of the actions of certain State officials."[128] Moreover, the court decided that there does not have to be a present or ongoing

[125] *Tri-County Landfill Co. v. Ill. Pollution Control Bd.*, 41 Ill. App. 3d 249, 252 (1976)
[126] *Id.* at 254
[127] *Id.*
[128] *Id.* at 255

hazard to merit the PCB's decision to revoke a permit, there only needs to be a risk.[129] This case suggests the stringency of the IEPA and its protection of groundwater, even before the IGPA was established. It also illustrates the PCB's strength in executing the state's laws and statutes. This case is used in later cases to preclude parties from evoking estoppel against the PCB's orders.

Other cases show how discharges into groundwater are treated with serious concern regardless of their hydrological connections to navigable waters. In *Environmental Site Developers, Inc. v. White & Brewer Trucking Inc.,* the court authorizes the PCB's order for respondents to cease and desist from violations for groundwater not hydrologically connected to navigable waters.[130] In *People of the State of Illinois v. Heritage Coal Co.*, a violation to Class I Groundwater was met with rigid scrutiny, and established that that the PCB can demand that private entities are ongoingly monitoring their groundwater discharge to ensure the maximum amount of pollutants is not exceeded.[131]

c. Appendix A Scenarios

Scenario 1) Municipal Wastewater Management

Illinois' Environmental Safety statutes include the Wastewater Land Treatment Site Regulation Act (WLTSRA) which defines wastewater sites as sewer systems and any other construction system component such as lagoons.[132] Any individual or entity that wishes to apply for a wastewater land treatment site must submit a program proposal to the steering committee appointed under the WLTRSA, in addition to applying for an NPDES permit which only covers surface water discharges into WOTUS.[133] Although the statute does not reference underground

[129] *Id.* at 257
[130] 1997 Ill. ENV LEXIS 649 (Ill. Pollution Cont. Bd. November 20, 1997)
[131] 2012 Ill. ENV LEXIS 285 (Ill. Pollution Cont. Bd. September 6, 2012)
[132] 415 ILL. COMP. STAT. ANN. 50/2.04 (LexisNexis 2020).
[133] 50/3.01.

injection wells, the *Maui* case could cause the legislature to revisit the WLTSRA to consider the inclusion of information on underground injection wells in the future.

Scenario 2) Stormwater Management: Green Infrastructure (GI)

In Illinois, stormwater management is delegated to individual counties, which is headed by each county board's management planning committee.[134] The planning committees generally have discretion on how stringent their stormwater management plans will be, but they still must abide by the IEPA. This means that if their stormwater management plan affects groundwater in any way, they would need to monitor it and provide reports to the IEPA in light of GWQS that detail the activities taking place and the probable effects on groundwater on said site.

Scenario 3) Drinking Water: Water Reuse

Illinois statutes and caselaw illustrate how discharge into groundwater is always met with high levels of scrutiny, especially when it comes to Class I Groundwater, which constitutes drinking water. *People v. Heritage* exemplifies how groundwater used for drinking water is examined with serious scrutiny.[135] The statutes also explain how Class 3 groundwater, connected to "especially unique" waters are subject to the highest level of scrutiny. While the other classes also have strict requirements, the stakes for them are not as high as they are for Classes 1 and 3. However, it is safe to assume that in Illinois, any kind of groundwater discharge will necessitate a permit, with variance on requirements and conditions depending on where the groundwater leads and what it is used for.

[134] 55 ILL. COMP. STAT. ANN. 5/5-1062 (LexisNexis 2020).
[135] *Id.*

V. Indiana

a. Statutory Regulation

Indiana falls under Category 2 of this analysis because it regulates groundwater regardless of whether the State's definition of 'waters' includes groundwater under the Groundwater Quality Clearinghouse program (GQC).[136] The program is operated by the Indiana Department of Environmental Management (IDEM).[137] The IDEM enforces the general statute for water quality control through administrative compliance orders and civil actions seeking injunctive relief.[138] It also cooperates with federal government agencies to ensure that the State is in compliance with federal regulations.[139]

The general statute regulating water quality control states that "[A] person may not: (1) throw, run drain or otherwise dispose; or (2) cause, permit, or suffer to be thrown, run, drained, allowed to seep, or otherwise disposed into any of the streams or waters of Indiana any organic or inorganic matter that causes of contributes to a polluted condition of any of the streams or waters of Indiana…."[140] For the purposes of pollution control laws 'waters' "means: (1) the accumulations of water, surface and underground, natural and artificial, public and private; or (2) a part of the accumulations of water that are wholly or partially within, flow through, or border upon Indiana."[141] Although the statute does not explicitly mention groundwater, it also does not mention any specific body of water such as rivers, ponds, lakes, etc. It is clear from the broad description of waters in the statute that the Indiana state legislature intended for essentially any

[136] IND. CODE ANN. §13-18-17-3 (LexisNexis 2020).
[137] *Id.*
[138] §§ 13-18-4-6, § 13-14-2-6, 13-14-2-7, 13-30-4-1.
[139] § 13-18-2-1
[140] § 13-18-4-5
[141] § 13-11-2-265.

kind of water to fall under the statute. Groundwater falls under the description of accumulations of water that are wholly or partially below the surface of Indiana.

The GQC's duties are: (1) to receive complaints about groundwater contamination; (2) screen reports of groundwater pollution; (3) ensure that complaints and reports are adequately investigated; (4) provide information to the public about groundwater; and (5) coordinate the management of groundwater quality data in Indiana.[142] The board under the IDEM adopts rules to establish groundwater quality with numeric and narrative data, a water classification plan and a method for determining where the quality standards must apply.[143] The discharge of potable groundwater is completely banned under this statute.[144] These laws show that Indiana has more stringent regulations than the federal government because it monitors and regulates groundwater closely regardless of its hydrological connection to navigable waters.

b. Caselaw

While there are not any cases that are specifically based on groundwater with hydrological connections to navigable waters, there cases in a variety of subject areas that have to do with groundwater contamination violations. The Maui decision will not make much of a difference in Indiana courts, since groundwater contamination is already treated with high levels of scrutiny under Indiana's groundwater protection statutes. Many of cases center around companies attempting to get insurance companies to cover groundwater contamination penalty costs (amongst costs for other types of contamination), or suing other private and public entities for clean-up costs. Based on the large amount of cases that involve avoiding liability for penalty

[142] IND. CODE ANN. § 13-18-17-5 (LexisNexis 2020).
[143] *Id.*
[144] *Id.*

costs, it can be presumed that environmental law violations in Indiana are not rare, and the penalties are rather steep.[145]

In *PSI Energy, Inc. v. Home Ins.*, PSI Energy incurred substantial clean-up costs due to general environmental contamination, including groundwater contamination, at its former manufactured gas plant (MGP) sites.[146] They sued their insurance companies to cover the clean-up costs.[147] The contamination at issue was investigated during the 80's and 90's by the State, and this case was heard in 2004.[148] Although the case does not explicitly mention the exact amount of money PSI Energy owed, the fact that they sought coverage a decade later may indicate an inability to make a substantial contribution to the penalty fees.

In *Head v. Comm'r, Ind. Dep't of Envtl. Mgmt.*, the court managed to include the sum of Head's penalty fees in writing. Head was fined $60 million for operating an "automobile fluff" business that violated permit laws and threatened the health of groundwater in the area.[149] [150] Notably, the court held Head in contempt for failing to comply with a previous order to secure the site, contain automobile fluff, procure a site assessment, dispose of the fluff, reduce contamination and to pay the penalty previously assigned.[151] While the court acknowledged that the sum was impractical, Head did not make any efforts to make payments, and did not take any

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[145] *See Shell Oil Co. v. Meyer*, 705 N.E.2d 962 (Ind. 1998) (where two oil companies denied being responsible for multiple acts of contamination including groundwater and the court ruled they were both responsible); *State Auto. Ins. Co. v. DMY Realty Co., LLP*, 977 N.E.2d 411 (Ind. Ct. App. 2012) (court granted summary judgement to the insured in its action for coverage for site investigation and cleanup after groundwater contamination because the insurance policy was ambiguous on the subject); *5200 Keystone Ltd. Realty, LLC v. Neth. Ins. Comp.*, 29 N.E.3d 156 (Ind. Ct. App. 2015) (court barred insured's claim against insurers for groundwater contamination penalties because the insurer knew of the contamination before finalizing the insurance policy and actively renounced liability); *Schuchman/Samberg Invs., Inc. v. Hoosier Penn Oil Co.*, 58 N.E.3d 241 (Ind. Ct. App. 2016) (where a property owner's attempt to recover groundwater violation costs from a previous owner was barred due to a six-year statute of limitations for such claims).
[146] *PSI Energy, Inc. v. Home Ins. Co.*, 801 N.E.2d 705, 711 (Ind. Ct. App. 2004)
[147] *Id.* at 710
[148] *Id.* at 711
[149] *Head v. Comm'r, Ind. Dep't of Envtl. Mgmt.*, 626 N.E.2d 518, 521 (Ind. Ct. App. 1993)
[150] *Id.* at 526
[151] *Id.*

other steps to remediate the violation, therefore the court did not reduce the penalty amount in this proceeding.[152] This case was not decided recently but it exemplifies the great cost resulting from contaminating water in Indiana and how strict the Indiana courts are when it comes to enforcing the most severe penalties.

c. Appendix A Scenarios

Scenario 1) Municipal Wastewater Management

Indiana regulates wastewater under Chapter 12 of its Water Pollution Control laws.[153] Under Chapter 12's Wastewater Management statute there is a provision that specifically prohibits point source discharge of sewage, treated or untreated, into waters without a special permit.[154] This statute, however, only applies to Allen County because of its dense population. [155] This does not mean that a permit is not needed when sewage leaks into groundwater generally, rather that counties with large populations need to take extra precautionary steps under the Chapter 12. A permit is not required under Chapter 12 only when an individual is engaged in servicing or maintaining publicly owned wastewater treatment facilities, or when they are transporting wastewater from publicly owned wastewater treatment facilities as long as the wastewater has been fully treated and in stabilized.[156] In these scenarios, individuals will still need to have permits under the GQC to discharge into groundwater, but not under Chapter 12.

Scenario 2) Stormwater Management: Green Infrastructure (GI)

Indiana leaves storm-water management and green infrastructure regulation to its municipalities. However, under the general statute regulating water quality control, the IDEM

[152] *Id.*
[153] IND. CODE ANN. § 13-18-12-1 (LexisNexis 2020).
[154] § 13-18-12-9
[155] *Id.*
[156] § 13-18-12-7

exempts situations in which fertilizer material contained in runoff from a storm event enters waters from much scrutiny.[157] It is unclear whether this means no permit is necessary under such situation. Generally, a permit is usually needed under the GQC.

Scenario 3) Drinking Water: Water Reuse

Indiana has special provisions under the GQC for groundwater contamination affecting private water supply wells and establishes protection zones around community water system wells.[158] [159] There are extra steps that need to be taken when dealing with contamination of potable groundwater, especially those located in protection zones, in order to comply with the GQC. However, these rules may not restrict the activity by a landowner, mineral owner, or mineral leaseholder of record unless the owner or leasehold is sent written notice of such restrictions and has an opportunity to be heard.[160]

VI. Iowa

a. Statutory Regulation

Iowa's CWA provisions explicitly state that a pollutant shall not be disposed of by dumping, depositing, or discharging such pollutant into any water of the state (defined to include groundwater), except that this section shall not be construed to prohibit the discharge of adequately treated sewage, industrial waste, or other waste in accordance with rules adopted by the commission.[161] "Iowa's "waters of the state" have a broader definition than the federal CWA's "waters of the US." Waters of the state include:

> any stream, lake, pond, marsh, watercourse, waterway, well, spring, reservoir, aquifer, irrigation system, drainage system, and any other body or accumulation

[157] IND. CODE ANN. § 13-18-4-5 (LexisNexis 2020).
[158] § 13-18-17-4
[159] § 13-18-17-6
[160] *Id.*
[161] IOWA CODE ANN. § 455B.186.

> of water, surface or underground, natural or artificial, public or private, which are contained within, flow through or border upon the state or any portion thereof.[162]

Iowa's legislature expanded the reach of the CWA in Iowa by explicitly regulating groundwater in Iowa's Groundwater Protection Act (GPA), which supplements Iowa's water quality laws to further promote its goal of "prevent[ing] contamination of groundwater from point and nonpoint source to the maximum extent practical."[163] The GPA has various enforcement tools. The Iowa Department of Natural Resources (department) may investigate and evaluate instances of groundwater contamination.[164] The department's enforcement mechanisms include cease and desist orders, civil penalties up to $5,000 per day for each violation, a range of criminal penalties, and temporary and permanent injunctions.[165]

b. Caselaw

Iowa's state CWA regulations have not been widely adjudicated in the state's courts. This is likely due to the fact that the state explicitly treats groundwater as a water of the state and therefore seeks to regulate it separately. In *Board of Water Works Trustees of the City of Des Moines, Iowa v. SAC County Board Supervisors*, the court upheld the legislature's groundwater regulations stating that, pursuant to Iowa's water preservation statutes,[166] farmers who directly comply with fertilizer label instruction, are exempt and immunized from liability for nitrate contamination, including for money damage and cleanup costs.[167] Ultimately, this holding

[162] IOWA CODE ANN. § 455E.4.
[163] IOWA CODE ANN. § 455E.5(1).
[164] IOWA CODE ANN. §§ 455E.8 & 455E.2(5) (defines department).
[165] IOWA CODE ANN. § 455E.8 (6) permits the director of the department to "take any action authorized by law, including the investigatory and enforcement actions authorized by chapter 4555B and 459."
[166] IOWA CODE ANN. § 468.126.
[167] *Board of Water Works Trustees of the City of Des Moines, Iowa v. SAC County Board Supervisors*, 890 N.W.2d 50, 62 (Iowa, 2017) stating "No provision in chapter 468 authorizes drainage districts to mandate changes in farming practices to reduce fertilizer runoff or to assess farmers for the cost of removing nitrates from waters flowing through agricultural drainage systems."

suggests that the courts of Iowa are willing to leave the policymaking up to the legislature, which has clearly chosen to regulate groundwater in their state.

c. Appendix A Scenarios

Scenario 1) Municipal Wastewater Management

Iowa's Environmental Protection Commission has promulgated rules for bypasses and sewage overflow upsets.[168] However, the rules do not reference how upsets could affect groundwater but do provide prohibitions on bypasses from any *portion* of a treatment facility or sanitary sewer collection system.[169] That said, owners or operators of these systems may request approval of anticipated bypasses with written permission from the Director of the Commission, but not where the bypasses occur as a result of mechanical failure or acts beyond control of the owner or operator.[170] Those unanticipated bypasses must be orally reported within 24 hours and the public may be notified under the discretion of the Commission and the Department of Natural Resources; a written report must also be submitted containing specific information outlined in the regulations, including the name of any body of surface water that was affected by the bypass.[171] Municipalities or those who otherwise provide these reports would be wise to consider *Maui*'s determination that groundwater is hydrologically connected to surface water when determining which surface waters have been affected by a bypass.

Lastly, the owner or operator of the treatment plant or collection system must perform additional monitoring and analysis of the bypass as requested by the regional field office that received the report.[172] The goal is to minimize the effect of a bypass on the receiving water of

[168] IOWA ADMIN. CODE r. 567-63.6 (2020).
[169] 567-63.6(1).
[170] 567-63.6(2).
[171] 567-63.6(3).
[172] 567-63.6(4).

the state.[173] Note that an upset is an exceptional incident that was unintentional and constitutes an affirmative defense to the assessment of civil penalties.[174]

Scenario 2) Stormwater Management: Green Infrastructure (GI)

The stormwater management program in Iowa closely resembles and adopts many of the regulations in the CWA.[175] Stormwater discharges from small MS4s, however, are regulated by the state.[176] Small MS4s are those that are located in urbanized areas and those that (1) serve 10,000 people or more located outside urbanized areas and (2) where the average population density is 1,000 people per square mile or more.[177] MS4 applications must demonstrate how the applicant will develop, implement, and enforce a stormwater management program designed to reduce the discharge of pollutants from the MS4 to the maximum extent practicable, to protect water quality and to satisfy CWA requirements.[178]

Scenario 3) Drinking Water: Water Reuse

Iowa regulates what is known as their Aquifer storage and recovery ("ASR") program, which consists of injecting and storing treated water in an aquifer through a permitted well.[179] A permit is required for all potable uses.[180] The application for permit must include points of injection and withdrawal; the immediate vicinity of the receiving aquifer; production, test, or observation wells within the aquifer; and the area of water storage.[181] Compared to other states, the requirement of providing an immediate vicinity of the aquifer is somewhat vague. The

[173] 567-63.6(4)(a).
[174] 567-63.6(6)(a).
[175] IOWA ADMIN CODE r. 567-64.13(1) (2020).
[176] *See* 567-64.13(2).
[177] 567-64.13(2)(b). A waiver may be granted by the Department of Natural Resources in Iowa.
[178] 567-64.13(2)(g).
[179] 567-55.4.
[180] 567-55.5(1)(a).
[181] 567-55.5(1)(a)(1)-(4).

immediate vicinity may not be sufficient for *Maui* standards if the hydrological connection to a surface water can reach over a mile long.

VII. Kentucky

a. Statutory Regulation

Although Kentucky law's prohibition against discharging pollutants into state waters is broader than that under federal law, Kentucky permits and enforcement are in fact limited to the permit terms and enforceable requirements that derive from federal law.

1) Scope of Regulation & Definition of "Waters"

Chapter 224 of the Kentucky Revised Statutes (KRS) contains a general prohibition against "directly or indirectly, throw[ing], drain[ing], run[ning] or otherwise discharg[ing] into any of the *waters of the Commonwealth*, or caus[ing], permit[ting] or suffer[ing] to be thrown, drained, run or otherwise discharged into such waters any pollutant, or any substance that shall cause or contribute to the pollution of the *waters of the Commonwealth*" in violation of any relevant statutory or regulatory requirements.[182] "Waters of the Commonwealth" is defined as "any and all rivers, streams, creeks, lakes, ponds, impounding reservoirs, springs, wells, marshes, and *all other bodies of surface or underground water*, natural or artificial, situated wholly or partly within or bordering upon the Commonwealth or within its jurisdiction."[183] Because the definition includes "underground water," it is more expansive than the federal regulatory definition of "waters of the United States," which categorically excludes groundwater.[184] Therefore, Kentucky law is more stringent than federal law.

[182] KY. REV. STAT. ANN. § 224.70-110 (LexisNexis 2020) (emphasis added).
[183] *Id.* § 224.1-010(32) (emphasis added).
[184] 40 C.F.R. § 120.2 (2020).

Notably, Chapter 224 of the KRS prohibits "directly or indirectly" discharging into "waters of the Commonwealth" without authorization.[185] The explicit inclusion of indirect discharges differs from the CWA, which merely provides a general prohibition of "any addition of any pollutant to navigable waters from any point source."[186] The KRS statutory language may be interpreted as covering any discharge through groundwater to jurisdictional surface waters (a type of indirect discharge to surface waters), representing a broader category of groundwater discharges than is covered under *County of Maui*'s "functional equivalent" test.

However, as discussed below, the KRS's regulatory scope is limited by other language in the statute that constrains the stringency of the state's permitting program.

2) Permitting

EPA has delegated authority to the Kentucky Energy and Environment Cabinet ("the Cabinet") to administer a NPDES permitting program in Kentucky[187] in accordance with Chapter 224 of the KRS and Chapter 5 of Title 401 of the Kentucky Administrative Regulations (KAR). Under the KAR, a Kentucky Pollutant Discharge Elimination System (KPDES) permit is "required to discharge pollutants from a point source into waters of the Commonwealth."[188]

However, the KRS provides that any KDPES permit "shall not impose . . . any effluent limitation, monitoring requirement, or other condition which is more stringent than the effluent limitation, monitoring requirement, or other condition which would have been applicable under federal regulation."[189] Additionally, the KAR excludes from the KPDES permitting requirements any "discharge that is not regulated by the U.S. EPA under the Clean Water Act Section 402."[190]

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[185] KY. REV. STAT. ANN. § 224.70-110.
[186] 33 U.S.C. § 1311(a), 1362(12) (2018).
[187] *See Kentucky NPDES Permits*, U.S. EPA, https://www.epa.gov/npdes-permits/kentucky-npdes-permits; *see also* KY. REV. STAT. ANN. § 224.16-050(1).
[188] 401 KY. ADMIN. REGS. 5:055 (Section 2)(1) (2021).
[189] KY. REV. STAT. ANN. § 224.16-050(4).
[190] 401 KY. ADMIN. REGS. 5:055 (Section 4)(4).

In *Commonwealth v. Sharp*,[191] the Kentucky Court of Appeals cited both of these provisions to support its conclusion that "the KPDES program is, in fact, expressly constrained by the federal NPDES permit program and, thus, cannot be implemented in a manner that is more stringent than federal law."[192] For this reason, the court held that the federal regulatory definition, not the state law definition, of a Concentrated Animal Feeding Operation controlled.[193]

Thus, although the waters covered under the KPDES permitting program are defined more broadly than at the federal level, KPDES permitting requirements are functionally no more stringent than NPDES permitting requirements. As such, the KPDES permitting program does not appear to apply to discharges into groundwater that would not be covered under EPA regulation pursuant to *County of Maui*. Application of *County of Maui* to the KPDES permitting scheme would not require any regulatory changes beyond EPA oversight of KPDES permitting for discharges that satisfy the "functional equivalent" test.

3) Exemptions

In addition to the exclusion for discharges not regulated under the CWA discussed above, the KAR provides other exclusions from the requirement to obtain a KPDES permit, including one for Underground Injection Control (UIC) wells that are permitted under federal UIC program regulations "if those permits are protective of public health and welfare and prevent the pollution of ground and surface waters."[194]

[191] *Commonwealth of Ky., Energy & Env't Cabinet v. Sharp*, No. 2009-CA-002283-MR, 2012 Ky. App. LEXIS 189 (Ky. Ct. App. May 25, 2012).
[192] *Id.* at *37.
[193] *Id.* at *39.
[194] 401 KY. ADMIN. REGS. 5:005 (Section 4)(1)–(3).

b. Caselaw

Kentucky caselaw does not address the specific issue of whether the KRS's broad prohibition against direct and indirect discharges into "waters of the Commonwealth" applies to direct discharges into groundwater or to discharges that travel through groundwater before reaching regulated surface waters. The caselaw also does not address whether groundwater can ever be considered a point source for purposes of KPDES regulation. However, as discussed above, the Kentucky Court of Appeals concluded in *Commonwealth v. Sharp* that the KRS prohibits KPDES permitting requirements from being more stringent than NPDES permitting requirements.[195] Consequently, any "more stringent than" state regulation of groundwater discharges would need to exist outside of the KPDES permitting scheme.

While Kentucky does not set water quality criteria for groundwater or otherwise regulate groundwater discharges outside of the KPDES permitting program, it does provide regulations for the preparation and implementation of groundwater protection plans to prevent groundwater pollution.[196] Activities that trigger the requirement to develop and implement a groundwater protection plan include land treatment or land disposal of pollutants, operation of sewage disposal systems, operation of wells, and containment of pollutants in surface impoundments and lagoons, among others.[197] There is no caselaw on the enforcement of groundwater protection plans, so it is unclear whether or how *County of Maui* might affect these regulations.

[195] *Sharp*, 2012 Ky. App. LEXIS 189 at *9.
[196] 401 KY. ADMIN. REGS. 5:037.
[197] *Id.* 5:037 (Section 1)(1).

c. Appendix A Scenarios

Scenario 1) Municipal Wastewater Treatment Plants

As discussed above, the KAR excludes UIC wells that are permitted under a state or federal UIC program from KPDES permitting requirements, so long as those UIC permits protect public health and welfare and "prevent the pollution of ground and surface waters."[198] The Cabinet reserves the right to issue KPDES permits to control discharges of pollutants into wells "if necessary to protect the public health and welfare and to prevent the pollution of ground and surface waters."[199] However, after *County of Maui*, KPDES permits may now be required under the CWA for wells that send discharges into groundwater that ultimately reach jurisdictional surface waters.

Other types of discharges from Publicly Owned Treatment Works (POTWs), such as inadvertent groundwater discharges that eventually reach jurisdictional surface waters, may also now trigger a requirement to obtain a KPDES permit. Any applicable KPDES permitting requirements would be no more stringent than what would be required at the federal level.[200]

Scenario 2) Stormwater Management & Green infrastructure (GI)

A Stormwater Pollution Prevention Plan or Best Management Practices Plan is required for some KPDES permits[201] and may include control measures to prevent groundwater pollution. However, no separate permit is required under the KRS and KAR for groundwater discharges from municipal separate storm sewer systems (MS4s) and wastewater treatment plants (WWTPs) that convey stormwater.

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[198] *Id.* 5:055 (Section 4)(1)–(3).
[199] *Id.* 5:055 (Section 9)(2).
[200] KY. REV. STAT. ANN. § 224.16-050(4).
[201] *Wastewater Discharge Permits*, KY. ENERGY & ENV'T CABINET, https://eec.ky.gov/Environmental-Protection/Water/PermitCert/KPDES/Pages/default.aspx (last visited Mar. 4, 2021).

After *County of Maui*, discharges from MS4s and stormwater WWTPs to jurisdictional surface waters via groundwater may now be subject to KPDES permitting requirements under the CWA. State regulation of such discharges will not be significantly impacted because of the requirement, discussed above, that KPDES permitting requirements be no more stringent than what would be required at the federal level.[202]

Scenario 3) Drinking Water & Water Reuse

The KRS and KAR do not address water reuse. As discussed above, certain activities—including the operation of a well—may require the development and implementation of a groundwater protection plan.[203]

VIII. Maine

a. Statutory Regulation

Maine has very comprehensive water regulations because it has a diverse array of bodies of water meant for recreational activity, commerce, and providing habitats for important wildlife. It implements a water quality classification system where every body of water has a distinct classification under specific circumstances, and that classification determines what the water is used for and what quality standards need to be kept.[204] Maine has a general provision stating that no person may directly or indirectly discharge any pollutant without a permit from the state.[205] In not specifying what in particular is protected from discharge, the legislature intended to keep the provision broad enough to fit into any scenarios, and implicitly includes waters of the state. Waters of the State is defined as "any and all surface and subsurface waters that are contained within, flow through, or under or border upon [the] State or any portion of the State..." with the

[202] KY. REV. STAT. ANN. § 224.16-050(4).
[203] 401 KY. ADMIN. REGS. 5:037.
[204] ME. REV. STAT. tit. 38, § 464 (LexisNexis 2020).
[205] § 413.

exception of waters retained completely upon one person's property that does not connect to any other waters.[206] Maine is in Category 2 of our analysis because it requires permits for discharge and use of groundwater regardless of hydrological connection to navigable waters.

Maine implements a groundwater protection program for the purpose of coordinating and compounding various regulations from different agencies with the goal of protecting the health of the people of the state, because groundwater in Maine is often used as drinking water.[207] The program is ran by different departments, including the Maine Department of Environmental Protection (MDEP), and is authorized to conduct research that determines recharge and cleansing rates of groundwater[208] in order to determine groundwater quality in the states sand and gravel aquifers.[209] The program also allocates groundwater rights to its citizens, allowing individuals to withdraw groundwater for domestic activity with specific limitations subject to liability if the limitations are not adhered to.[210] Groundwater is classified under GW-A and GW-B. GW-A is the highest classification for groundwater and it is for groundwater used for public water supplies. It should "be free of radioactive matter or any matter that imparts color, turbidity, taste or odor which would impair usage of these waters, other than that occurring from natural phenomena."[211] GW-B is the classification for groundwater of all uses other than public.[212]

Maine regulates nonpoint source pollution under its Nonpoint Source Pollution Program, which defines "nonpoint source" as any source that dischargers pollutants into the surface or ground waters of the State.[213] The focus of the program is prevention of nonpoint source

[206] ME. REV. STAT. tit. 38, § 361-A (1) (LexisNexis 2020)
[207] § 401.
[208] § 402.
[209] § 403.
[210] § 404.
[211] § 465-C.
[212] *Id.*
[213] Me. Rev. Stat. tit. 38, § 410-H (LexisNexis)

pollution from agricultural activities, wood harvesting and forest managing activities, and transportation related activities.[214] The commissioner of the program may make recommendations to the program committee about enacting regulatory exemptions from licensing requirements for activities conducted in compliance with the with best practices under this statute.[215]

b. Caselaw

While there are no cases directly related to discharge into groundwater that is hydrologically connected to navigable waters, it can be assumed that Maui will not make much of a difference to the way Maine regulates groundwater because Maine has regulations that are more stringent than the federal regulations. Still, many cases have demonstrated Maine's strict approach to groundwater regulation. In *Millet*, Maine went against the EPA when the EPA partnered with the petroleum industry in the late 90's to produce Methyl-tertiary-butyl oxygenated oil (MTBE) that was to be adopted by a number of states in order to comply with the federal Clean Air Act.[216] Although Maine was not one of the states obligated to opt into the program, it decided to opt in seven of its counties.[217] Later, it was discovered that MTBE was leaking into groundwater used for public water sources, and that the 1.1% of these public water sources exceeded MTBE levels outlined for Maine's drinking standards.[218] Despite the relatively small number of incidents under the program, Maine opted out and stopped buying into the EPA's MTBE oil program.[219]

[214] Me. Rev. Stat. tit. 38, § 410-J (LexisNexis)
[215] Me. Rev. Stat. tit. 38, § 410-K (LexisNexis)
[216] *Millett v. Atl. Richfield Co.*, 760 A.2d 250, 252 (Me. 2000)
[217] *Id.*
[218] *Id.*
[219] *Id.*

Other cases show how Maine has implemented its groundwater rights, showcasing its dedication to allowing individuals to extract groundwater for domestic purposes. In Rangeley, Maine allowed Nestle to extract groundwater connected to an aquifer for bottling purposes despite the town's objections.[220] The case ended up in the Maine Supreme Court, and it was decided that Nestle's use of the groundwater would only minimally impair the town's public use of the groundwater.[221]

c. Appendix A Scenarios

Scenario 1) Municipal Wastewater Management

Maine regulates septic and solid waste management under chapter 13 of its statutes.[222] The statues mostly deal with requirements and permits for wastewater management sites, and do not touch on what could happen in the case of sewer drainage intro groundwater.[223] However, considering Maine's general law forbidding any kind of discharge without a permit, it is safe to assume that this includes sewage leaks into groundwater.[224] Injunction wells are explicitly included in Maine's definition of 'surface waste water disposal system, and lagoons are included implicitly by the use of the words "any system for disposal of waste waters on the surface of the earth…."[225]

Scenario 2) Stormwater Management: Green Infrastructure (GI)

In order to build any kind of storm water management project that includes one acre or more of disturbed area, a permit is needed from the MDEP.[226] While the statute does not explain

[220] *Rangeley Crossroads Coal. v. Land Use Regulation Comm'n*, 955 A.2d 223 (Me. 2008)
[221] *Id.* at 234.
[222] ME. REV. STAT. tit. 38, § 1301 (LexisNexis 2020).
[223] § 1302 (LexisNexis).
[224] § 413 (LexisNexis).
[225] ME. REV. STAT. tit. 38, § 361-A(1) (LexisNexis).
[226] § 420-D.

what permits are needed if the projects happen to involve groundwater discharge, the need for a permit is implied in Maine's general law forbidding discharge or any kind without a permit.[227]

Scenario 3) Drinking Water: Water Reuse

The groundwater protection program was implemented in order to protect the health of Maine's citizens because a lot of Maine's drinking water comes from groundwater connected to aquifers.[228] The quality standard for groundwater used for drinking water exceeds the quality standards for groundwater of other uses under Maine's classification system.[229] Any kind of activity that may affect groundwater connected to aquifers or groundwater that is used for public use in any way, will be reviewed with high scrutiny.

IX. Maryland

a. Statutory Regulation

Maryland law establishes a separate state permitting program for discharges to groundwater. However, the state statute and regulations do not clearly address whether discharges to groundwater that ultimately reach surface waters are treated differently than those that do not reach surface waters.

1) Scope of Regulation & Definition of "Waters"

The Maryland Code contains a general prohibition against "discharg[ing] any pollutant into the *waters of this State*" unless authorized by statute, regulation, or permit. [230] "Waters of this State" is defined to include "[b]oth surface *and underground waters* within the boundaries of the State subject to its jurisdiction."[231] This definition is more expansive than the federal

[227] § 413.
[228] § 401.
[229] § 465-C.
[230] MD. CODE ANN., ENV'T §§ 9-322, 9-323 (LexisNexis 2021).
[231] *Id.* §9-101(l)(1) (emphasis added).

regulatory definition of "waters of the United States" for two reasons. First, the state definition covers "underground waters," while the federal definition categorically excludes groundwater.[232] Second, state surface waters are defined to include "tidal and nontidal wetlands, public ditches, tax ditches, and public drainage systems" and "[t]he flood plain of free-flowing waters determined by the Department of Natural Resources on the basis of the 100-year flood frequency."[233] The federal definition does not cover the entire 100-year floodplain and extends CWA jurisdiction over only some ditches and wetlands adjacent to other jurisdictional waters.[234]

Further, the Maryland Code defines "discharge" as "[t]he addition, introduction, leaking, spilling, or emitting of a pollutant into the waters of this State; or . . . [t]he placing of a pollutant in a location where the pollutant is likely to pollute."[235] This definition represents a broader scope of regulation than is authorized under the CWA, which defines "discharge of a pollutant" as "any addition of any pollutant to navigable waters from any point source."[236] Therefore, Maryland law is more stringent than federal law.

2) Permitting

The Maryland Code provides that "[a] person shall hold a discharge permit issued by the Department before the person may construct, install, modify, extend, alter, or operate [a facility or disposal system, state-owned treatment facility, or any other outlet or establishment] if its operation could cause or increase the discharge of pollutants into the waters of this State."[237]

The Department issues separate discharge permits for surface water discharges and groundwater discharges. Permits for surface water discharges are issued under the NPDES

[232] 40 C.F.R. § 120.2 (2020).
[233] MD. CODE REGS. 26.08.01.01 (2021).
[234] 40 C.F.R. § 120.2.
[235] MD. CODE ANN., ENV'T §9-101(b).
[236] 33 U.S.C. § 1362(12) (2018); *see also Assateague Coastkeeper v. Md. Dep't Env't*, 28 A.3d 178, 213 (Md. Ct. Spec. App. 2011).
[237] MD. CODE ANN., ENV'T § 9-323(a)(1).

framework.[238] EPA has delegated authority to the Maryland Department of the Environment ("the Department") to administer a NPDES permitting program in Maryland in accordance with Title 9 of the Environment Article of the Maryland Code, Title 26 Subtitle 8 Chapter 4 of the Code of Maryland Regulations ("COMAR"), and the federal CWA.[239]

State permits for groundwater discharges are issued outside of the state-administered NPDES program.[240] The COMAR provides, "Any discharge or disposal of waters or wastewaters *into the underground waters of the State* requires the approval of the Department."[241] A State Groundwater Discharge Permit[242] is required for "[w]astewater effluents disposed of by means of spray or other land treatment or application systems," "[g]round water recharge systems," discharges of "leachate from a landfill to surface or ground waters" with exceptions, and "[o]ther subsurface disposal systems not specifically exempted in this regulation."[243] Combined state and federal Underground Injection Control (UIC) permits—issued for municipal and industrial wastewater discharges into groundwater via septic systems and soil infiltration systems[244]—are considered a type of State Groundwater Discharge Permit.[245]

The Department may issue a NPDES permit or State Groundwater Discharge Permit upon its determination that the discharge meets all applicable state and federal water quality standards and effluent limitations.[246] The COMAR establishes surface water quality standards

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[238] *See Wastewater Permits Program*, MD. DEP'T ENV'T, https://mde.maryland.gov/programs/water/wwp/Pages/index.aspx (last visited Feb. 26, 2021).
[239] *See Maryland NPDES Permits*, U.S. EPA, https://www.epa.gov/npdes-permits/maryland-npdes-permits (last visited Feb. 26, 2021); MD. CODE REGS. 26.08.04.07 (2021).
[240] See *Wastewater Permits Program*, *supra* note 238; MD. CODE REGS. 26.08.02.09(A).
[241] MD. CODE REGS. 26.08.02.09(A)(1) (emphasis added).
[242] *See Groundwater Discharge Permit Division*, MD. DEP'T ENV'T, https://mde.maryland.gov/programs/Water/wwp/Pages/GWDP.aspx (last visited Feb. 26, 2021).
[243] MD. CODE REGS. 26.08.02.09(A)(2).
[244] *Groundwater Discharge Permit Division*, *supra* note 242.
[245] MD. CODE REGS. 26.08.02.09(A)(4).
[246] MD. CODE ANN., ENV'T § 9-324(a).

by assigning a designated use to all surface waters and setting water quality criteria for each designated use.[247] Additionally, the COMAR establishes groundwater quality standards and discharge quality criteria for three aquifer types.[248]

The COMAR does not explicitly state whether and to what extent State Groundwater Discharge Permits are subject to surface water quality standards, particularly when the groundwater discharge reaches surface waters. Neither Maryland caselaw nor the Department's website provide guidance on this point. However, the section of the COMAR that establishes the separate permit requirement for groundwater discharges provides that a permit "will contain limitations and requirements deemed necessary by the Department to protect the public health and welfare and to prevent pollution of ground *and surface waters*."[249] Further, the effluent limitations section of the COMAR states that the "discharge of waters, wastes, or wastewaters to the waters of this State is permitted if . . . [t]he discharge does not contravene the surface water quality standards established by this State."[250] These references to surface waters suggest that State Groundwater Discharge Permits may require compliance with state surface water quality standards to the extent that the groundwater is hydrologically connected to surface waters.

After *County of Maui*, discharges that fall under Maryland's groundwater discharge permitting scheme may be newly subject to NPDES permit requirements if they satisfy the "functional equivalent" test. This creates a possibility of potentially duplicative or conflicting permit requirements for dischargers.

[247] MD. CODE REGS. 26.08.02.02–08.
[248] *Id.* 26.08.02.09.
[249] *Id.* 26.08.02.09(A)(1) (emphasis added).
[250] *Id.* 26.08.03.01(C)(1).

3) Exemptions

A state groundwater discharge permit is not required for certain categories of point sources including "[l]andfills designed to achieve natural attenuation of leachate and permitted under [Title 9 of the Environment Article of the Maryland Code], unless there is a discharge of leachate to surface waters of the State" and other subsurface disposal systems permitted by the Department under the Maryland Code and COMAR.[251] A state discharge permit is also not required for "land application of food processing wastewater . . . if the wastewater meets the Maryland Department of Agriculture (MDA) State Chemist Office requirements for registration as a soil conditioner," subject to certain conditions.[252]

b. Caselaw

Maryland courts have not specifically addressed when and how the Department may regulate discharges into groundwater that ultimately reach surface waters.

c. Appendix A Scenarios

Scenario 1) Municipal Wastewater Treatment Plants

Discharges from Publicly Owned Treatment Works (POTWs) are not subject to any permitting requirements beyond the NPDES and state groundwater discharge permitting requirements described above.

The Groundwater Discharge Permits Division ("the Division") of the Department issues both State Groundwater Discharge Permits and combined state and federal UIC permits.[253] The Division issues State Groundwater Discharge Permits for wastewater that is discharged into groundwater via land application system, groundwater recharge system, landfill leachate (with

[251] *Id.* 26.08.02.09(A)(3).
[252] *Id.* 26.08.02.09(A)(5).
[253] *Groundwater Discharge Permit Division*, *supra* note 242.

exceptions), and other underground disposal systems.[254] Municipal Groundwater Discharge Permits, specifically, are issued for "land application systems of treated domestic wastewater and large onsite wastewater disposal systems with a monthly average wastewater flow of greater than 5,000 gallons per day."[255] The Division issues UIC permits for wastewater that is discharged underground through septic systems, drainfields, seepage pits, and other soil infiltration systems.[256] UIC permitting requirements track the federal regulations.[257] As discussed above, it is unclear whether any of these permits would require compliance with state surface water quality standards if the groundwater discharge ultimately reaches jurisdictional surface waters.

Other types of groundwater discharges from POTWs—including inadvertent discharges into groundwater, such as basement back-ups and exfiltration from sewer lines—are not specifically addressed in the Maryland Code or COMAR. They are also not mentioned in the application forms for POTW NPDES permits and State Groundwater Discharge Permits for domestic wastewater.[258] Thus, it is unclear whether inadvertent discharges from a POTW to jurisdictional surface waters via groundwater would trigger any or all of the following: (1) a requirement to obtain a State Groundwater Discharge Permit, (2) a requirement to meet state groundwater quality standards, and (3) a requirement to meet state surface water quality standards.

After *County of Maui*, a POTW's groundwater discharges that reach surface waters may now be subject to both NPDES permit requirements and State Groundwater Discharge Permit

[254] MD. CODE REGS. 26.08.02.09(A)(2).
[255] *Groundwater Discharge Permit Division*, *supra* note 242; *see also* MD. CODE REGS. 26.08.02.09(A)(2).
[256] *Groundwater Discharge Permit Division*, *supra* note 242.
[257] MD. CODE REGS. 26.08.07.01(A).
[258] For the application forms, see *NPDES Municipal Surface Water Discharges*, MD. DEP'T ENV'T, https://mde.maryland.gov/programs/Water/wwp/Pages/MunicipalSurfaceWater.aspx (last visited Feb. 26, 2021); *Groundwater Discharge Permit Division*, *supra* note 242.

requirements for their groundwater discharges, if such discharges satisfy the "functional equivalent" test.

Scenario 2) Stormwater Management & Green infrastructure

The COMAR requires the Department to establish NPDES general permits for municipal separate storm sewer systems (MS4s).[259] While the COMAR does not specifically address whether groundwater discharges from green infrastructure (GI) for stormwater management are regulated under MS4 general permits or under another permitting scheme, it does require a State Groundwater Discharge Permit for "ground water recharge systems."[260] The COMAR does not define "ground water recharge system"; however, to the extent that GI—implemented because of an MS4 permit condition—may qualify as a "ground water recharge system," a State Groundwater Discharge Permit is likely required. As discussed above, it is unclear whether such a permit would require compliance with state surface water quality standards.

After *County of Maui*, MS4s with groundwater recharge systems may be subject to both NPDES permit requirements and State Groundwater Discharge Permit requirements for their groundwater discharges, if such discharges satisfy the "functional equivalent" test.

[259] *Id.* 26.08.04.09(C). For more information about Maryland NPDES MS4 permits, see *Maryland's NPDES Municipal Separate Storm Sewer System (MS4) Permits*, MD. DEP'T ENV'T, https://mde.maryland.gov/programs/Water/StormwaterManagementProgram/Pages/storm_gen_permit.aspx (last visited Feb. 26, 2021); *Maryland's NPDES Municipal Separate Storm Sewer System (MS4) Phase II General Permits*, MD. DEP'T ENV'T, https://mde.maryland.gov/programs/Water/StormwaterManagementProgram/Pages/NPDES_MS4_New.aspx (last visited Feb. 26, 2021).

[260] MD. CODE REGS. 26.08.02.09(A)(2)(b).

Scenario 3) Drinking Water & Water Reuse

The Department has created guidelines for the use of reclaimed water.[261] However, any discharge of reclaimed or reused water into groundwater is still subject to State Groundwater Discharge Permit requirements.[262]

After *County of Maui*, a water supplier operating a groundwater recharge system may be subject to both NPDES permit requirements and State Groundwater Discharge Permit requirements for their groundwater discharges, if such discharges satisfy the "functional equivalent" test.

X. Massachusetts

a. Statutory Regulation

Massachusetts requires permits for discharges into groundwater regardless of its Connection WOTUS as defined by NPDES.[263] Any person who discharges any pollutant into "waters of the commonwealth" will be subject to enforcement provisions unless they have an adequate permit.[264] Waters or "waters of the commonwealth" means all waters within the Massachusetts jurisdiction, and explicitly includes groundwater.[265] Massachusetts is under Category 2 of our analysis because it regulates discharges groundwater regardless of hydrological connection to WOTUS and regardless of its definition of "waters." Permits for discharges are granted only if the discharge and the treatment works proposed in an application

[261] *See* MD. DEP'T ENV'T, GUIDELINES FOR USE OF CLASS IV RECLAIMED WATER: HIGH POTENTIAL FOR HUMAN CONTACT (2016); MD. DEP'T ENV'T, GUIDELINES FOR LAND APPLICATION / REUSE OF TREATED MUNICIPAL WASTEWATERS (2010).
[262] MD. CODE REGS. 26.08.02.09(A)(2)(b).
[263] MASS. GEN. LAWS ANN. ch. 21, § 43(2) (West 2020).
[264] § 42.
[265] § 26A.

will conform to limitations specified in the permit, state and federal regulations, and water standards.[266]

Massachusetts codes detail what kind of activities constitute discharges of pollutants requiring a permit. These activities include, but are not limited to, the "construction, installation, modification, operation or maintenance" of any facility that discharges liquid onto or below the land surface, percolation pit, pond, lagoon, or class V injection well.[267] Additionally, any facility with an unlined pit, pond, lagoon, or surface impoundment in which wastewaters or sludge are collected, and from which liquid seeps into the ground, necessitates a permit under Massachusetts law.[268]

Unlike many other states, Massachusetts does not have a special committee dedicated specifically to groundwater regulation, but this does not make its regulations any less stringent because groundwater is explicitly included in the "waters of the commonwealth" definition.[269] Groundwaters are protected under all regulations having to do with waters of the commonwealth as well as the Water Resources Management Advisory Committee (WRMAC).[270] WRMAC adopts policies for effective planning and managing of water use and conservation to ensure adequate volume and quality of the state waters.[271] The committee emphasizes water conservation as its primary goal and expresses the recognition of all waters of the state being a part of a single hydrological system.[272] "The department [adopts] such regulations as it deems necessary to carry out the purposes of [its] chapter, establishing a mechanism for managing ground and surface water in the commonwealth as a single hydrological system and ensuring…a

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[266] § 43(2).
[267] 314 MASS. CODE REGS. 5.03 (LexisNexis 2020).
[268] *Id*.
[269] MASS. GEN. LAWS ANN. ch. 21, § 26A (West 2020).
[270] MASS. ANN. LAWS ch. 21G, § 3 (LexisNexis 2020).
[271] *Id*.
[272] *Id*.

balance among competing water withdrawals and uses.[273] In viewing all waters above and below the surface of the land within the states as hydrologically connected, Massachusetts is already a step ahead of the *Maui* decision, where the difference lies in whether the point source is direct or indirect. Massachusetts law does not differentiate between direct or indirect point sources because it considers all waters to be hydrologically connected as a general standard of practice.

Although there is no specific groundwater committee, Massachusetts' Division of Water Supply Protection implements a groundwater survey program that works with the United States Geological Survey to conduct detailed groundwater assessments.[274] The goal is to protect sources of groundwater supply and for the identification of new groundwater resources.[275] The division also offers technical assistance to localities that are having groundwater deficits due to either lack or quantity or quality of groundwater supply.[276]

b. Caselaw

There is not any Massachusetts caselaw dealing with issues of groundwater hydrologically connected to WOTUS, but other kinds of cases show how important groundwater regulation is to the commonwealth and that local townships can implement their own rules and regulations for allowing groundwater discharge permits with a lot of discretionary power. This discretionary power, however, is not without limitations. The court in *Tresca Bros.* explains what limitations apply to this discretion. In the case, a Massachusetts town board decided that in order for Tresca Brothers to operate their concrete-producing business in a groundwater protection district, they would require special groundwater protection permits that are specific to

[273] *Id.*
[274] MASS. ANN. LAWS ch. 21, § 9B (LexisNexis 2020).
[275] *Id.*
[276] *Id.*

the town's bylaws.[277] Tresca Brothers submitted their applications for the special permits and the board denied access.[278] A lower court dismissed the board's ruling on grounds that it was "capricious and arbitrary" because "rather than identifying anticipated adverse impacts on groundwater, the board simply recited the requirements of the bylaws and concluded that the application did not satisfy them, without making or relying on any factual findings.[279] The appeals court explored whether the board has the power of discretionary denial regardless of the evidence of lack of reasoning supported by the factual record.[280] It found that in order to allow this discretionary denial, the board would've had to articulate the manner in which the proposed use is not in harmony with the bylaws in absence of credible evidence.[281] The board did not meet this requirement, therefore the appeals court affirmed the lower court's decision.[282] This case is extremely important for any agency or business that would need to apply for groundwater permits because it shows, not only that Massachusetts local governments can implement their own bylaws and conditions that need to be met to allow for such discharge on top of federal and state regulations, but also that the local governments cannot deny permits without an explanation that connects the proposed activity to the specific bylaws.

Zoning Bd. is an older case that also addresses board discretion in denying projects that require groundwater discharge permits. Here, Green View Realty, LLC (GVR) applied for permits to build affordable housing on a site that had previous operated as a waste facility and had a lot of environmental problems, including carcinogens in its groundwater.[283] GVR proposed

[277] *Tresca Bros. Sand & Gravel, Inc. v. Bd. of Appeals of Wilmington*, 97 Mass. App. Ct. 1128 (2020)
[278] *Id.* at 2
[279] *Id.* at 8.
[280] *Id.* at 16.
[281] *Id.*
[282] *Id.*
[283] *Zoning Bd. of Appeals of Holliston v. Hous. Appeals Comm. & Green View Realty, LLC*, 18 LCR 300 (Mass. Land Ct. 2010)

that they would clean up the site in order to complete the affordable housing project in compliance with regulations.[284] The Housing Appeals Committee approved the project but the zoning board denied it, citing groundwater impacts as one of its primary reasons.[285] "Much of [the] concerns stem[med] from the assertion that the groundwater discharge of wastewater from the property (approximately 65,000 gallons per day) may change the flow patterns, *may* result in wastewater traveling through the town landfill, *may* exacerbate high iron and manganese concentrations at the town's well, and *may* result in the TCE plume traveling to that well."[286] The court decided to deny the board's appeal of the HAC decision on the condition that GVR would have to implement long term testing to monitor the town's groundwater to ensure compliance with the state's standards.[287] The court's emphasis on the words "may" implies that, in order to deny groundwater discharge permits, there needs to be a strict finding of some kind of impediment or issue with respect to groundwater quality or quantity. Granting GVR permission under the condition that they must monitor the groundwater was a reasonable compromise that also shows how the mere possibility of a negative effect can be derailed with adequate measures, and that the government should take those measures into consideration before denying permits.

c. Appendix A Scenarios

Scenario 1) Municipal Wastewater Management

Massachusetts law dictates that a groundwater discharge permit is generally required for a wastewater disposal system discharging greater than 10,000 gallons per day.[288] This kind of permit requires the applicant to establish and enforce an adequate sewer ordinance that prohibits

[284] *Id.*
[285] *Id*. at 301
[286] *Id*. at 309
[287] *Id.*
[288] 314 MASS. CODE REGS. 5.03(2)(a) (LexisNexis 2020).

incompatible wastes into the works, and that requires pretreatment when appropriate.[289] The permit also requires periodical monitoring and reporting of waste flows in order to adopt procedures that would identify the source and nature of any new source of discharge and any significant change in such flow.[290] This ordinance goes on to explain that districts and municipalities can implement their own laws to enforce sewer ordinances and to issue permits for sewer connections.[291]

Scenario 2) Stormwater Management: Green Infrastructure (GI)

Kirk v. Li outlines Massachusetts stormwater management standards in regards to groundwater discharge for developments. It explains that development discharge rates should not exceed predevelopment discharge rates, but that this standard may be waived for discharges to land subject to coastal storm flowage.[292] Additionally, "loss of annual recharge to groundwater shall be eliminated or minimized through the use of infiltration measures including environmentally sensitive site design, low impact development techniques, stormwater best management practice, and good operation and maintenance. At a minimum, the annual recharge from the post-development site shall approximate the annual recharge from pre-development conditions based on soil type. This standard is met when the stormwater management system is designed to infiltrate the required recharge volume as determined in accordance with the Massachusetts Stormwater Handbook."[293]

[289] 5.03(9).
[290] *Id.*
[291] *Id.*
[292] *Kirk v. Li*, 27 LCR 1 (Mass. Land Ct. 2019)
[293] *Id*. at 19

Scenario 3) Drinking Water: Water Reuse

Unless otherwise provided by other ordinances, all groundwaters of the commonwealth of Massachusetts are designated sources of potable water supply.[294] There are additional and more stringent effluent limitations for discharges that occur within 100 feet of an irrigation well, as well as for discharges from treatment works that discharge into groundwater without the benefit of treatment.[295] Every permit contains monitoring, recordkeeping and reporting requirements.[296]

XI. Michigan

a. Statutory Regulation

In Michigan it is statutorily prohibited to "discharge into the waters of the state a substance that is or may become injurious…"[297] Further, Michigan prohibits any person from "any direct or indirect discharge . . . into the groundwater or on the ground" without a permit.[298] "Waters of the state" is defined as "groundwaters, lakes, rivers, and streams and all other watercourses and waters, including the Great Lakes, within the jurisdiction of this state."[299]

In relation to federal regulation under the Clean Water Act, Michigan should be considered a "more than stringent" state in accordance with the criteria outlined above. Groundwater is explicitly mentioned in the statute that defines "waters" that are regulated. This means that Michigan's regulations are more stringent than the CWA because it includes a more expansive definition of "waters."

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[294] 314 MASS. CODE REGS. 5.11 (LexisNexis 2020).
[295] 5.10 (4B) - 4(C)
[296] 5.10 (6)
[297] MICH. COMP. LAWS ANN. § 324.3109(1) (LexisNexis 2020).
[298] R §§ 323.2204, 323.2201(i).
[299] MICH. COMP. LAWS ANN. § 324.3101(aa) (LexisNexis 2020).

b. Caselaw

Some insight into Michigan's post-*Maui* regulatory future can be gained by examining how Michigan state courts have ruled on Michigan's water regulations in the past. For instance, in *Charter Twp. of Plainfield v. Department of Natural Resources,* the Court of Appeals was tasked with determining whether a gravel pit where residue from water treatment was deposited constituted a 'water of the state.'[300] The Township of Plainfield (the "Township") brought suit against the Michigan Department of Natural Resources ("DNR") after a gravel pit used by the Township as a depository for "backwash" water and "water softening sludge" from the Township's water treatment plant was found to lack a NPDES permit.[301] However, the DNR had previously communicated to the Township that the gravel pit did *not* need an NPDES permit because the gravel pit was *not* a water of the state, since the gravel pit was determined to exist only for "wastewater conveyance, treatment, or control."[302] In Michigan, the Michigan Administrative Rules consider "drainage ways and ponds used solely for wastewater conveyance, treatment, or control" to be exempt from the definition of "surface waters of the state."[303]

After the DNR conducted a survey of the Township's water system, the Department of Environmental Quality ("DEQ") warned the Township that while no NPDES permit was needed for the gravel pit itself, a spillway that was constructed between the gravel pit and the Grand River could lead to unlawful discharges from the pit and the river.[304] The Township was advised by the DEQ that the Township needed to prevent such illicit discharges from occurring.[305]

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[300] *Twp. of Plainfield v. Dep't of Nat. Res.*, No. 316535, 2015 WL 1120903, at *1 (Mich. Ct. App. Mar. 10, 2015).
[301] *Id.*
[302] *Id.*
[303] *Id.*
[304] *Id.*
[305] *Id.*

Further, in 2009, the DEQ alerted the Township that the gravel pit was to be considered part of "the surface waters of the state."[306] As such, the DEQ required the Township to form an alternate plan for wastewater disposal.[307]

The Township filed a complaint and sought relief from the trial court.[308] In its complaint, the Township sough a declaratory judgment from the court that the gravel pit was not a "water of the state," that equitable estoppel should bar the DNR from arguing that the gravel pit was a "water of the state," and that collateral estoppel should bar the DNR from ruling that the gravel pit is a "water of the state."[309] Finally, the Township argued that the DNR's attempt to rule that the gravel pit is a "water of the state" constituted inverse condemnation.[310] When the Township filed its second amended complaint, it sought only declaratory judgment from the court to rule that the gravel pit was not a "water of the state."[311] The Township argued that the DNR should be estopped from arguing that the pit was a "water of the state" because of the prior years where the DNR advised the Township that no permit was needed.[312] Further, the Township tried to convince the court that since the pit was only used for wastewater conveyance and was a "pond."[313]

The court emphasized that under Michigan administrative regulations, ponds that are used "solely" for wastewater conveyance or control are statutorily exempt from the definition of "surface waters of the state."[314] Thus, if the DNR could not prove that the Township's pond was

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[306] *Id.* at 2.
[307] *Id.*
[308] *Id*.
[309] *Id.*
[310] *Id.*
[311] *Id.*
[312] *Id.*
[313] *Id.*
[314] "Under Mich. Admin Code, R 323.1044(u), the 'surface waters of the state' means all of the following, but does not include drainage ways and ponds used solely for wastewater conveyance, treatment, or control: (i) The Great

not used solely for wastewater conveyance, storage or treatment, then the Township's gravel pit would not be considered a surface water of the state, regardless of the hydrological connection between the pit and the river.[315] On the other hand, if the Township could convince the court that the gravel pit was a "pond" used only for wastewater storage, the court would find that the gravel pit was not a water of the state subject to the requirements of a permit.

Thus, the DNR argued that the pit was a "water of the state" because it was not a "pond" that was used solely for "wastewater conveyance, treatment, or control."[316] The DNR argued that the pit was hydrologically connected to the river via groundwater, rendering the pit a "water of the state."[317] Both sides moved for summary disposition.[318]

The trial court determined that the gravel pit constituted a "water of the state.'[319] Since "waters in the [gravel pit] are drawn from and interchange with the groundwater system which includes the Grand River," the gravel pit was not "a drainage way or pond used solely for wastewater conveyance, treatment, or control" and thus not exempt from being considered a "water of the state."[320]

On appeal, the Township raised the same arguments to the appellate court, which reviewed the case *de novo* to determine if there was a genuine issue of material fact.[321] The appellate court reviewed the statutes that gave the DNR the power to promulgate rules in order to protect Michigan's waters, then reviewed the rules themselves.[322] The court quoted the

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Lakes and their connecting waters; (ii) all inland lakes; (iii) rivers; (iv) streams; (v) impoundments; (vi) open drains; (vii) wetlands; (viii) other surface bodies of water within the confines of the state." *Id.*

[315] *Id.*
[316] *Id.*
[317] *Id.*
[318] *Id.*
[319] *Id.*
[320] *Id.*
[321] *Id.*
[322] *Id.* at 3.

administrative rules that contained exemptions from the statutory definition of "waters of the state" and found that the Township's gravel pit was exempted from being waters of the state because it was a "pond" that was "solely used" for wastewater conveyance.[323] The court found that the word "use" connotes use by humans, not nature--meaning that the natural groundwater connections between the gravel pit and the Grand River did not make the gravel pit a water of the state if humans only used the gravel pit for wastewater conveyance.[324] Otherwise, every pond that was connected to another body of water via groundwater would not be exempted from being a water of the state, nullifying the exemption's purpose.[325] In essence, the Michigan court found that any pond that is used by a discharger of wastewater should not be considered a point source of discharge if that wastewater seeps into another water of the state and thus is not considered a violation of the discharger's NPDES permit.

c. Appendix A Scenarios

Scenario 1) Municipal Wastewater Management

In Michigan, Article II of the Natural Resources and Environmental Protection Act governs "Pollution Control." More specifically, section 324.4105 regulates the requirements of sewage disposal and waterworks systems.[326] This section outlines the requirements for municipalities operating sewage systems.[327] Subsection 1 requires every mayor, township president, or any individual charged with operating sewage systems to file a complete plan of the sewage system including any purification or treatment works associated with the system in general.[328] Further, anyone operating a sewage system in the state of Michigan must also list "all

[323] *Id*. at 7.
[324] *Id*.
[325] *Id*.
[326] MICH. COMP. LAWS ANN. § 324.4105(aa) (LexisNexis 2020).
[327] *Id*.
[328] *Id*.

the sources through or from which water is or may be at any time pumped or otherwise permitted to enter into the sewerage system, and the drain, watercourse, river, or lake into which sewage is to be discharged."[329]

This section also prescribes penalties and consequences for any individual that allows the construction of a sewage system not in accordance to the approved plans or without a permit.[330] Thus, this section holds individuals responsible for discharges that are not explicitly mentioned in an approved sewage system plan. While this section does not explicitly mention groundwater as a point source for discharge, if discharge from a sewage system travelled through groundwater into another source of water, that discharge would be treated the same as if the point source was the sewage system itself. In a roundabout way, Michigan regulates discharges through groundwater as if the groundwater were a point source if those discharges are not listed in either the sewage system plan or the permit issued by the Department of Natural Resources.[331]

Scenario 2) Stormwater Management: Green Infrastructure (GI)

In Michigan, Rule 2190 of the Michigan Administrative Code regulates the stormwater permits granted to industrial dischargers of pollutants.[332] A discharger of stormwater is presumed to have a valid national permit as long as a plan including the impact the discharge will have on the soil with a valid signature is filed with the Department of Environmental Quality.[333] This rule also places restrictions on the discharge of a permittee.[334] One of those restrictions requires permittees to restrain from "directly or indirectly discharge wastes" into "waters of the state," which includes groundwater.[335] So, this administrative rule is an example of Michigan regulating

[329] *Id*.
[330] *Id*.
[331] MICH. ADMIN. CODE r. 313.2190 (2020).
[332] *Id*.
[333] *Id*.
[334] *Id*.
[335] *Id*.

stormwater discharge from a point source into groundwater that may serve as a conduit for discharge into another water of the state. While this rule does not represent a definition of groundwater as a point source for discharge, it does represent the state holding polluters accountable for stormwater discharge that seeps into groundwater and other waters of the state. It is possible that the *Maui* decision will strengthen regulations such as these by explicitly holding groundwater to be a point source of discharge by explicitly requiring a permit for groundwater discharges.

Scenario 3) Drinking Water: Water Reuse

In Michigan, Chapter 325 of the Michigan Compiled Laws governs the public health of the state.[336] In terms of groundwater as a point source and its relationship to drinking water, Section 1019.a of Chapter 325 mentions how state and local governments are responsible for "substances of concern" that migrate from land owned by state and local governments into groundwater of the source that is used as a drinking water source.[337] If the state or local government owned a piece of real property at the time a "substance of concern" was used on that real property, the government is responsible for providing an alternate source of drinking water if the Michigan department of health and human services issues an advisory for the public near the piece of real property, if the substance that is the subject of the public health advisory was used on the property, and if the state or federal government "acknowledges that the substance of concern has migrated from the real property and is present in groundwater that provides water to the impacted water source."[338]

[336] *Id*.
[337] MICH. COMP. LAWS ANN. § 325.1019(a) (LexisNexis 2020).
[338] *Id*.

While not explicitly recognizing groundwater as a point source for discharge, this Michigan regulation holds governments accountable for the discharge produced by sewage systems that migrates from that sewage system into a source of drinking water. This regulation represents the closest Michigan comes to recognizing groundwater as a point source for discharge explicitly. *Maui* may bridge the gap between implicit and explicit in terms of groundwater as a point source for discharge for Michigan's drinking water.

XII. Minnesota

a. Statutory Regulation

Chapter 115 of the Minnesota Statutes ("MS") sets forth the state's clean water regulatory policy. State water quality standards and pollution regulations are promulgated by the Minnesota Pollution Control Agency ("MPCA"). "Waters of the state," as defined, are inclusive of underground water, but the MS also provides a definition for 'groundwater', which is "water contained below the surface of the earth in the saturated zone...."[339] Therefore, Minnesota is in Category 1 because its regulations are more stringent than the CWA due to groundwater being included in the definition of waters of the state. A "discharge" is also defined as "the addition of any pollutant to the waters of the state or to any disposal system."[340] As outlined in Minnesota Statutes, section 115.071, the state (including the MPCA) has the authority to enforce compliance by means of criminal penalties, civil penalties (to be determined by a court, not more than $10,000 per day of violation, and $25,000 if the violation is related to hazardous waste), injunctions, actions to compel performance, and administrative penalties as directed by

[339] MINN. STAT. § 115.01, subd. 6 (2020).
[340] § 115.01, subd. 4 (emphasis added). Note that the definition given in the MPCA's regulations on "underground water" provides that "underground" and "groundwater" are treated synonymously. MINN. R. 7060.0300, subp. 6 (2020).

Minnesota Statutes, section 16.072. Neither the MS nor MPCA's regulations mention that civil claims may be brought under the statute.

Minnesota's State Disposal System ("SDS") regulates water discharges to groundwater and discharges that will affect groundwater. Similar to NPDES permits, an SDS permit can also regulate discharges of pollutants into surface water, but NPDES permits satisfy SDS permit requirements.[341] Part 7001.0150 of the regulations provide conditions for an NPDES permit to be satisfied and state that "each draft and final permit must contain [these] conditions necessary for the permittee to achieve compliance with applicable Minnesota or federal statutes or rules…and any conditions that the agency determines to be necessary to protect human health and the environment."[342] The conditions essentially require schedules of compliance, monitoring requirements, report retention requirements, and other general requirements, including that the issuance of a permit does not release a permittee from liability imposed by state or federal statutes, nor does it prevent future adoption of pollution control rules or standards that are more stringent than those now in existence.[343] The state gives out both individual permits, which cover a specific act or facility, and general permits, which cover a group of acts or facilities.[344] Permits are further divided into two categories: major and minor. Major facility permits are designed for facilities with one or more storage tanks that have a total capacity of more than 1 million gallons, typically municipal or industrial in kind. Minor permits are for all other facilities.[345]

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[341] MINN. R. 7001.1010 (2020).
[342] 7001.0150, subp.2, 3. The conditions are lengthy but essentially require schedules of compliance, monitoring requirements, report retention requirements, and other general requirements, including that the issuance of a permit does not release a permittee from liability imposed by state or federal statutes, nor does it prevent future adoption of pollution control rules or standards that are more stringent than those now in existence.
[343] *Id*.
[344] 7001.0210.
[345] 7001.4205, subp. 2

In addition to permit requirements, the MPCA also oversees the construction of facilities likely to discharge pollutants. "It is unlawful for any person to "construct, install, or operate a disposal system" unless plans and specifications have been submitted to the MPCA, which then must have granted a written permit.[346] There are also requirements specific to the proposal of public wastewater treatment facilities that would require NPDES or SDS permits.[347]

Part 7060 of the MPCA's Underground Waters regulations aim to protect sources of potable water by preventing contamination caused by the discharge of pollutants into groundwater.[348] It considers underground waters as potable water, as the agency "recognizes that the underground waters of the state are contained in a series of related and often interconnected aquifers, such that if sewage, industrial waste, other waste, or other pollutants enter the underground water system, they may spread both vertically and horizontally."[349] The regulations include a non-degradation policy to require that the disposal of waste is controlled "to the maximum practicable extent" to retain the natural quality of the state's groundwater, the exception being a determination made by the agency that "a change is justifiable by necessary economic or social development" and does not preclude beneficial uses of water.[350]

Finally, the MPCA has specific requirements for discharges of effluent to waters of the state.[351] In addition, all entities responsible for discharges of sewer, industrial, or other wastewater must submit reports on continued compliance to the MPCA to provide information on discharges and "the nature and concentration of pollutants" in the effluent.[352] Untreated sewage may not be discharged from either point- or non-point sources into waters of the state,

[346] MINN. STAT. § 115.07, subd. 1(a) (2020).
[347] MINN. R. 7001.1080, subp. 2C (2020).
[348] 7060.0100.
[349] 7060.0400.
[350] 7060.0500.
[351] 7050.0210.
[352] 7049.0570.

and inadequately treated wastewater must be controlled, treated, or abated to comply with the relevant standards.[353] These standards, comprising of water quality based effluent limits, and reporting, permit, and treatment requirements, apply to all point- and non-point discharges to all WOTS, including surface and underground water.[354] If, for example, effluent limits exceed water quality standards for a receiving water, then the corresponding permit for the discharger who is causing or contributing to the discharge must be modified to reflect these limits.[355]

b. Caselaw

There is little case law to elucidate what a Minnesota court would hold in a situation where a discharge is made to groundwater that one might determine to be "hydrologically connected" to surface water regulated by the CWA. That said, the issue was briefly discussed in consolidated appeals heard by the Court of Appeals of Minnesota. There, the MPCA refused to reissue NPDES/SDS permits to appellants for their discharges from a tailings basin.[356] The court concluded that "the CWA does not apply to discharges of pollutants to groundwater that is hydrologically connected to navigable waters" and therefore did not find it necessary to "reach the issue of whether the tailings basin [was] a point source."[357] After *Maui*, Minnesota courts will have to adjust their analysis to reflect the decision in *Maui* given the conflict with the decision by the Court of Appeals of Minnesota.[358]

c. Appendix A Scenarios

Minnesota law has quite stringent regulation regarding the discharge of municipal wastewater and stormwater, with permitting and reporting requirements for any entity releasing

[353] MINN. R. 7053.0205, subp.1, 3 (2020).
[354] 7053.0115.
[355] 7053.0205, subp. 13.
[356] *In re reissuance of an NPDES/SDS Permit to the U.S. Steel Corp.*, 937 N.W.2d 770, 774 (Minn. Ct. App. 2019).
[357] *Id*. at 779, n. 6.
[358] *See id*.

such effluent to "waters of the state," which is inclusive of groundwater. But it also appears to have additional and more stringent requirements for the quality of "underground water" or "groundwater," likely because Minnesota considers groundwater potable water that should be kept at a quality that allows it to become drinking water, with the only exception being that the MPCA is able to make a finding of an important economic or social reason to permit a discharge. Thus, agencies discharging sewage, waste, or stormwater need to comply with Minnesota's stringent regulations.

Scenario 1) Municipal Wastewater Management

The *Maui* decision will likely not have much of a practical impact on the regulation of sewer system discharges due to regulations that go beyond NPDES permit requirements.[359] As mentioned above, the regulations provide a list of conditions for all NPDES permits issued by the MPCA, one condition being that a permittee must report an unanticipated bypass or upset that causes an exceedance of an applicable effluent limitation.[360] This provision also references another condition in the regulations, which requires that if the permittee discovers that noncompliance has occurred which could endanger human health, public drinking water supplies, or the environment, then the permittee must orally notify the commissioner within 24 hours of the discovery, then submit a written description of noncompliance, the cause, exact dates, and steps taken or planned to reduce, eliminate, and prevent reoccurrence.[361] This likely applies to unanticipated leaks of wastewater and sewage into basements, at least to the extent that they are unanticipated bypasses and are a danger to human health. If the basement backflows could endanger public drinking water supplies or the environment through subsequent discharge

[359] MINN. R. 7001.1090 (2020).
[360] 7001.1090, subp. 1(I).
[361] 7001.0150, subp. 3(K).

via hydrological connection through the groundwater into surface waters, then this also should apply. It is unclear, however, how a permittee is supposed to determine if the backflow into groundwater could endanger same.

With respect to the *Maui* issue relating to injection wells, Minnesota has opted out of regulating the UIC program, and therefore, NPDES permits for UIW's in the state is federally regulated by the EPA.[362]

Those who store or construct storage for bulk sewage sludge at locations other than a permitted wastewater treatment facility must apply for and obtain an NPDES or SDS permit.[363] Therefore, if a lagoon is not designated as a wastewater treatment facility, then it would require a permit anyway, and is therefore part of the permit program regardless of its form.[364] The regulations require that representative samples of sewage sludge applied to land from a lagoon must be collected and analyzed.[365] There are also minimum construction requirements for lagoons used to store liquid sewage sludge, where they must not seep at a rate greater than 500 gallons per acre per day."[366] Waste stabilization ponds are also considered a point source and are required to comply with all applicable federal standards adopted by the EPA, as well as effluent limits set by the MPCA.[367]

Scenario 2) Stormwater Management: Green Infrastructure (GI)

Stormwater management systems are also regulated under the state's non-degradation policy requiring the utmost preservation of underground water.[368] There are specific rules for

[362] UICs are not mentioned anywhere in the statutes or regulations, and the EPA website mentions that the agency in charge of UIC wells is the EPA. "Underground Injection Control in EPA Region 5." https://www.epa.gov/uic/underground-injection-control-epa-region-5-il-mi-mn-oh-and-wi.
[363] MINN. R. 7041.0600, subp. 2.
[364] 7041.0600.
[365] 7041.1500, subp. 1(B).
[366] 7041.0900(A).
[367] 7053.0225 subp. 1-5.
[368] MINN. R. 7090.0280, .0290.

discharges of stormwater from municipal storm sewer systems (MS4), construction sites, and industrial activities.[369] All MS4s require both an NPDES permit and an SDS permit.[370] Certain MS4s have additional requirements. For example, if the MS4 is designated by the commissioner to (1) significantly contribute pollutants to WOTS or (2) substantially contribute to the pollutant loadings of a physically interconnected MS4 that is regulated by the NPDES storm water program, then the commissioner must issue a public notice identifying it as such, include their preliminary determination that the designation should be granted, and the designation is subject to scrutiny or challenge by the public.[371] In addition to these requirements, MS4's must have a storm water pollution prevention program that must address minimum measures in accordance with the Code of Federal Regulations, title 40, section 122.34(b).[372]

Lastly, through its antidegradation provisions for waters of the state, Minnesota seeks to achieve and maintain the highest possible quality in surface waters.[373] This applies for both MS4's and individual NPDES storm water permits for industrial and construction activities.[374] The application only applies where the commissioner anticipates that such permits would result in net increases in discharges to a surface water or other causes of degradation to surface waters.[375]

Scenario 3) Drinking Water: Water Reuse

Underground water quality standards of the state stipulate that "no sewage, industrial waste, or other wastes shall be discharged directly into the zone of saturation by such means as

[369] 7090.0030.
[370] 7090.0020, .0030. That said, NPDES requirements will satisfy the SDS requirements for stormwater discharges. *Id*. at subp 2.
[371] 7090.1010, subp. 1-4.
[372] 7090.1040.
[373] 7050.0250.
[374] MINN. R. 7050.0280, .0290. Note, there are exceptions for everything but MS4's under part 7050.0275.
[375] *Id*.

injection wells or other devices used for the purpose of injecting materials into the zone of saturation."[376] This also includes discharges into the unsaturated zone or deposited in such a manner or quality where effluent might degrade the use of underground waters as potable water supply, or simply might pollute underground waters.[377] There are even specific water quality standards for waters of the state classified for domestic consumption:

> No sewage, industrial waste, or other wastes from point or nonpoint sources, treated or untreated, shall be discharged into or permitted by any person to gain access to any waters of the state classified for domestic consumption so as to cause any material undesirable increase in…chronic toxicity…or in any other manner to impair the natural quality or value of the waters for use as a source of drinking water.[378]

[376] 7060.0600, subp.1.
[377] 7060.0600, subp. 2.
[378] 7050.0221, subp. 6.

These drinking water standards are the same as the EPA's primary and secondary drinking water standards,[379] and the stringency explains why there is no mention of permits allowing such discharges in order to recharge aquifers.[380]

XIII. Nebraska

a. Statutory Regulation

Under the Nebraska Environmental Protection Act ("NEPA"), Nebraska defines "waters of the state" as "all waters within the jurisdiction of this state, including all streams, lakes, ponds, impounding reservoirs, marshes, wetlands, watercourses, waterways, wells, springs, irrigation systems, drainage systems, and all other bodies or accumulations of water, *surface or underground*, natural or artificial, public or private, situated wholly or partly within or bordering upon the state."[381] Thus, groundwater is included in all waters of the state and Nebraska falls under Category 1 in Appendix B. Further, the state's regulations and permits extend past the NPDES program, which demonstrates its commitment to enact legislation that is more stringent than federal regulations.[382]

The Department of Natural Resources has jurisdiction over all matters pertaining to water, unless other regulations restrict otherwise, including planning and promoting implementation of programs for resource development in conjunction with federal agencies.[383] The Nebraska Department of Environment and Energy (NDEE)[384] monitors water quality in the

[379] *Id*. at subp. 1(B).
[380] The Freshwater Society mentioned severe challenges with implementing water reuse in the state, which further explains the stringency in allowing water reuse. Carrie Jennings, *The Water Underground: Stretching Supplies*, FRESHWATER SOCIETY, (February 2017), https://www.lcc.leg.mn/lwc/Meetings/2017/170327/8_FWS%20The%20Water%20Underground-Stretching%20Supplies%20Report.pdf.
[381] NEB. REV. STAT. ANN. § 81-1502(21) (LexisNexis 2020).
[382] See below for this analysis.
[383] NEB. REV. STAT. ANN. § 61-204(1), -206(1)-(3) (LexisNexis 2020).
[384] A 2019 legislative amendment altered the name of the agency from "Environmental Quality" to "Environment and Energy." This distinction should be noted given the continued prevalence of the now defunct acronym "NDEQ."

state and prepares annual reports outlining groundwater quality for trend analysis.[385] The NDEE has the power to regulate and enforce NEPA, to develop programs to prevent, control, and abate water pollution, and to "act as the state water pollution...control agency for all purposes of the Clean Water Act."[386] Appointed by the Governor, the Director of the NDEE is responsible for all laws and regulations that are related to environmental water quality under NEPA.[387]

NPDES permits in Nebraska are secured through the NDEE and must be obtained by anyone who "discharges any pollutant into any waters of the state from a point source."[388] Additionally, "industrial users" discharging pollutants into a Publicly Owned Treatment Works ("POTW") must also apply for and have a permit to do so.[389] Discharge exemptions are listed in chapter 3 of Title 119 of the regulations.[390] Other permit terms and conditions, such as duties to mitigate discharges that affect human health or the environment, effluent limitations, and stormwater discharges are also found in Title 119 of the regulations.[391]

The next issue is how Nebraska's regulations are enforced. As stated above, the NDEE has the power to enforce environmental regulation. The state considers it unlawful for any person to violate, *inter alia*, any water quality standards, effluent standards or limitations, or permit conditions pursuant to the EPA *or* any rules adopted by the state.[392] These violations carry a civil penalty of "no more than $10,000 per day," and with a continuing violation, each day constitutes a separate offence.[393] The statute allows courts to consider the magnitude of the

[385] § 46-1304.
[386] § 81-1504.
[387] § 81-1503(7).
[388] 119 NEB. ADMIN. CODE § 2-001 (2020).
[389] § 2-003.
[390] § 3-001.
[391] 119 NEB. ADMIN. CODE § 10-001, 14-001, 18-001 (2020).
[392] NEB. REV. STAT. ANN. § 81-1508.02(1).
[393] § 81-1508.02(2).

violation in determining the penalty.[394] When entities violate any provision of the Nebraska Safe Drinking Water Act or any rule or regulation adopted and promulgated under the Act, then they may be served with an administrative order.[395] These orders specify the violation or facts alleged that constitute a violation and outline necessary corrective action within a specific timeframe.[396] Orders are final unless the named permittee of the order requests a hearing.[397] Administrative penalties include fines at a minimum of $500 per day and will not exceed $25,000 and are decided at the discretion of the relevant department.[398]

b. Caselaw

The Nebraska Supreme Court has mentioned that the Nebraska Legislature is fully aware of the hydrological connection often existing between surface and ground waters and that this can extend beyond more than one natural resources district.[399] The case discussed classification of water basins and was unrelated to discharges, but it provides color to legislative history and the Nebraska Ground Water Management and Protection Act.[400] In deciding another water use appropriation issue, the Nebraska Supreme Court also mentioned that groundwater and surface water are inextricably linked, saying "[groundwater] discharges into springs, streams…and oceans."[401] But, the court also commented that Nebraska water law ignores that fact and mentioned that ground water is governed by the Natural Resources District, whereas surface water is governed by the Department of Natural Resources.[402]

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[394] *Id.*
[395] § 71-5304.01(1).
[396] *Id*.
[397] *Id*.
[398] NEB. REV. STAT. ANN. § 71-5304.01(5) (LexisNexis 2020).
[399] *Upper Big Blue Natural Res. Dist. v. State Dep't of Natural Res.*, 756 N.W.2d 145, 150 (Neb. 2008).
[400] Note, this Act does not deal with groundwater discharges, but with water use and appropriation.
[401] *Spear T Ranch, Inc. v. Knaub*, 691 N.W.2d 116, 130 (Neb. 2005).
[402] *Id*. at 183, 184. Recall, the litigated issue was not related to groundwater discharges.

The Nebraska district court also discussed the hydrological connection between groundwater and surface water in *Potter v. ASARCO, Incorporated*. ASARCO, with an NPDES permit from the NDEQ for effluent discharges into the Missouri River through the city's storm water system, was responsible for cleanup of their hazardous waste site.[403] During recreational use, plaintiffs complained of odor and smell coming from the Missouri river, which was close to ASARCO's site.[404] The court pointed out that ASARCO's facility sat atop sand and gravel deposits underlain by sedimentary bedrock strata, which clearly transmitted groundwater into the Missouri River.[405] Despite the hydrological connection that was made, the court held that the plaintiffs lacked standing to sue under the Resource Conservation Recovery Act because they failed to demonstrate a link between the pollution and ASARCO's industrial activities;[406] not only were there other industries contributing to pollutants in the river, but chemicals discharged from the groundwater at the ASARCO site did not represent a significant threat to its overall water quality.[407]

c. Appendix **A Scenarios**

Groundwater is heavily regulated in Nebraska. "Any pollutant introduced directly or indirectly by human activity is not allowed to enter groundwater" if beneficial uses of groundwater or hydrologically connected groundwaters would be impaired.[408] Nebraska has three different groundwater classifications including Class GA (current or proposed to be public drinking water supply), Class GB (currently being used as private - or has the potential for being used as private *or* public drinking water supply but cannot be classified as GA), and Class GC

[403] *Potter v. ASARCO, Inc.*, 8:96CV555, 1999 U.S. Dist. LEXIS 15763, at *3, *5 (D. Neb. June 29, 1999).
[404] *Id*. at *7.
[405] *Id*. at *3.
[406] *Id*. at *12.
[407] *Id*. at *11, *18.
[408] 118 NEB. ADMIN. CODE § 4 (2020). Beneficial uses are defined in chapter 6 of Title 118.

(which is not being used and has little or no potential as public or private drinking water supply.[409] These classifications may be changed by the Environmental Control Council but not to simply avoid cleanup in the event of, or in anticipation of, groundwater pollution.[410] The Department of Environmental Control ("DEC") also may regulate what is considered a potential point source and must consider certain factors: 1) ground water classification, 2) vulnerability of the groundwater to pollution, 3) beneficial uses of groundwater, 4) characteristics of the potential point source, 5) technical and socioeconomic factors, and 6) other site-specific factors.[411] That said, the requirements must not preempt more stringent restrictions required of sources and facilities covered by the CWA, SDWA and other applicable federal statutes.[412] The regulations state that the determination applies to all potential point sources for which the DEC has authority, which includes injection wells, water treatment plants, septic tanks, individual waste treatment lagoons, pretreatment facilities, hazardous waste treatment/storage/disposal facilities, livestock waste control facilities, licensed landfills, compost sites, and mineral exploration holes.[413]

This list is quite exhaustive and the corresponding titles in Nebraska's regulations are extensive and thorough. It is highly likely that any potential challenge or environmental concern arising from a *Maui*-centered issue would not need to be litigated regardless of the expansive list of scenarios in Appendix A. The potential point-sources will already be covered under the state's regulations.

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[409] § 7-003.01-.03.
[410] That said, there is criteria which allows the Council to reclassify which includes finding information that was previously unknown. This may include information such as the inclusion of the *Maui* decision. 118 NEB. ADMIN. CODE § 8-003 (2020).
[411] 118 NEB. ADMIN. CODE § 9-001 (2020).
[412] § 9-002.
[413] These point sources are all regulated by Titles 119 to 135 of the Nebraska Administrative Code.

Scenario 1) Municipal Wastewater Management

The effects of *Maui* likely won't necessitate practical changes in permitting of sewer discharges. For example, sewage sludge disposal that even "*would result* in any pollutant…entering any waters of the state" is covered under the NPDES program.[414] Underground Injection Wells ("UIW") are regulated under Title 122 and divided into five classes. They are discussed further in Scenario 3, but it is important to note that Class V UIWs include domestic wastewater disposal wells.[415] These wells refer to septic systems with a capacity of greater than 20 persons that use a variety of disposal methods, and also refer to domestic wastewater treatment plant effluent disposal wells like in *Maui*.[416] The title also regulates drinking water and requires that "no owner or operator shall construct, operate...plug or abandon any injection well...in a manner that allows the movement of fluid containing any contaminant into underground sources of drinking water, if the presence of that contaminant may cause a violation of any primary drinking water regulation...or may otherwise adversely affect the health and safety of persons.[417]

Chapter 11 of Title 123 regulates the operation and maintenance of wastewater works. Wastewater treatment facilities must be maintained in proper operation condition in accordance with NPDES permit requirements and not result in a prohibited bypass or unauthorized discharge.[418] Noncompliance of NPDES permit effluent limits must be reported via report within 24 hours, which includes unanticipated bypasses or upsets.[419] Bypasses prohibitions are outlined

[414] 119 NEB. ADMIN. CODE § 2-002.01 (2020).
[415] 122 NEB. ADMIN. CODE § 2-005.17C (2020).
[416] *Id*.
[417] § 4-001 (2020).
[418] 123 NEB. ADMIN. CODE § 11-001.
[419] 119 NEB. ADMIN. CODE § 14-001.12G2.

in general under chapter 32 of title 119.[420] Bypasses in pretreatment programs are prohibited unless certain circumstances arise. Some examples include if they are unavoidable to prevent severe property damage, no feasible alternatives exist, or if permittees of POTWs submit written notices promptly.[421] Bypasses are also regulated under chapter 14-001.13 of Title 119. Permittees may allow bypasses to occur under a variety of conditions, which fall under either anticipated or unanticipated bypasses, but it is heavily monitored and controlled.[422] Most importantly, Chapter 14-003 states that "the discharge of [1] any pollutant not identified and authorized by the NPDES permit or…[2] any pollutant more frequently than or at a level in excess of that identified and authorized by the permit shall constitute a violation of the terms and conditions of the permit." This may be interpreted to mean that a discharge from an unanticipated sewage bypass that ends up into a basement and then into groundwater is a violation of the NPDES permit program. That said, the regulations specific to bypasses did not otherwise discuss the potential for bypasses to affect groundwater or hydrological connections to surface water.

Lastly, lagoons are regulated under chapter 11 of Title 123 and are assigned a list of strict operating requirements.[423] They require a permit, as well as groundwater monitoring and maintenance plans, and must operate and maintain the lagoon in compliance with NEPA.[424]

[420] This section prohibits bypasses unless four conditions are met (these conditions have been summarized): it was unavoidable, no feasible alternatives existed, the permittee notified the director within 24 hours of becoming aware of the bypass, and the bypass is conducted under conditions determined to be necessary by the Director to minimize any adverse effects. 119 NEB. ADMIN. CODE § 32-001.
[421] 127 NEB. ADMIN. CODE § 48-001.
[422] 119 NEB. ADMIN. CODE § 14-001.13
[423] 123 NEB. ADMIN. CODE § 11-008.
[424] 124 NEB. ADMIN. CODE § 3-005.

Scenario 2) Stormwater Management: Green Infrastructure (GI)

Chapter 10 of Title 119, which regulates the permitting of storm water discharges, states that "no person shall discharge storm water containing any pollutant except as authorized by a NPDES permit" or elsewhere in the chapter.[425] The following activities that discharge stormwater need an NPDES permit: anything associated with industrial activity;[426] large, medium, and small municipal separate storm sewer systems ("MS4"); and anything that the Director determines to *contribute* to a violation of a water quality standard or *significant* contributor of pollutants to WOTUS.[427] Included in this list is combined sewer systems that discharge storm water runoff combined with municipal sewage. They are considered point sources, an NPDES permit is required, and they are not regulated by the provisions in chapter 10.[428] Storm water discharges associated with industrial activities require monitoring results, but they will be established on a case-by-case basis depending on the nature of the discharge.[429] Permits are generally required for making additions to wastewater works, however, construction of MS4s are exempt from these permitting requirements.[430]

The director might require permit conditions incorporating erosion and sediment control for storm water discharges associated with small construction activities.[431] Besides implementing appropriate erosion and sediment control best management practices, such a program also would contain requirements for construction site operators to develop and implement a storm water pollution prevention plan.[432] For storm water discharges *from* construction activities, the same

[425] 119 NEB. ADMIN. CODE § 10-002.01. Note, chapter 10 provides a complete list of requirements for all types of stormwater discharges, including discharges from and through MS4s.
[426] Further regulations regarding NPDES permitting for industrial activities is found in Appendix F of Title 119.
[427] 119 NEB. ADMIN. CODE § 2-002.06 (2020).
[428] § 10-002.08
[429] § 17-012.04. Additionally, minimum requirements for these activities are also included in this subchapter.
[430] 123 NEB. ADMIN. CODE § 3-002.08
[431] 119 NEB. ADMIN. CODE § 17-020.01.
[432] 119 NEB. ADMIN. CODE § 17-020.01C.

program also applies and also requires anything necessary to achieve a "best available technology" standard.[433]

The operator of a large or medium MS4 must submit annual reports, which will include, among other things, the status of implementing components of the storm water management program that are established as permit conditions.[434] To the extent that this refers to GI, these discharges must be at least reported to the NDEE on an annual basis.[435] As for discharges from GI, inflow structures that discharge water from roof drains, exterior storm water drains, or ground water to a public sanitary sewer system must be authorized by permit or regulation.[436] By contrast, the Director may not require a permit for discharges of storm water runoff from certain operations, including:

> …Transmission facilities, composed entirely of flows which are from conveyances or systems of conveyances (including but not limited to pipes, conduits, ditches, and channels) used for collecting and conveying precipitation runoff *and* which are not contaminated by contact with or that has not come into contact with, any overburden, raw material, intermediate products, finished product, byproduct or waste products located on the site of such operations.[437]

To the extent that this also refers to GI, then discharges from these facilities do not require an NPDES permit. Therefore, it seems that as long as the storm water is clean enough and does not contribute to pollution, then a permit will not be necessary under Nebraska state standards, and as long as the director considers *Maui* in its determination for a storm water facility to require a permit, then Nebraska's GI programs should be in compliance with *Maui*.

[433] § 17-020.02.
[434] § 15-001.03.
[435] *Id*.
[436] 123 NEB. ADMIN. CODE § 4-001.04.
[437] 119 NEB. ADMIN. CODE § 10-002.03.

Scenario 3) Drinking Water: Water Reuse

Drinking water is strongly regulated in Nebraska as well. There are various restrictions on wastewater and injection wells as mentioned above, and Title 122 of the Code, which regulates underground injection ("UIW") and mineral production wells, classifies UIWs into five categories (I-V).[438] Class I wells are wells that:

> Inject fluids beneath the lowermost formation containing, within one quarter mile of the well bore, an underground source of drinking water. These include, but are not limited to industrial and municipal waste disposal wells.[439]

Class V wells are injection wells that are not included in the other four classes and include, but are not limited to, recharge wells used to replenish the water in an aquifer.[440] They must be authorized by the NDEE before construction or operation, and an application must be submitted pursuant to chapter 10.[441] The person authorized must report noncompliance which might endanger health and safety or cause pollution within 24 hours of an incident, and a written submission must also be reported to the NDEE within five days and include, *inter alia*, "any malfunction…which may cause fluid migration into or between [underground sources of drinking water] or to the *surface*."[442] This rule leads to the conclusion that groundwater standards also apply when UIW's influence surface water.

Chapter 3 of the title includes prohibitions of unauthorized injections. Chapter 4 includes prohibitions of movement of fluids into underground sources of drinking water, which outlines restrictions for class V wells, including a requirement for an individual permit if the well causes a violation of primary drinking water regulations of the state.[443] Chapter 5 delegates discretion to

[438] 122 NEB. ADMIN. CODE § 4-003 (2020).
[439] § 2-001.
[440] § 2-005.06.
[441] § 6-001, -002
[442] § 6-007.
[443] 122 NEB. ADMIN. CODE § 4-003.

the Director to identify and protect underground sources of drinking water, including exempting certain aquifers.[444] Chapter 7 provides classifications for groundwater, but does not explicitly mention surface water in the classifications. Lastly, chapter 17 provides rules on construction and the design of UIWs, including for class V wells (which involves domestic wastewater disposal wells), where the design must be submitted to the department for approval and minimum setback distances are provided as guidelines.[445] The setback distance for surface water is the same 50 feet for class V wells that are constructed into and above the water table, and for domestic wastewater disposal wells.[446]

Nebraska also requires that all POTWs must provide adequate notice to the Director of any anticipated impact of the change on the quantity or quality of effluent to be discharged *from* the POTW."[447] Assumedly, this would include effluent discharged into injection wells.

XIV. Nevada

a. Statutory Regulation

Nevada's Water Pollution Control Law ("WPCL") defines "waters of the state" as:

> all waters situated wholly or partly within or bordering upon this State, including but not limited to all streams, lakes, ponds, impounding reservoirs, marshes, water courses, waterways, wells, springs, irrigation systems and drainage systems; and all bodies or accumulations of water, *surface and underground*, natural or artificial.[448]

Thus, groundwater is included in WOTUS and is therefore part of Category 1 in Appendix B. A diffuse source is also a key definition in Nevada's regulations for purposes of this analysis. It means "any source of water pollution which is diffused to the extent that it is not

[444] § 5-001, -002.
[445] § 17-005.01.
[446] § 17-005.02, -005.03G, -005.04I, (Table 17.1, 17.2, 17.3).
[447] 119 NEB. ADMIN. CODE § 15-001.02, .02C2.
[448] NEV. REV. STAT. ANN. § 445A.415 (LexisNexis 2020).

readily discernible and cannot be confined to a discrete conveyance…[which is] intended to be equivalent to the term 'nonpoint source' as used in federal statutes and regulations.[449] Nevada's Administrative Code contains entire sections that regulate diffuse sources,[450] which ensures that all types of pollution are regulated regardless of their source or when and where they connect to navigable waters. It is the policy of the state to "maintain the quality of waters…consistent with [*inter alia*] the public health and enjoyment…and to encourage and promote the use of methods of waste collection and pollution control for all significant sources of water pollution (including point *and diffuse sources*)."[451] This further shows that Nevada's regulations are more stringent than the federal regulations for discharges into waters of the state.

The Department of Conservation and Natural Resources ("DCNR") is designated as the pollution control agency for the state of Nevada.[452] Under the Division of Environmental Protection (NDEP), the DCNR reviews environmental assessments, (445A.160) enforces the SEC's regulations (445A.180) and is directly responsible for the management of Lake Tahoe and its watershed, including adopting regulations, issuing permits, and providing permission to deposit material into the Lake.[453] In addition to carrying out the legislation and regulations related to water pollution control, the director of the DCNR has the discretion to push state and federal requirements for injection wells.[454] The director participates in and administers the state's

[449] NEV. REV. STAT. ANN. § 445A.435.
[450] Zone of mixing is defined as "the volume of water near the point of waste discharge within which the waste immediately mixes with the receiving water due to the momentum of the waste discharge and the difference in density between the waste and the receiving water." NEV. ADMIN. CODE § 445A.115. This is relevant in that it demonstrates that Nevada regulates pollution discharges even as they mix in with navigable waters to ensure they "achieve the highest attainable level of water quality." NEV. ADMIN. CODE § 445A.295.
[451] NEV. REV. STAT. ANN. 445A.305 (LexisNexis 2020) (emphasis added).
[452] § 445A.440. The DCNR is responsible for all federal water pollution control legislation except for the SEC's role stated hereafter.
[453] § 445A.170.
[454] NEV. REV. STAT. ANN. § 445A.450 (LexisNexis 2020).

NPDES program and ensures records are kept, procedures are established, and reports are completed for owners and operators of treatment plants in the state.[455]

The State Environmental Commission (SEC) is the other main water pollution control entity in Nevada and has the exclusive power to promulgate rules and regulations.[456] It is responsible for regulating the amount of waste that may be discharged as well as regulating injection wells that even might "reasonably be expected to supply any public water system," and cooperating with the federal government and other agencies.[457]

Obtained from the DCNR, permits in Nevada are required by all who discharge pollutants from a point source into any waters of the state, and fall under the ambit of the NPDES permit program.[458] In addition to a discharge from a point source, it is unlawful for a person to allow "fluids injected through a well to remain in a place where the fluids could be carried into the waters of the State by any means" without receiving a permit from the DCNR.[459] The application process for permits is rigorous, and its requirements are listed in the regulations.[460]

There are three types: general permits, individual permits, and temporary permits. The general permit is the most prevalent, and may be issued for a category of discharges, reuse or ultimate disposal of treated wastewater and sludge.[461] This includes discharges or injections of fluids through a well, which in some way relate to each other whether it be in the same

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[455] *Id*.
[456] § 445A.440.
[457] § 445A.425(1)(a-e).
[458] Nev. Rev. Stat. Ann. § 445A.465(1) (LexisNexis 2020). That they fall under this program is reasonably assumed given that the definition of a permit means a written authorization in accordance with the Act (which is referred to as the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. §§ 1251 et seq.). NEV. ADMIN. CODE § 445A.072, .098 (2020).
[459] § 445A.465(1)(d).
[460] NEV. ADMIN. CODE § 445A.230, .232, .234 (2020) (public notice). The director is also responsible for notifying other appropriate government agencies of each complete application and must provide them with an opportunity to submit reviews and recommendations. §445A.235.
[461] § 445A.266 (1)(a)-(c).

geographical area, or the same types of discharges, limitations, or monitoring.[462] Facilities seeking general permits are restricted in where they can be located.[463] Facilities that regulate stormwater or require the same effluent limitations or standards for water reuse fall under the general permit program.[464]

The individual permit is a "catch-all" effort to cover everything outside of a general permit. The DCNR might require a general permit holder to obtain an individual permit instead.[465] Instances where this might occur include if the discharge or injection is not in compliance with the general permit, a change in circumstances makes the general permit no longer applicable, or if the department determines that the discharge or injection is a significant or potentially significant contributor of pollutants to waters of the state.[466] The department will consider the location and size of the discharge or injection, and the quantity and nature of the pollutants.[467]

A temporary permit may be issued for the discharge of pollutants or injection of fluids through a well and is valid for not more than 180 days.[468] Neither the statute nor the regulations explicitly detail the purpose and any other requirements. Therefore, it is assumed that the permit is used in preparation to acquire another permit.

Permits are prohibited from being issued if they authorize the discharge or injection of fluids through a well into any waters of the state and:

> (1) [are a] radiological, chemical or biological warfare agent or high-level radioactive waste;

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[462] NRS 445A.475.
[463] NEV. ADMIN. CODE § 445A.266(3) (2020). The regulation specifies five possible areas, the last of which is up to the director's discretion.
[464] § 445A.266(4)(c), (d).
[465] NEV. REV. STAT. ANN. 445A.480(1)(LexisNexis 2020) .
[466] § 445A.480(2)(a)-(c).
[467] NEV. REV. STAT. ANN. 445A.480(2)(c).
[468] § 445A.485.

(2) which would substantially impair anchorage and navigation in any waters of the State;
(3) which would result in the degradation of existing or potential underground sources of drinking water;
(4) which is inconsistent with an applicable areawide plan for management of the treatment of waste; or
(5) which the Director determines is inconsistent with the regulations and guidelines adopted by the Commission pursuant to NRS 445A.300 to 445A.730, inclusive, including those relating to standards of water quality and injections of fluids through a well.[469]

There is a list of exemptions where permits are not required.[470] This includes discharges of pollutants from agricultural and silvicultural activities (runoff from crops and forested lands), but this is not without severe limitations.[471] The limitations can be summarized as if the agricultural or silvicultural activity contributes to anything greater than a *de minimis* amount of pollution, then it will be inapplicable to the exemption and a permit will be required.

The next question is how Nevada's regulations are enforced. As stated above, the DCNR has the power to enforces the regulations. Violations, or aiding or abetting in violations, of any provisions relating to water pollution in the state, or of any permit, regulation, or order are subject to a fine up to $25,000 per day.[472] The DCNR may recover damages from any adverse effects resulting from a discharge, loss of wildlife or aquatic life, and may compel compliance by injunction or any other remedy.[473] Criminal punishments may also be included from the same violations of a maximum of $25,000 per day and/or by imprisonment of up to one year.[474] As another layer to enforcement, the director, under most circumstances, must conduct an

[469] § 445A.490.
[470] This list is detailed and has many caveats that make it onerous to replicate here. The list is found in paragraph 2 of chapter 445A.228 of the Code.
[471] § 445A.228(2)(c).
[472] NEV. ADMIN. CODE § 445A.700(1) (2020).
[473] § 445A.700(2)-(4).
[474] § 445A.705.

independent investigation into the violation that took place before any civil or criminal action is commenced.[475]

As for violations concerning surface waters and diffuse sources, upon discovery of a violation, the director *may* issue an order laying out the violation and prescribing necessary corrective action, but "no civil or criminal penalty may be imposed for failure to obey the order."[476] Instead, if corrective action is not taken, then the Director may commence a civil action pursuant to the regulations or issue an injunction.[477]

The state requires corrective action, which must take place for major corrective sites and includes mandatory oversight and reimbursement of costs associated with the remediation and oversight of the cleanup.[478] Major corrective sites include treatment, storage or disposal sites as defined by federal law that have contaminated soil or groundwater; subjects of administrative orders or civil actions, or a written corrective action agreement; or those that have oversight costs that exceed $10,000. Minor corrective sites are in essence, those not defined as treatment, storage, or disposal sites under federal law, and are therefore unnecessary to consider in this analysis.

b. Caselaw

There is caselaw in Nevada that interprets diffuse sources against point sources. In *County of Elko v. Nevada*, the court found that diffuse source laws take precedence over point

[475] § 445A.707.
[476] § 445A.680(1).
[477] NEV. ADMIN. CODE § 445A.680(2) (2020). The differentiation in enforcement between point sources and non-point sources in Nevada is somewhat cause for concern if non-point sources are reclassified through enforcement of the *Maui* decision either by litigation or legislative action.
[478] Corrective action is defined as "permanent remedial action that is taken after the release of a hazardous substance, hazardous waste or regulated substance to prevent the element or chemical from posing a threat or potential threat to the present or future health of the public or to the environment. NEV. ADMIN. CODE § 445A.2731.

source law.[479] This meant that the petitioner in the case did not need a permit to repair a road – which involved cleaning a channel – because the court considered the construction as a diffuse source defined under Part 445A.309.[480]

In *Great Basin Mine Watch v. Hankins*, the Ninth Circuit Court of Appeals addressed dewatering and whether it falls under the federal program. The Nevada statute that governs dewatering is separate from the WPCL and thus it was a concern whether dewatering was part of the permit program. Under the statute, "any person wishing to appropriate or divert underground water should apply to the Nevada state engineer for a permit."[481] Taking this into account, the court held that "because the quality of discharged water and the quantity of appropriated water are governed by different laws and subject to different permits, it is clear that Nevada does not regulate dewatering under its Clean Water Act authority."[482] The court further held that because the state and CWA's anti-degradation statutes only refer to water quality and that the water pollution regime is defined to not supersede the water allocation regime, that the CWA's anti-degradation provision must be inapplicable to water allocation.[483]

The court in *Great Basin Resource Watch v. United States DOI* also interpreted Nevada's WPCL in holding that not only does Nevada have a "comprehensive regulatory scheme governing water quality issues," but that post-mining pit lakes simply cannot have the potential to degrade the groundwaters of the state, otherwise the mine operator must obtain a permit from the NDEP.[484]

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[479] *County of Elko v. Nev.*, File No. 30208, Dept. No. 1, 2000 Nev. Dist. LEXIS 1597, at *7 (Nev. Dist. Ct., 4th Jud. Dist., Elko Cty. 2000).
[480] *Id*.
[481] NEV. REV. STAT. ANN. § 534.050. (LexisNexis 2020).
[482] *Great Basin Mine Watch v. Hankins*, 456 F.3d 955, 970 (9th Cir. 2006).
[483] *Id*. at 964.
[484] *Great Basin Res. Watch v. United States DOI*, 3:13-cv-00078-RCJ-VPC, 2014 U.S. Dist. LEXIS 100363, *51 (D. Nev. July 23, 2014).

The NDEP regulates spill cleanup efforts firsthand but exercises this oversight in conjunction with the EPA.[485] This demonstrates that Nevada works closely with the federal government to promote water pollution control.

c. Appendix A Scenarios

The primary concern with Nevada's regulations and its permit program is whether diffuse sources fall under the functional equivalent standard set out in *Maui*. These are considered non-point sources, which begs the question, what happens if a diffuse source as defined by the state is has a hydrological connection to WOTUS, which according to *Maui* would be regulated under the NPDES program? The regulations as they now stand may redirect a diffuse source that could be potentially classified as a point source.

Diffuse sources are clarified in the regulations to include agricultural, silvicultural, and mining activity; and runoff from construction activities, roads, and urban areas.[486] They do undergo a massive amount of scrutiny and are controlled by programs established by the DCNR or those municipalities to which it delegates.[487] If a diffuse source is a source of pollution, then it must be determined who is responsible for it if it is a violation of standards for water quality.[488] Anyone who might commence use of land which is likely to cause pollution from a diffuse source must file notice to the municipality, unless they have a permit that requires the use of the best practices for the control of water pollution resulting from diffuse sources.[489] Therefore, the DCNR or the municipality will be made aware of the potential for a diffuse source to pollute navigable waters. This means they should be able to mandate the required permit in the event

[485] *Roeder v. Atl. Richfield Co.*, Case No. 3:11-CV-00105-RCJ-WGC, 2013 U.S. Dist. LEXIS 160624, *18 (D. Nev. October 21, 2013).
[486] NEV. ADMIN. CODE § 445A.309(1)-(8) (2020).
[487] NAC 445A.314.
[488] 445A.317
[489] 445A.327(1), (3)(c).

that a diffuse source that may be hydrologically connected to a navigable water to ensure compliance with the *Maui* doctrine.

Further, the DCNR is able to sample any surface water of the state and decide if a use or activity is likely to cause water pollution.[490] Any programs established by municipalities to monitor diffuse sources undergo thorough evaluation and the *State Handbook of Best Management Practices*, prepared by the State Conservation Commission, must be consulted and amended to include plans for how to manage diffuse sources. Given Nevada's plans on how to regulate diffuse sources, it is likely that *Maui* is already, or if not, can be easily incorporated into the regulatory scheme.

If this is not enough evidence that *Maui* is already or can be incorporated, the definition of waters of the state includes surface water. This is an extra layer of regulation over sources of water pollution despite Nevada specifying a diffuse source to be an exclusive interpretation of a non-point source. There is a long list of standards for surface waters in the state. One example is that wastes from controllable sources (like municipal facilities) containing certain chemicals that are reasonably amenable to treatment or control must not be discharged untreated or uncontrolled into surface waters in Nevada.[491]

Scenario 1) Municipal Wastewater Management

Sewer system backups are regulated sufficiently under Nevada's Administrative Code. It requires owners or operators[492] to immediately take corrective action necessary to mitigate and abate imminent and substantial hazards to public health or safety created by the release of waste,

[490] 445A.325, .327.
[491] NEV. ADMIN. CODE § 445A.121(7).
[492] Operator is defined as a person in control of or having responsibility for the daily operation of a site, business or other operation where a hazardous substance, hazardous waste or a regulated substance is disposed of, used or store. § 445A.2265. Owner is defined as a person who owns same. § 445A.22655.

including (but not limited to) removal from any leaking container required to prevent further leakage; conducting above ground inspections or exposed underground releases to any surrounding soil, groundwater, or surface water; and eliminating the hazard from any contaminated soil that is exposed of during excavation of the site that has been contaminated.[493] Sewage leaking into basements is likely applicable, particularly because the director can also waive any provision not requiring immediate corrective action as well.[494] Regardless, there is an extensive process for corrective action with soil contamination which requires orders, plans and schedules to complete the corrective action, and conditions for terminating the remediation.[495]

Discharges of effluent are also heavily regulated under the permit program. The state requires vast oversight into effluent limitations. Consideration must be given to the effect of the discharge on receiving waters and its beneficial use as well as standards for water quality and effluent limitations promulgated by the EPA or any more stringent limitations, including those necessary to meet any other federal law or regulation.[496] Further, for each issued NPDES permit, the director must "specify average and maximum daily quantitative limitations for the level of pollutants in the authorized discharge.[497]

Disposal of pollutants into wells also have their own set of regulations.[498] Particularly, the director must specify additional terms and conditions in the final NPDES permit. This is for the purpose of prohibiting or, in the least, controlling the proposed disposal in order to prevent pollution of ground and surface waters.[499]

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[493] NEV. ADMIN. CODE § 445A.22695(1) (2020).
[494] § 445A.22695(2).
[495] § 445A.22725, .2273, 22745.
[496] § 445A.243(1), (3).
[497] § 445A.243(4).
[498] § 445A.253(1). It is assumed that this includes injection wells. Despite other states implementing it quite methodically, the regulations in Nevada do not mention the federal UIC well program at all.
[499] NEV. ADMIN. CODE § 445A.253(1), (2) (2020).

Lastly, if a person discharges a pollutant into a POTW, they must comply with standards for pretreatment and the applicable limitations and prohibitions contained in 40 C.F.R. §§ 401.10 to 469.26, inclusive. Further, if a permit is for discharge from a POTW, the holder shall notify the director of new pollutants into the [POTW] from a source which would be a new source as defined in section 306 of the CWA if the source were discharging pollutants.[500] This lends support to the fact that wastewater treatment components must withstand federal scrutiny and are heavily regulated for potential pollution mishaps. Lagoons are also included in the treatment works regulations, and thus too require a permit to discharge pollutants.[501]

Scenario 2) Stormwater Management: Green Infrastructure (GI)

Runoff from stormwater is also regulated under the NPDES permit program. Owners or operators of industrial or commercial facilities that are over 5 acres in size are required to submit a permit application.[502] As mentioned in the statutory regulation, a facility that discharges any pollutant into waters of the state (which includes groundwater) must be located within designated areas. The regulations under the general permit program further state that such a facility must contain storm water to be part of that program.[503] Therefore, a permit may be required for green infrastructure that diverts stormwater into the ground or surface water. This includes bioswales. However, if the GI doesn't discharge the same types of pollutants, require the same effluent limitations, or require the same or similar monitoring, then the discharge will not be part of the general permit. The general permit program will allow bioswales and other green infrastructure

[500] § 445A.255(1)(a).
[501] § 445A.289. A lagoon is included in the definition of "facility" in the regulations and listed as a Class I plant in the Treatment Works part of the Code, which requires a permit to discharge into WOTUS.
[502] § 445A.232. In this provision, stormwater runoff is mentioned as a part of the fee structure to obtaining a permit. It is therefore an appropriate assumption that stormwater is regulated under the NPDES permit program.
[503] NEV. ADMIN. CODE § 445A.266(3).

to operate and discharge into surface and groundwater, but only under the limitations set forth in the permit. Other GI will be regulated under an individual permit.

Scenario 3) Drinking Water: Water Reuse

Nevada mirrors pretreatment regulations with federal regulations. If a person discharges a pollutant either into WOTS or into a POTW, they must comply with standards for pretreatment and the applicable limitations and prohibitions contained in 40 C.F.R. §§ 401.10 to 469.26, inclusive. Further, if a permit is for discharge from a POTW, the holder shall provide notice to the director of new pollutants into the [POTW] from a source which would be a new source as defined in section 306 of the Act if the source were discharging pollutants.[504] In determining corrective action for contaminated soil, an evaluation of the conditions at the site must consider the depth of the ground water and the distance to irrigation wells or wells for drinking water.[505] This demonstrates that the regulation of reclaimed water[506] is at least as stringent as federal regulations in Nevada.

Reclaimed water cannot be used unless the DCNR has approved a plan for managing the reclaimed water, an NPDES permit has been obtained, and the water has received at least secondary treatment.[507] This treatment refers to treatment of sewage and has 30-day average requirements for pH, oxygen concentration, and suspended solids concentration.[508]

[504] § 445A.255(1)(a).
[505] § 445A.227(2).
[506] Reclaimed water is defined as sewage that has been treated by a physical, biological or chemical process, which is intended for reuse and that meets the corresponding water quality criteria for the specified use. The term does not include graywater. § 445A.27445.
[507] NEV. ADMIN. CODE § 445A.275(1)(a)-(b).
[508] § 445A.275(3)(c).

There are six categories of reclaimed water, each of which must meet specific requirements of bacteriological quality.[509] Category A+ may be used for indirect potable reuse[510] (IPR) through injection wells or spreading basins, and must meet the provisions of the National Primary Drinking Water Regulations and related federal regulations.[511] The point of compliance for IPR is the zone of saturation.[512] IPR undergoes incredibly strict requirements beyond an application for an NPDES permit, including issuance of public notice. Spreading basins require higher water quality (category A), and injection wells must pass through a minimum of three separate treatment processes for pathogen removal.[513] These regulations for injection wells, if implemented for the same injection wells in contention in *Maui*, likely would have been sufficient to restrict their use and ensure that the water did not reach the ocean.[514]

Lastly, the director of the DCNR may waive compliance or modify any water reclamation requirements for a specific proposed use of reclaimed water as long as the proposed use is consistent with discharge NPDES permit regulations.[515]

XV. New Hampshire

a. Statutory Regulation

New Hampshire's permit program is "more stringent than" federal standards. Although New Hampshire does not have delegated NPDES authority, it is included in this memo because it may seek delegation as Idaho did in 2018. It is also included because New Hampshire's laws

[509] § 445A.276(1).
[510] Indirect Potable Reuse is defined as the discharge of reclaimed water into an aquifer for the purpose of augmentation or recharge of a drinking water source where the reclaimed water travels through an environmental buffer before the reclaimed water is recovered into an extraction well for potable use. § 445A.27441.
[511] NEV. ADMIN. CODE § 445A.2761(1)-(2), .27612(1)(a).
[512] § 445A.27612(2).
[513] § 445A.27618(1), (2).
[514] Note that storage reservoirs do not constitute part of the treatment process for purposes of determining quality of reclaimed water. § 445A.279.
[515] NEV. ADMIN. CODE §445A.280.

may serve as a guide for understanding how other states could regulate discharges to groundwater reaching navigable waters in light of *Maui*. New Hampshire's Water Pollution and Waste Disposal Act ("WPWDA"), and the New Hampshire Water Quality and Quantity Program Regulations that implement the WPWDA, are the primary state regulatory authorities for the protection of water quality.[516] The WPWDA requires that the New Hampshire Department of Environmental Services ("NHDES") regulate discharges to waters of the state to satisfy the provisions of either state or federal law, "whichever is more stringent."[517] Unlike many other states, New Hampshire law does not define "waters of the state." Instead, the WPWDA prohibits any person or persons from "discharge[ing] or dispose[ing] of any sewage or waste to the surface water or groundwater of the state without first obtaining a written permit from the Department of Environmental Services."[518] Hampshire's state law is more stringent than federal law because its regulatory reach explicitly includes groundwater. New Hampshire therefore belongs in Category 1 of Appendix A 'more stringent than' states.

The WPWDA focuses narrowly on the types of discharges to surface and ground water that it regulates. This may be because it does not have delegated authority to regulate certain types of pollutants.[519] The WPWDA defines 'waste' and 'sewage' respectively to mean "industrial waste and other wastes" and "water-carried waste products from buildings, public or private, together with such groundwater infiltration and surface water as may be present."[520] It

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[516] N.H. CODE ADMIN. R. ANN. Dep't of Env't Serv. Serv. Div. of Water Quality and Quantity Programs § 300, § ThNo400, § 1700 (2020).
[517] WATER POLLUTION AND WASTE DISPOSAL ACT, N.H. REV. STAT. ANN. § 485-A:3 (2020).
[518] § 485-A:13.
[519] While the CWA allows states to seek delegation from the EPA to administer the NPDES permit program, New Hampshire is one of three states that has not sought delegation. As a result, the EPA, rather than a state agency, issues NPDES permits in New Hampshire. NHDES reviews federal permits issued by the EPA and certifies that the permit meets state water quality standards and may issue its own discharge permits separately. EPA, *Permitting for Environmental Results NPDES Profile: New Hampshire*, (March 10, 2005), https://www3.epa.gov/npdes/pubs/newhampshire_final_profile.pdf.
[520] § 485-A:2.

includes a separate definition of 'other waste' as "garbage, municipal refuse, decayed wood, sawdust, shavings, bark, lime, ashes, offal, oil, tar, chemicals and other substances other than sewage or industrial wastes, and any other substance harmful to human, animal, fish or aquatic life."[521] New Hampshire's definition of 'waste' and 'sewage' seems to exclude stormwater. This may mean that while New Hampshire is, in general, a 'more stringent than' state, stormwater is regulated in a way that is 'no more stringent than.'

New Hampshire law does not provide much clarity on how discharges to groundwater that reach navigable waters ought to be regulated. In general, New Hampshire law requires that groundwater shall "not contain any regulated contaminant at a concentration such that the natural discharge of that groundwater to surface water will cause a violation of a surface water quality standard established in RSA 485-A or Env-Wq 1700."[522] Consideration of the natural discharge of ground to surface water are most likely used by the state in setting the effluent limitations of groundwater permits. Permits specifically designed for groundwater with a connection to surface water are not required under state law.

Groundwater discharge permits are issued by the water division of NHDES. The Groundwater Protection Act (GPA) governs groundwater quality standards in New Hampshire.[523] The GPA divides groundwater up into four classes and assigns each varying levels of state protection based on its potential to be used as drinking water.[524] Not all discharges to groundwater require permits. There are seven categories of discharges that require permits, such

[521] *Id*.
[522] N.H. CODE ADMIN. R. ANN. Dep't of Env't Serv. Div. of Water Quality and Quantity Programs § 402.04 (2020).
[523] GROUND WATER PROTECTION ACT N.H. REV. STAT. ANN. § 485-C:1 (2020).
[524] § 485-C:5.

as land treatment of wastewater and discharges containing regulated contaminant.[525] Some discharges such as stormwater do not require a permit but are required to be registered.[526]

The NHDES has wide discretion in selecting the standards upon which the effluent limitations of groundwater permits are based. It will select whichever standard it views as providing the "most effective means to abate pollution" and preserve New Hampshire's groundwater quality.[527] The NHDES commissioner is responsible for setting ambient ground water standards and these standards are the basis for issuance of groundwater discharge permits under § 485-A:13.[528] The commissioner's standards may not be less stringent than federal standards under the Safe Drinking Water Act but may be more stringent if the commissioner determines federal standards are insufficient to protect human health.[529] The NHDES may also impose additional reasonable conditions as may be necessary to fulfill the purposes of the statute in preventing pollution of the waters of the state such as compliance schedules or monitoring programs.[530] These standards may include economic and technological considerations, classifications enacted by the legislature, the projected best use of the surface water downstream or the requirements of state law or the CWA and all regulations promulgated thereunder.[531] New Hampshire law does not make clear what would happen in a scenario in which properly permitted discharges to groundwater reach navigable waters and whether this would trigger the need for a second surface water permit. This scenario would be most likely solely governed by *Maui*.

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[525] § 402.08.
[526] § 402.09.
[527] § 485-A:13.
[528] § 485-C:6.
[529] *Id*.
[530] § 485-A:13.
[531] *Id*.

b. Caselaw

There is very limited case law in New Hampshire on discharges to groundwater and no directly on point case law on discharges to groundwater reaching navigable waters. However, New Hampshire's case law on groundwater suggests that the state may be willing to heavily regulate discharges of certain pollutants to groundwater with a hydrological connection to surface waters. The state appears to more strictly regulate and monitor pollutants it deems particularly toxic, harmful to human health, hard to clean up and persistent in the environment.[532]

One example of such a particularly toxic chemical is MTBE. In *State v Exxon Mobil Corporation*, Exxon Mobil was adding methyl tertiary butyl ether (MTBE) to its gasoline in order to comply with the requirements of the federal Clean Air Act mandating the addition of an oxygenate to gasoline.[533] In 1999, after becoming aware that MTBE could pose increased risks to groundwater, the NHDES set a maximum contamination limit for MTBE in drinking water at 13 parts per billion and issued permits accordingly.[534] The state later banned MTBE altogether.[535] The court held that New Hampshire could regulate and ban the use of MTBE because the requirements of federal law did not preempt state tort law claims since Exxon was not required by federal law to use MTBE.[536] The court reasoned that since MTBE is capable of traveling through groundwater very rapidly, contaminating drinking wells as well as lakes and wetlands, the state was justified in its traditional exercise of police power to protect state water quality and such an exercise did not present an obstacle to federal law.[537] *Exxon Mobil* demonstrates that

[532] *State v. Exxon Mobil Corp.*, 126 A.3d 266, 274 (2015), *cert. denied*, 136 S. Ct. 2009 (2016).
[533] *Id*.
[534] *Id*.
[535] *Id*.
[536] *Id*. at 282; *see also State v. Hess Corp.*, 20 A.3d 212 (2011), *as modified on denial of reconsideration* (Mar. 22, 2011) (holding that the state could seek damages for contamination to private wells because the connected nature of water goes beyond damage to an individual well owner).
[537] *Id*.

New Hampshire recognizes and will regulate the conveyance of certain toxic chemicals like MTBE through groundwater to surface water.[538] However it's unclear whether it will do so through seeking permits for such discharges or monitoring water contamination levels and pursuing state tort law damages based on a theory of market share liability against local polluters after the fact.[539]

c. Appendix A Scenarios

Scenario 1) Municipal Wastewater Management

New Hampshire law requires that combined sewage overflows comply with NPDES permitting requirements and the EPA's National CSO control policy but does not provide clarity on discharges to groundwater. Sewer systems which back up into basements or leak directly into the ground are most likely going to governed largely by the Supreme Court's decision in *Maui* and New Hampshire surface water regulations rather than by separate, state laws on discharges to groundwater.[540] Analysis of such discharges would most likely be conducted on a case-by-case basis by the NHDES in light of the volume of the discharge and impact on receiving waters.[541] No explicit guidance is provided on how this assessment would be conducted. Other municipal waste, like discharges of backwash from public water treatment facilities, do not require permits but must be registered.[542]

Until 2019, New Hampshire law appeared to require underground injection to wells to comply only with 40 CFR 144, 145, and 146.[543] New regulations have been adopted but the

[538] New Hampshire is the second state to sue the makers of toxic PFAS chemicals, including 3M and DuPont Co. for statewide groundwater contamination. https://www.boston.com/news/local-news/2019/05/30/new-hampshire-sues-3m-dupont.
[539] *Exxon,* 126 A.3d at 297.
[540] N.H. CODE ADMIN. R. ANN. Dep't of Env't Serv. Div. of Water Quality and Quantity Programs §1703.05 (2020).
[541] § 402.04.
[542] §402.09.
[543] §404.04.

updated text has not yet been incorporated into the New Hampshire Administrative Code on Westlaw. In general, unlike under the CWA, New Hampshire law prohibits the underground injection of hazardous waste altogether.[544] New Hampshire's administrative code defines hazardous waste as any substance that is ignitable, corrosive, reactive or has toxic characteristics.[545] Discharges to groundwater from the operation of a septage lagoon within a wellhead protection area classified as GAA (the most protected class) are also prohibited.[546] Anyone operating an unlined wastewater, septage or sludge lagoon must obtain a groundwater discharge permit.[547] Aside from hazardous waste, owners/operators of underground injection wells must obtain a discharge registration before releasing any non-domestic wastewater that does not contain a regulated contaminant into groundwater. [548] Discharge permits are required for any discharges containing regulated contaminants.[549] A regulated contaminant is any contaminant for which an ambient groundwater quality standard has been established.[550] Ambient groundwater quality standards do not apply to naturally occurring contaminants.[551]

Scenario 2) Stormwater Management: Green Infrastructure (GI)

Discharges of stormwater must obtain a groundwater discharge registration.[552] It does not seem like discharges of stormwater require groundwater permits other than NPDES under *Maui*. If state permits are required, then the NHDES would most likely evaluate them on a case-by-case basis after considering the designated use/classification of the groundwater that the discharge

[544] §701.03.
[545] N.H. CODE ADMIN. R. ANN. Dep't of Hazardous Waste Programs §403.03 (2020).
[546] N.H. REV. STAT. ANN. § 485-C:12 (2020).
[547] N.H. CODE ADMIN. R. ANN. Dep't of Hazardous Waste Programs §403.08 (2020).
[548] §402.33.
[549] §402.08.
[550] §401.03.
[551] N.H. REV. STAT. ANN. § 485-C:6 (2020).
[552] N.H. CODE ADMIN. R. ANN. Dep't of Env't Serv. Serv. Div. of Water Quality and Quantity Programs §402.33 (2020).

will enter, the ambient groundwater quality established for that class, and the type of contaminant in the stormwater.[553] New Hampshire regulates stormwater by state permits such as shoreland permits, wetland permits and alteration of terrain permits. Municipalities discharging stormwater to green infrastructure would most likely need to seek an alteration of terrain permit. No stormwater management system may be located in groundwater protection areas "where the stormwater comes from one or more areas where petroleum products are dispensed or otherwise transferred for commercial or industrial purposes."[554] It must also not be located in an area with contaminants in groundwater above established ambient water quality standards.[555]

Scenario 3) Drinking Water: Water Reuse

Where treated water is used to recharge aquifers, New Hampshire's Groundwater protection act and regulations of Env-Wq 402 apply. Groundwater discharge permits are required for the construction and operation of any aquifer storage and recovery program.[556] Aquifer recharge programs must comply with the applicable ambient groundwater quality standards.[557] To the extent that groundwater discharges influences surface waters, New Hampshire law requires that any groundwater discharge shall "not contain any regulated contaminant at a concentration such that the natural discharge of that groundwater to surface water will cause a violation of a surface water quality standard."[558]

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[553] *Chapter 4 State and Federal Permitting Programs*, NEW HAMPSHIRE STORMWATER MANUAL: VOLUME 1, https://www.des.nh.gov/organization/divisions/water/stormwater/documents/wd-08-20a_ch4.pdf.
[554] N.H. CODE ADMIN. R. ANN. Dep't of Env't Serv. Serv. Div. of Water Quality and Quantity Programs §1507.02 (2020).
[555] *Id*.
[556] §402.08.
[557] N.H. REV. STAT. ANN. § 485-C:6 (2020).
[558] N.H. CODE ADMIN. R. ANN. Dep't of Env't Serv. Serv. Div. of Water Quality and Quantity Programs §402.04 (West 2020).

XVI. New Jersey

NJDEP rules specifically address the *Maui* scenario: under N.J.A.C. §7:9C-1.2, "discharges to ground water that subsequently discharge into surface waters shall not be permitted by the applicable regulatory program if such discharges would cause a contravention of surface water quality standards applicable to those waters."

a. Statutory Regulation

The New Jersey Water Pollution Control Act (NJWPCA) was enacted in order to extend the powers and responsibilities of the Department of Environmental Protection (NJDEP) to ensure compliance with the Clean Water Act and ensure limited direct regulation by the Federal Government.[559]

NJWPCA defines 'waters of the state' as "the ocean and its estuaries, all springs, streams and bodies of surface or **ground water**, whether natural or artificial, within the boundaries of this State or subject to its jurisdiction."[560] (Emphasis added.) Because NJWPCA explicitly covers pollutant discharges into ground water,[561] defines discharges to include intentional or unintentional leakages and spillages, and incorporates effluent limitations based on both primary and secondary recipient state waters (i.e. both ground water and surface water), New Jersey regulates water pollution more stringently than the Clean Water Act (CWA).[562] Further, because New Jersey already has a regulatory scheme that anticipates indirect pollution discharges to surface waters, the *Maui* decision will have limited impact on the regulation of pollution discharges to ground water.

[559] N.J. STAT. ANN. § 58:10A-1.
[560] N.J. STAT. ANN. § 58:10A-1(t).
[561] N.J. STAT. ANN. § 58:10A-1(t).
[562] N.J. STAT. ANN. § 58:10A-1(e).

Discharges to ground water are regulated per ground water quality standards.[563] Additionally, "discharges to ground water that subsequently discharge into surface waters shall not be permitted by the applicable regulatory program if such discharged would cause a contravention of surface water quality standards applicable to those surface waters. That is, those discharges must achieve compliance with both these [ground water] standards and the surface water quality standards."[564] By requiring NJPDES permits for pollution discharges into ground water within the state boundaries, as well as imposing conditions on discharges to ground water that change either the ground water or subsequent surface water quality standards, New Jersey regulates indirect discharges of pollutants to the ocean and other waters of the United States.

1) <u>Water Quality Standards</u>

The NJWPCA prohibits any pollutant discharges into waters of the state that would cause violations or exceedance of the set water quality standards under federal (adopted pursuant to the Clean Water Act) or State law (set by the New Jersey Legislature, or the commissioner of NJDEP based solely on NJ law). NJDEP has authority to adopt water quality standards that pertain to ground water pollutants, which apply to the development of: ground water protection standards pursuant to NJPDES, ground water remediation standards, and other requirements and regulatory actions applicable to discharged that cause pollutants to enter the ground waters of the state including non-point and diffuse sources.[565] Ground water quality criteria are outlined in N.J.A.C. §7:9C-1.

[563] N.J.A.C. §7:9C-1.1.
[564] N.J.A.C. §7:9C-1.2.
[565] N.J.A.C. §7:9C-1.1.

Of note: N.J.A.C. §7:9C sets ground water quality criteria for both pollutant discharges directly into ground water, and also for how those discharges may impact surface water quality standards. Where ground water that receives pollutants from discharges subsequently flows to surface waters, NJDEP also has the power to regulate those discharges as necessary to ensure the integrity of the surface water quality standards applicable.[566] Additionally, under the NJWPCA, NJDEP may set more stringent effluent limitations for point source discharge site than required by federal or State law, if the federal or State limitations interfere with the maintenance of applicable New Jersey water quality standards.[567] Thus, NJDEP already directly regulates the types of discharges that may be implicated by the Supreme Court's decision in *Maui*.

2) Permitting

The NJWPCA further outlines the issuance and modification processes, and the substance of NJPDES permits. The Commissioner of Environmental Protection is authorized to grant (and revoke) NJPDES permits.[568] A permit for discharges into New Jersey state waters includes a letter of agreement between a delegated local agency and a user of its municipal treatment works that set effluent limitations and other conditions for such discharges.[569] To modify a facility that is already subject to a NJPDES permit requires a showing of how the recipient will meet the state water quality standards, and also a detailed offering of what pollutants will be discharged, at what levels, and how they will change or comply with the applicable water quality standards.[570]

The commissioner may grant general permits for discharge of pollutants from concentrated aquatic animal production facilities and aquaculture projects, that do not set out

[566] N.J.A.C. §7:9C-1.7(g).
[567] N.J. STAT. ANN. § 58:10A-.8.
[568] N.J. STAT. ANN. § 58:10A-6.
[569] N.J. STAT. ANN. § 58:10A-3(k).
[570] N.J. STAT. ANN. § 58:10A-6 (f).

numeric effluent limitations.[571] The priority of these general permits is to meet the best management practices rather than meeting numeric pollutant discharge levels.[572] In granting general permits, the commissioner must take into consideration the source and receiving water quality and the type of aquaculture activity being conducted.[573] However, if NJDEP is not persuaded best management practices will be protective of the water quality standards outlined in P.L. 1977, NJDEP may require a permit that does establish numeric pollutant discharge limits.[574] General permits are also required for the discharge of ground water to surface water involving a ground water remedial action for discharges from an underground storage tank containing petroleum products.[575] This act is the only program regulating underground storage tanks in the state, and supersedes all local laws unless the municipal ordinance is more stringent, then it will be deemed effective after a NJDEP review.[576] This is another example of how New Jersey regulates discharges directly into groundwater which indirectly impact surface waters of the state.

3) Exemptions

Exemptions from the NJPDES permitting requirement may only be granted by the commissioner of the Department of Environmental Protection by regulation, so long as said exemption does not limit civil or criminal liability of any discharger.[577] Additionally, exemptions must fall within the following categories: (1) additions of sewage or other materials into publicly owned sewage treatment works regulated by pretreatment standards; (2) discharges of any pollutant from a marine vessel or discharges incidental to the normal operations of marine

[571] N.J. STAT. ANN. § 58:10A-6(q).
[572] N.J. STAT. ANN. § 58:10A-6(q).
[573] N.J. STAT. ANN. § 58:10A-6(q).
[574] N.J. STAT. ANN. § 58:10A-6(q).
[575] N.J. STAT. ANN. § 58:10A-7.2.
[576] N.J. STAT. ANN. § 58:10A-35.
[577] N.J. STAT. ANN. § 58:10A-6(d).

vessels; (3) Discharges from septic tanks and other means of land disposal of wastes; (4) discharges of dredged or fill materials into waters controlled by the Clean Water Act (so long as they comply with the Clean Water Act); (5) nonpoint source discharges; (6) uncontrolled nonpoint sources composed entirely of stormwater uncontaminated by industrial or commercial activity; (7) discharges conforming to a national contingency plan for removal of oil and hazardous substances; and (8) discharges resulting from agriculture activities.[578]

4) Enforcement

Furthermore, the NJWPCA outlines the schedule of compliance for remedial measures when effluent limitations are violated by pollution discharges into waters of the state of New Jersey. It includes "an enforceable sequence of actions or operations leading to compliance with water quality standards, an effluent limitation or other limitation, prohibition or standard."[579] The schedule of compliance requires the NJPDES permit recipient to demonstrate financial assurance, including the posting of bond or securities necessary to carry out the remedial measures outlined by the schedule of compliance. However, local agencies are not required to post financial security as a condition of compliance.[580]

Violations of NJCPWA or the granted permits by any person will result in a number of penalties brought by the commissioner, including but not limited to: issuing order requiring compliance; bringing civil action; levying civil administrative penalties; bringing an action for a civil penalty; petitioning the Attorney General to bring criminal action.[581] Relief outlined for the civil actions include: a temporary or permanent injunction; reasonable costs of any investigation, inspection, monitoring and subsequent litigation; reasonable costs incurred by the State for

[578] Id.
[579] N.J. STAT. ANN. § 58:10A-3(p) (West 2019).
[580] § 58:10A-6.1(a).
[581] § 58:10A-10(a).

removing, correcting or terminating the adverse effects of the violation; compensatory damages for any loss or destruction of wildlife or natural resources, or other damages; and/or the amount of economic benefits attained by the violation.[582] No penalty, however, may be levied without notice to the discharger by mail or personal service.

b. Caselaw

There is no on-point case law discussing New Jersey state ground water regulation under its "more than stringent" legislation.

However, courts have analyzed the scope of NJDEP's authority to issue and require permits for pollution discharges. In *SJC Builders, LLC, v. State of New Jersey Department of Environmental Protection*, the Supreme Court of New Jersey held that the NJDEP has "primary jurisdiction regarding safety of proposed method of wastewater disposal," including over a private housing development who would retain responsibility for the operation of the disposal system and stormwater management system.[583] The NJWPCA states the DEP's "policy is to liberally interpret and enforce" the Act through implementing regulations for the NJPDES permit system.[584] NJPDES permits are required for injection wells which are defined as "any one subsurface disposal system or multiple subsurface disposal systems, on **a single property** for which the sanitary wastewater design flow is in excess of 2000 gallons per day".[585] The NJPDES regulations define "property" as "all contiguous blocks and lots including vacant land owned or otherwise under the control of the owner or operator of the regulated facility, upon which a discharge is conducted or controlled as a result of the operation of a facility."[586] While individual

[582] § 58:10A-10(c).
[583] *SJC Builders, LLC, v. State of New Jersey Department of Environmental Protection*, 874 A.2d 586, 589 (N.J. Super. 2005).
[584] Id.
[585] Id at 590.
[586] Id.

sewage disposal systems are permitted under limited circumstances (disposal system that generates less than 2,000 gallons per day of sanitary sewage only) by issuing an Individual Subsurface Sewage Disposal System Permit, the NJPDES regulatory definition of property required a NJPDES permit because all of the septic tanks on the development property were under a common ownership. The regulatory definition of "property" was held a proper exercise of authority under NJWPCA because the Act explicitly gives NJDEP liberal and broad discretion for preventative purposes.[587]

In *Vi-Concrete Co. V. State Department of Environmental Protection*, the Supreme Court of New Jersey placed limitations on the NJDEP's authority to issue NJPDES permits to closed landfill sights that did not apply for a permit.[588] The Court construed the NJWPCA to allow the issuance of NJPDES permits to the owner of a closed landfill only if the NJDEP has a substantial evidential basis for its belief that the landfill was actually discharging pollutants that might flow or drain into the state's waters.[589] The Court reasoned that inferences or assumptions of pollutant discharges are not enough to warrant issuance of a unilateral permit with its attendant burdens and costs.[590]

Furthermore, in *State v. Signo Trading International*, the court disagreed over what the "migratory" nature of ground water spells for damages, where the court discussed whether a threat of harm from off-site discharge of hazardous substances is enough of a cause of action in a case involving an insurance policy.[591]

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[587] Id.
[588] *Vi-Concrete v. State Department of Environmental Protection,* 556 A2d 761 (N.J. 1989).
[589] Id at 766.
[590] Id.
[591] *State v. Signo Trading Int'l*, 130 N.J. 51 (N.J. Sup. Ct. September 23, 1992).

c. Appendix A Scenarios

Scenario 1) Municipal Wastewater Management

All discharges, other than exemptions granted by the commissioner, must maintain the water quality standards of both the immediate recipient waters as well as any secondary waters that may be affected.[592] The requirements to maintain both ground water and surface water quality standards considers the migratory nature of ground water to surface waters. They also implement pollution discharge limitations both to ensure the quality of ground water, as well as other waters of the state that may be impacted by ground water conduits. Further, leaks, spillages, underground injection sites, and wastewater systems are all covered by the definition of "point sources" in the NJCWA- thus requiring NJPDES permits and compliance.[593] As discussed in *SJC Builders, LLC, v. State of New Jersey Department of Environmental Protection,* a single NJPDES permit covers the entire property under common ownership, and effluent limitations are set for the entire facility under that single permit.[594] Therefore, any sewer system posing risks of backups or leaks into the ground, injection wells, and constructed wastewater treatment components are subject to a single NJPDES permit so long as there is common ownership, and located on continuous property.[595] However, these definitions are subject to NJDEP regulations, which can be changed with proper notice and comment process.[596]

Scenario 2) Stormwater Management: Green Infrastructure (GI)

NJDEP rules specifically address hydrological connections between bodies of water. Under N.J.A.C. §7:9C-1.2, "discharges to ground water that subsequently discharge into surface

[592] N.J.A.C. §7:9C.
[593] N.J. Stat §58:10A-3(m).
[594] *SJC Builders, LLC, v. State of New Jersey Department of Environmental Protection*, 874 A.2d 586, 589 (N.J. Super. 2005).
[595] Id.
[596] Id.

waters shall not be permitted by the applicable regulatory program if such discharges would cause a contravention of surface water quality standards applicable to those waters." That is, those discharges must achieve compliance with both these standards and the surface water quality standards." Thus, a discharge of stormwater runoff into ground water has to comply with both the standards of the ground water it is running into, as well as, if present, a surface water it could seep into. Additionally, green infrastructure projects will require NJPDES permits unless there is a showing that the stormwater diversion do not come in contact with commercial activities, or the discharge is into pre-treatment facilities that will not alter the pollutant discharge limits or compositions.[597] Similar to Scenario 1, green infrastructure facilities operate pursuant to a single NJPDES permit so long as the facility is under common ownership and on continuous property, subject to NJDEP regulatory changes.[598]

Scenario 3) Drinking Water: Water Reuse

New Jersey incorporates and enforces the National Primary Drinking Water Regulations as the main regulatory scheme applicable to all public water systems.[599] There are some discretionary changes to the National Regulations that apply in New Jersey, though they primarily concern the individual contaminants permitted.[600] However, any serious harm or degradation of any ground or surface waters used for drinking is subject to enforcement and compliance under NJWPCA.[601] NJCWPA defines "pollutant" to include both hazardous and nonhazardous pollutants, and disinfected water is not included in the exemption categories outlined by NJCWPA.[602] Therefore, even if a water supplier is injecting water that has already

[597] N.J. STAT. ANN. § 58:10A-6(d).
[598] *SJC Builders, LLC, v. State of New Jersey Department of Environmental Protection*, 874 A.2d 586, 589 (N.J. Super. 2005).
[599] N.J.A.C. §7:10-5.1.
[600] N.J.A.C. §7:10-5.2.
[601] N.J. STAT. §58:10A-10(f)(1)(b).
[602] N.J. Stat §58:10A-3(n); N.J. STAT. ANN. § 58:10A-6(d).

been disinfected into the group to recharge a ground water supply a NJPDES permit is likely required. Additionally, such injections into ground water will be subject to effluent limitations based on both the state ground water quality standards, as well as state surface water quality standards if the injections eventually reach surface waters of the state.[603] Because pollutant limits are predicated on both ground water quality standards and surface water standards if the ground water discernibly reaches other waters of the state, both must be taken into consideration when treating water for drinking purposes.

XVII. New York

a. Statutory Regulation

New York administers the federal NPDES program through the State Pollution Discharge Elimination System (SPDES), which is overseen and enforced by the New York Department of Environmental Conservation (DEC). SPDES permits are required for any point source pollutant discharge into waters of the state, and set obligations for the permittee based on the water quality classification of the receiving body and the applicable water quality standards.[604]

New York State Environmental Conservation Law (ECL) defines "waters of the state" very broadly to include a comprehensive set of water bodies as long as they are wholly or partially within the boundaries of the state.[605] This includes reservoirs, the Atlantic ocean within the territorial limits of the state, and all other bodies of surface or underground water, natural or artificial, inland or coastal, public or private (except those private waters which do not combine or effect a junction with natural surface or underground waters) which are wholly or partially

[603] N.J.A.C. §7:9C-1.7(g).
[604] N.Y. ENV'T CONSERV. LAW § 17-0301, §17-0505 (Consol. 2020).
[605] N.Y. ENV'T CONSERV. LAW § 17-0105 (Consol. 2020).

within or bordering the state or within its jurisdiction.[606] The regulations are ground water inclusive and, thus, New York State is a "more than stringent" state.

While the ECL does not define the term "discharge," under the implementing regulations, "[d]ischarge means any addition of any pollutant to waters of the State through an outlet or point source."[607] However, the general prohibition against pollution states: "it shall be unlawful for any person, directly or indirectly to throw, drain, run or otherwise discharge into such waters [of the state] organic or inorganic matter that shall cause or contribute to a condition in contravention of the standards adopted by the department."[608] The ambiguity of whether this prohibition applies to the conduit theory or ground waters that migrate to surface waters is not addressed in the text of the statute.

1) General Permits

The issue of indirect discharges via groundwater arose tangentially in the context of a DEC general permit authorizing certain sewage discharges. DEC may issue general permits in order to cover a category of point sources of one or more discharges within a defined geographical area which (1) involve the same or substantially the same types of operations, (2) discharge the same types of pollutants, (3) require the same effluent limitations or operating conditions, (4) require the same or similar monitoring, and (5) which will result in minimal adverse cumulative impacts.[609] The categories of discharges for which general permits can be issued include, among other things, municipal separate storm sewers, and discharges of less than ten thousand gallons per day of domestic sewage.[610]

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[606] N.Y. ENV'T CONSERV. LAW § 17-0105 (Consol. 2020).
[607] N.Y. COMP. CODES R. & REGS. TIT. 6, § 750-1.2 (2020).
[608] N.Y. ENV'T CONSERV. LAW § 17-0501 (Consol. 2020).
[609] N.Y. ENV'T CONSERV. LAW § 70-117 (6) (Consol. 2020).
[610] N.Y. ENV'T CONSERV. LAW § 70-117 (6)(b) (Consol. 2020).

The SPDES General Permit for Ground Water Discharges of Treated Sanitary Sewage, which applies to private, commercial and institutional facilities with onsite wastewater treatment systems treating one thousand to ten thousand gallons per day.[611] This General Permit is specific to discharges into ground water, and DEC detailed in its responses to comments on the 2015 renewal of the General Permit that it "does not believe that it is necessary for the permit to specify the nearest surface water of potential impact because the surface waters do not receive a direct discharge."[612] Rather, DEC pointed to condition #7 of the General Permit as sufficient protection to secondary waters that might be impacted by discharges into ground waters pursuant.[613] Thus, DEC explained, properly designed and maintained systems, as required by the General Permit, ensure that both ground water and surface waters are protected.

b. Caselaw

There is no New York case law that specifically addresses the question of indirect discharges. Two administrative decisions may suggest an interpretation of discharge restrictions that could extend to pollutants entering surface waters via ground water. Each concludes, in a different context, that even if the effluent limitations specified in the relevant SPDES permit are not exceeded, DEC may have authority to enforce against a permittee if the discharge violates the water quality standards for the receiving state body of water.[614] These enforcement actions rely on an ECL provision that broadly prohibits any person from discharging materials "directly or indirectly" into waters of the state that "cause or contribute to a condition in contravention of" water quality standards.[615] In the context of a NPDES general permit, the Second Circuit has

[611] The General Permit is available at https://www.dec.ny.gov/permits/101152.html.
[612] The Response to Comments is available at https://www.dec.ny.gov/docs/water_pdf/spdesgppci015001resp.pdf.
[613] *Id*. at 5.
[614] Interim Opinion and Order: In the Matter of *General Electric Company*, DEC File No: 2833, February 9, 1976, available at 6 Envtl Law Rep'r 30007. See also *In the Matter of Bath Petroleum Storage, Inc. et al.,* DEC Case No: R8-1088-97-01, July 7, 2005.
[615] N.Y. ENV'T CONSERV. LAW § 17-0501 (Consol. 2020).

recently held that effluent limits must be specific, and that generic language requiring a discharge to be "controlled as necessary to meet applicable water quality standards in the receiving water body or another water body impacted by your discharges" is insufficient.[616]

c. Appendix A Scenarios

Scenario 1) Municipal Wastewater Management

Sewer systems, underground injection wells and wastewater treatment system components are all covered as point sources under the ECL and are subject to SPDES permits for discharges to waters of the state. There is no specific case law that requires dischargers to be cognizant of how ground water discharges may influence surface waters. Under DEC's SPDES regulations, if a permitted discharge were found to "cause or contribute to a condition in contravention of State water quality standards," DEC could modify the permit and require abatement action to be taken by the permittee.[617]

Scenario 2) Stormwater Management: Green Infrastructure (GI)

Municipal Separate storm sewer systems (MS4s) can operate pursuant to an individual SPDES permit, or through a system-wide or jurisdiction-wide based general permit that requires "controls to reduce the discharge of pollutants to the maximum extent possible."[618] Green infrastructure projects that release storm water into the ground rather than surface waters may be required pursuant to the DEC General Permit for MS4s.[619] Conceivably, if a green infrastructure project implemented pursuant to the MS4 General Permit were found to be "a significant

[616] *NRDC v. U.S. EPA*, 800 F.3d 556 (2d Cir. 2015).
[617] N.Y. COMP. CODES R. & REGS. TIT. 6, § 750-2.1(B) (2020).
[618] N.Y. ENV'T CONSERV. LAW § 17-0808(3)(c) (Consol. 2020).
[619] New York State DEC SPDES General Permit for Stormwater Discharges from Municipal Separate Storm Sewer Systems (MS4s), Permit No. GP-0-15-003, available at https://www.dec.ny.gov/docs/water_pdf/ms4permit.pdf.

contributor of pollutants," DEC could require the MS4 to apply for and obtain an individual SPDES permit.[620]

Scenario 3) Drinking Water: Water Reuse

Standards for drinking water are promulgated by the New York State Department of Health (NYS DOH) and not the DEC. If the water injected into ground water for water supply purposes complies with ground water quality standards a SPDES permit may not be required, or a general permit may be more applicable. Best practice would be to apply for a SPDES permit so that specific effluent limitations can be outlined, and indirect discharges of pollutants to surface waters of the state can be considered.

XVIII. Ohio

a. Statutory Regulation

Ohio's discharge permit program is more stringent than federal standards and belongs in Category 3 of Appendix B 'more stringent than' states. Sections 6111.01 to 6111.99 of the Revised Ohio Code are the primary authority for the protection of Ohio's groundwater resources.[621] Ohio law defines "waters of the state" more stringently than federal law defines "waters of the United States." Section 6111.01(H) defines "waters of the state" as "all streams, lakes, ponds, marshes, watercourses, waterways, wells, springs, irrigation systems, drainage systems, and other bodies or accumulations of water, surface and underground, natural or artificial, regardless of the depth of the strata in which underground water is located, that are situated wholly or partly within, or border upon, this state, or are within its jurisdiction, except those private waters that do not combine or effect a junction with natural surface or underground

[620] N.Y. ENV'T CONSERV. LAW § 70-117 (6)(d) (Consol. 2020); N.Y. COMP. CODES R. & REGS. TIT. 6, § 750-1.21(e)(1)(viii) (2020).
[621] OHIO REV. CODE ANN. §§ 6111.01-6111.99 (West 2020).

waters."[622] The statue's usage of the term "underground waters" most likely means "groundwater" because unlike other states, there does not appear to be a separate definition of groundwater within the Ohio water pollution control statute. Nor is there a separate statute or set of regulations specifically for groundwater. Ohio regulates surface and groundwaters together.

Ohio belongs in Category 3 of Appendix B. Although Ohio's definition of "waters of the state" includes groundwater, Ohio law requires state agencies to identify whether a proposed environmental protection rule is more stringent than its federal counterpart.[623] If it is more stringent, the agency must provide the legislative committee with a justification for why a more stringent rule is needed.[624] Ohio's laws are thus 'qualified more stringent than' federal law.

Ohio prohibits discharges to waters of the state without a permit. Section 6111.04(A)(1) prohibits any person from causing pollution or placing or causing to be placed "any sewage, sludge, sludge materials, industrial waste, or other wastes in a location where they cause pollution of any waters of the state" unless they have a permit.[625] Exceptions to Section 6111.04(A)(1) include water, gas or other material injected into a well to facilitate the production or oil and gas, pollution by residual farm products, and the excrement of domestic and farm animals or runoff therefrom into any waters of the state.[626] These exceptions apply unless a permit is required by the Federal Water Pollution Control Act or regulations adopted under it.[627] Since Ohio law regulates impacts to both groundwater and surface water under Section 6111.04, there are no separate statutes or regulations on groundwater discharge permits or on a hydrologic connection between ground and surface waters.

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[622] § 6111.01(H).
[623] OHIO REV. CODE ANN. § 121.39 (3) (West 2020).
[624] *Id.*
[625] § 6111.04(A)(1).
[626] § 6111.04(F).
[627] § 6111.04(F)(3).

b. Caselaw

Ohio law defines 'discharges' broadly to include waste which migrates from the soil to groundwater to surface water. In *Heiby Oil Co. Inc. v. Schregardus,* the Heiby Oil Company ("Heiby") owned and operated a bulk petroleum storage facility.[628] On March 19, 1987, ten thousand gallons of unleaded gasoline leaked from an above ground storage tank at the Heiby facility, soaking into the soil and slowly began seeping into the groundwater.[629] Heiby argued that such a spill did not constitute a 'discharge' under Section 6111.03(H)(1).[630] Heiby argued that 'discharge' did not refer to "the pollutants' subsequent presence in the environment or migration through the soil or water."[631] The court held that the oil spill did constitute a discharge to the waters of the state even though it was not directly discharged into the waters of the state.[632] The court explained that since Section 6111(H)(1) does not provide a statutory definition of the word 'discharge,' it would rely on the plain and ordinary meaning which means "to emit waste" or "give vent to fluid or other contents."[633] Nothing in these definitions excludes the seepage of waste from the soil to groundwater to surface water from being classified as a 'discharge.'[634] Ohio law appears to regulate discharges even more stringently than states like New Jersey or New York, which do not include naturally occurring seepages within the definition of "discharge."[635] In cases involving naturally occurring seepages or indirect discharges to waters of the state (such as via soil), it's unclear whether the polluter would need to get a permit under Section 6111.04(A)(2) or would only be responsible for the cleanup of the spill.

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[628] *Heiby Oil Co. v. Schregardus*, 634 N.E.2d 234, 235 (Ohio Ct. App. 1993).
[629] *Id.*
[630] *Id*. at 236-237.
[631] *Id.* at 237.
[632] *Id.* at 239-240.
[633] *Id.* at 237.
[634] *Id.*
[635] *Id.*

Whether or not a polluter needs to get a permit may depend on whether Ohio has other laws regulating the type of discharge in question. For example, in the case of landfills and leachate, though the indirect discharges of leachate from the soil into groundwater discharge is prohibited by Section 6111.04, the landfill operator would need to get a soil waste permit but not a water discharge permit as required by Section 6111.04. In *Citizens Against Am. Landfill Expansion v. Koncelik,* the operator of a new landfill argued that Section 6111 did not apply to pollution discharged into subsurface waters by landfill waste.[636] The court held that while Section 6111.04 apply to such discharges via its general prohibition that "no person shall cause pollution or place or cause to be placed any sewage, sludge, sludge materials, industrial waste, or other wastes in a location where they cause pollution of any waters of the state," the landfill operator did not need a permit.[637] The court explained that even though Section 6111.04 does apply, the Ohio EPA does not issue leachate to groundwater discharge permits under Section 6111.04 since there are other laws specific to solid waste facilities.[638] These more specific laws are better suited to reduce the discharge of pollutants originating from landfills into groundwater.[639] According to the court, "the legislation incorporates the same effective goals as R.C. Chapter 6111 with respect to water pollution, and may be viewed as an extension of the general policy expressed therein."[640] While Section 6111 would apply in the case of actual leachate discharge, when assessing the potential risk to groundwater, the regulations governing soil waste disposal apply.[641]

[636] *Citizens Against Am. Landfill Expansion v. Koncelik*, 9 N.E.3d 386, 395 Ohio Ct. App. 2014).
[637] *Id.*
[638] *Id.*
[639] *Id.* at 396.
[640] *Id.* at 295.
[641] *Id.* at 396.

c. Appendix A Scenarios

Scenario 1) Municipal Wastewater Management

Wells injecting "sewage, industrial waste, hazardous waste, or other wastes" or material used facilitate the production of oil and gas need a permit (drilling permit and operating permit) in order to operate in Ohio.[642] Oil and gas injection well permits are issued under Section 1509 of the Revised Code rather than Section 6111.04, which specifically exempts these discharges from coverage.[643] Sections 6111.043 to 6111.049 regulate the injection of sewage, industrial waste, hazardous waste, and other wastes into wells in order to "control pollution of the waters of the state, to prevent contamination of underground sources of drinking water, and to satisfy all requirements of the Safe Drinking Water Act."[644] Discharges from sewer systems that may back up into basements or leak directly into the ground require also permits under Section 6111.[645]

Scenario 2) Stormwater Management: Green Infrastructure (GI)

There are no specific regulations regarding how green infrastructure is regulated under Ohio state law. Ohio has specific regulations regarding NPDES permitting of stormwater containing agricultural waste because this is a type of discharge exempted by Section 6111.0 (F)(3).[646] In general, it seems that stormwater discharge permits apply to discharges to groundwater because groundwater is included in Ohio's definition of waters of the state and stormwater is not exempted from permitting requirements under Section 6111.0(F)(3).

[642] § 6111.043 (E)
[643] § 6111.04 (F)(2).
[644] § 6111.043 (A)
[645] § 6111.03 (J)(1).
[646] § 6111.0 (F)(3).

Scenario 3) Drinking Water: Water Reuse

Recharge wells are used to replenish the water in an aquifer. Recharge wells are classified under Ohio Administrative Code Rule 3745-34-04 as Class V wells and require permits.[647] Rule 3745-34-11 prohibits any person from injecting "sanitary waste, sewage, industrial wastes or other wastes, into or above a USDW without first obtaining a UIC permit to drill and a permit to operate in accordance with Rule 3745-34-12 of the Administrative Code."[648] Industrial wastes include "wastewater resulting from the treatment of drinking water."[649] Permits for the injection of wastewater resulting from the treatment of drinking water are only authorized if all of the following condition are satisfied:

(1) For wastewater resulting from ion exchange treatment:
(a) Less than two thousand five hundred gallons per month is injected into the class V well;
(b) The information required by paragraph (M) of this rule is submitted to the director; and
(c) The injection of the fluid will comply with paragraph (A) of rule 3745-34-07 of the Administrative Code.

(2) For wastewater resulting from a filter system for removal of iron or manganese or both:
(a) The information required by paragraph (M) of this rule is submitted to the director; and
(b) The injection of fluid will comply with paragraph (A) of rule 3745-34-07 of the Administrative Code.[650]

Paragraph (A) of Rule 3745-34-07 of the Code prohibits any injection activity that "allows the movement of fluid containing any contaminant into an underground source of drinking water, if the presence of that contaminant may cause an exceedance in the underground source of drinking water of any primary drinking water standard established under Chapter 3745-

[647] OHIO ADMIN. CODE 3745-34-04 (E) (2020).
[648] 3745-34-11 (A).
[649] 3745-34-11 (I)(2).
[650] 3745-34-11 (E).

81 of the Administrative Code or may otherwise adversely affect the health of persons."[651] The applicant has the burden of showing that this will not happen.

In general, when permitting for Class V wells, the applicant must include within the application a map showing the name number and location of all surface bodies of water as well as indicate the direction of water movement as the proposed injection may impact other underground sources of drinking water.[652] While recharge well regulations do not explicitly indicate how injections to groundwater reaching surface water will be regulated, it seems that the hydrologic connection between waters is considered since the permit application requires both identification of water movement between sources of groundwater and identification of nearby surface waters, presumably to assess the risk posed by the injection activity to these waters.[653]

XIX. Oregon

a. Statutory Regulation

All laws relating to water pollution are found under Title 36 of Oregon's Statutes. Specifically, Chapter 468B provides rules on water quality and water pollution control. Within this chapter are regulations for surface water[654] and ground water.[655] Oregon's Department of Environmental Quality ("DEQ") regulates water pollution under Chapter 340 of the Oregon Administrative Rules ("OAR"). Oregon defines "waters of the state" in their regulations as follows:

> Lakes, bays, ponds, impounding reservoirs, springs, wells, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Pacific Ocean within the territorial limits of the State of Oregon, and all other bodies of *surface or underground waters*, natural or artificial, inland or coastal, fresh or salt, public or private (except those private waters that do not combine or effect a junction with natural surface or

[651] OHIO ADMIN. CODE 3745-34-07 (A).
[652] 3745-34-16 (A)(1)(d); 3745-34-16 (A)(2)(a).
[653] *Id.*
[654] OR. REV. STAT. § 468B.040-.095 (2020).
[655] § 468B.150-.190.

underground waters) that are located wholly or partially within or bordering the state or within its jurisdiction.[656]

Groundwater and surface water are included in this definition, albeit with an exception for private waters that don't connect to natural surface or underground waters. Therefore, Oregon falls under Category 1 in Appendix B for implementing regulations that are more stringent than federal regulations. As of late, Oregon has recently been failing to effectively implement federal standards of water quality and the NPDES program. The DEQ faced backlash in 2018 for failing to stay up to date on NPDES permit renewals but has been reorganized with the goal of being back on track with its state-issued permits by 2028.[657]

The Environmental Quality Commission (EQC) establishes policies for the operation of the DEQ in a manner consistent with the appropriate corresponding regulations for environmental quality.[658] Subject to policy direction by the Commission, the DEQ must work with other agencies on water quality issues, conduct and supervise programs for water pollution control, and enforce water pollution laws of the state.[659] The Director of the DEQ must administer and enforce laws of the state concerning environmental quality, and is able to delegate responsibility to others, including a Deputy Director.[660]

Without a permit issued from the Director of the DEQ or the State Department of Agriculture, a person may not discharge any wastes into WOTUS from any industrial or commercial establishment or any disposal system, or conduct any commercial activity which would cause an increase in discharge of wastes into WOTUS.[661] Permits are issued as either

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[656] OR. ADMIN. R. 340-044-0005 (50) (2020).
[657] Carl Segerstrom, *Settlement Forces Oregon to Update Water Pollution Permits* (Dec. 5. 2018 https://www.hcn.org/articles/water-oregon-ordered-to-update-water-pollution-permits-by-state-court).
[658] OR. REV. STAT. § 468.015.
[659] § 468.035.
[660] OR. REV. STAT. § 468.045 (2020).
[661] § 468B.050(1).

individual, general, or watershed permits.[662] Permitting actions are categorized according to environmental and public health significance, with the lowest category (Category I) representing permit actions with low environmental and public health significance and no public notice and opportunity for public participation; and the highest category (Category IV) representing permit actions with potentially high environmental and public health significance and the greatest level of public notice and opportunity for public participation.[663] An NPDES permit must be obtained before any discharge of pollutants into navigable waters from a point source, as well as before discharging stormwater subject to federal permit requirements.[664] NPDES permits are issued according to various parameters and requirements listed in the regulations,[665] as are Water Pollution Control Facilities ("WPCF") permits.[666] Oregon created a WPCF permit for the purpose of constructing and operating disposal systems that to not discharge to navigable waters.[667] The permit is regulated under both Division 45 of the regulations and under Division 71, which regulates on-site wastewater treatment systems.[668] WPCF permits are more lenient than NPDES permits, often requiring less scrutiny to be issued. For example, where it is not required of a WPCF permit,

> before beginning construction on any waste collection, treatment, disposal, or discharge facilities for which a[n] [NPDES] permit is required…the facility owner or operator must submit detailed plans and specifications to, and receive written approval from the DEQ…[and additionally], monitoring, recording, and reporting procedures used to meet the requirements of NPDES permits must conform with the [FWPCA] and regulations issued under it.[669]

[662] § 468B.050(2). *See* OR. ADMIN. R. 430-045-0033 (2020) for general permit regulations.
[663] OR. ADMIN R. 340-045-0027(1) (2020).
[664] 340-045-0015(2).
[665] 340-045-0035.
[666] 340-045-0037.
[667] Definition in regulations.
[668] Specifically, OAR 340-071-0162 governs WPCF permits for onsite wastewater treatment systems.
[669] OR. ADMIN. R. 340-045-0065 (2020).

That said, the DEQ reserves the right to regulate more stringently than the NPDES system. A permittee that complies with the NDPES permit program is not necessarily considered compliant with groundwater quality protection requirements as specified in Division 40 of Chapter 340 of the regulations.[670] It includes anti-degradation policies, as well as best practicable methods for prevention of movement of pollutants to groundwater.[671] In arriving at the best practicable methods, available technologies for treatment, cost effectiveness, pollutant toxicity, and other regulations shall be considered on a case-by-case determination to protect the public health and environment.[672] Water quality standards – including the anti-degradation policy, which protects further degradation from new or increased point and nonpoint sources of pollution, as well as existing surface water quality[673] – are found in Division 41.

As stated above, the DEQ has the power to enforce environmental regulation. There is a substantial list of water quality violations separated by three classes.[674] The first class includes discharging any waste into WOTUS without a permit, and also worth noting is, "operating an underground injection control system that causes a data verifiable violation of federal drinking water standards in an aquifer used as an underground source of drinking water; or [f]ailing to substantially implement a stormwater plan in accordance with an NPDES permit."[675] Violations are also based on magnitude and are considered "major" if the DEQ finds that the violation had a significant impact on human health or the environment, and "minor" if they find that the violation had no more than a *de minimis* adverse impact, and posed no more than a *de minimis*

[670] 340-045-0080.
[671] 340-040-0020(1)-(12).
[672] 340-040-0020(11). Additionally, in regulating point source activities that could result in disposal of wastes onto or into the ground in a manner that allows potential movement to groundwater, the DEQ must utilize all available and appropriate statutory and administrative authorities, including permits, fines, orders, and compliance schedules. (12).
[673] OR. ADMIN. R. 340-041-0004 (2020).
[674] OR. ADMIN. R. 340-012-0055 (2020).
[675] 340-012-0055(1)(q), (r).

threat to human health or the environment.[676] The violations are calculated by taking the class of violation with the magnitude and applying them to a matrix in Division 12 of Chapter 340 of the regulations.[677] Additional civil penalties can be assessed by the DEQ for those who intentionally or recklessly violate the water quality statutes and regulations adopted by the Commission, including intentionally or negligently failing to clean up a spill.[678]

b. Caselaw

In *Environmental Quality Commission v. City of Coos Bay*, a pipe in the City's sewage disposal system (which they had an NPDES permit to operate) that connected a treatment plant and sludge lagoon had ruptured and spilled thousands of gallons of partially treated sewage sludge into nearby tidal wetlands.[679] The court held that an operator of a permit cannot violate regulations by waste spills simply because they did not obtain a permit for that spill.[680] The EQC's arguments were circular and therefore the court reversed the results of the administrative hearing so that spills associated with adequately permitted operations do not need to be covered by a permit as well.

The Oregon District Court substantiated Oregon's stringent water pollution scheme in *Umatilla Waterquality Protective Association v. Smith Frozen Foods*. The court held that there is no doubt that a water quality permit is needed for discharges into underground water even though the CWA confines the discharges to affect surface waters.[681] That said, the court clarified that these permits are often regulated under the WPCF program, and that hydrological connections to surface water (the *Maui* issue) are not regulated under the NPDES program.[682]

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[676] 340-012-0130(3), (4).
[677] 340-012-0140(1).
[678] 340-012-0155(1)(a), (b).
[679] *Environmental Quality Comm'n v. City of Coos Bay*, 14 P.3d 649, 649 (Or. Ct. App. 2000).
[680] *Id*. at 110.
[681] *Umatilla Waterquality Protective Ass'n v. Smith Frozen Foods*, 962 F. Supp. 1312, 1316 (D. Or. 1997)
[682] *Id*.

This suggests that certain WPCF permits that would otherwise need an NPDES permit under *Maui* may be rejected by the EPA upon renewal, however the court mentioned that the two programs are very similar.

Courts in Oregon are known to enforce the NPDES system when it applies. In *State Public Interest Research Group, Incorporated v. Pacific Coast Seafoods Company*, the Oregon District Court held that a state-issued consent order was not the equivalent of a NPDES permit and as a result an operator discharging waste into a river without the requisite NPDES permit was liable.[683] The court reasoned that neither the state statute nor the CWA supported the nonpermitted discharge.[684]

Permitting for MS4s has also been reviewed in Oregon courts. The court in *Tualatin Riverkeepers v. Oregon Department of Environmental Quality* held that "a lack of numeric limits and conditions requiring compliance with state water quality standards" for an MS4 is not in violation of water pollution laws given that both state and federal objectives only mandate reduction of pollution to the maximum extent practicable for these storm sewer systems.[685]

c. Appendix **A Scenarios**

Oregon's regulations protect public waters from any type of discharge. One issue relating to the *Maui* decision is that *de minimis* discharges may be exempted from permit requirements.[686] Another issue that may arise as a result of *Maui* will be whether the WPCF permit program is effective enough to meet NPDES requirements. For example, wastewater system components are strictly managed under the WPCF program, but if under the hydrological

[683] *Or. State Pub. Interest Research Group, Inc. v. Pac. Coast Seafoods Co.*, 361 F. Supp. 2d 1232, 1243 (D. Or. 2005).
[684] *Id*.
[685] *Tualatin Riverkeepers v. Or. Dep't of Envtl. Quality*, 230 P.3d 559, 561, 568 (Or. Ct. App. 2010).
[686] OR. REV. STAT. § 468B.053 (2020). That said, *de minimis* discharges must still meet performance-based criteria established by the EQC and operators must monitor performance and certify, and report, results to the DEQ.

connection theory they end up polluting surface waters, then the DEQ may be required to enforce NPDES requirements on what the state considers a nonpoint source discharge. That said, the state regulations push water quality policies strongly enough that it is within its power to amend regulations or begin mandating NPDES permits for sources of discharge that are now covered under the hydrological connection theory. This can be done through programs that control pollution from nonpoint sources. When they are developed by the DEQ (or other agencies pursuant to section 208 of the CWA) and approved by the DEQ, they can be incorporated into the regulations.[687]

Scenario 1) Municipal Wastewater Management

Sewage backups into basements are regulated under Division 45. The Director can issue what is known as a Mutual Agreement and Order ("MAO") to enforce a cleanup of a spill associated with disposal of wastewater.[688] The MAO can be in lieu of, *or in addition to*, an NPDES or WPCF permit, and can include compliance schedules, effluent limitations, monitoring and reporting requirements, or penalties.[689] The issue, then, is that if an NPDES permit is not issued and the backup works through underground waters into surface waters, then *Maui* may become relevant if proper protocols are not instituted. Oregon's current way of addressing this issue is that certain restrictions are in place to ensure that the MAO would otherwise force the violator to comply with an NPDES permit. For example, if used in lieu of a permit, the MAO cannot be longer than the term of the type of permit it is replacing and permitting procedures will apply as though it was a Category II permitting action.[690] For Category II, the DEQ will provide

[687] OR. ADMIN. R. 340-041-0061(5) (2020).
[688] OR. ADMIN. R. 340-045-0062(1) (2020). This provision also mentions an activity that "does not lend itself to the normal permitting process or permit term."
[689] 340-045-0062(2).
[690] 340-045-0062(3), (4).

public notice and a minimum of 30 days to submit written comments,[691] but there is an exception if issuing a MAO would only magnify the problem.

UIW's are regulated under the Underground Injection Control ("UIC") program, which Oregon adopted in conformance with the SDWA. The EQC's policy, adopted in 2001, is to restrict, regulate, or prohibit further construction and use of waste disposal wells in Oregon and to phase out completely the use of waste disposal wells as a means of disposing untreated or inadequately treated sewage or wastes as quickly as possible.[692] There are five classes of UICs; Class V includes systems injecting sanitary waste fluids into subsurface fluid distribution systems such as septic systems, as well as commercial systems and storm water injection systems.[693] UIC's must be authorized either by permit issued from the DEQ or under Section 340-044-018.[694] Certain exclusions to the UIC program exist,[695] and prohibitions to Class V UIWs are extensively regulated.[696] The only Class V UIWs that inject sanitary waste or sewage that are not prohibited are those that are being used where municipal sanitary sewer service is not available to the property or where there is an attempt to repair plugged or failing sewage drain or drill holes.[697] Aside from needing permits from the DEQ for both of these instances, there are other requirements as well.[698] Therefore, it is likely that *Maui* won't have a practical effect on the regulation of UIWs as these regulations lend plenty of support to the notion that a *Maui*-like discharge will require a NPDES permit.

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[691] 340-045-0027(1)(b).
[692] 340-044-0010(2).
[693] OR. ADMIN. R. 340-044-0011(5)(a) (2020).
[694] 340-044-0012.
[695] 340-044-0013.
[696] 340-044-0015.
[697] 340-044-0015(3)(b), -0017.
[698] *Id*. For example, if repairing UIWs, there must be no other feasibly alternative for on-site or off-site sewage treatment and disposal.

Wastewater treatment system components are also extensively regulated in Oregon. Under the ambit of the WCPF permit program, Alternative Treatment Technologies ("ATT") are alternative systems that incorporate aerobic and other treatment technologies (which include anaerobic processes common in lagoons).[699] Division 71, the section that regulates these components, does not reference the NPDES system. That said, the Division also does not explicitly negate the requirement that an NPDES permit is needed for a point-source discharge into WOTUS, but a WPCF permit might be the preference if it does not have as stringent requirements.

Scenario 2) Stormwater Management: Green Infrastructure (GI)

A person must obtain a valid NPDES permit to discharge stormwater subject to permit requirements in 40 C.F.R. § 122.26 or § 122.33, including stormwater from large, medium, and regulated small MS4s and stormwater associated with industrial or construction activity. If storm water is discharged by an *injection system*, which is defined as "a well, improved sinkhole…subsurface fluid distribution system or other system or groundwater point source used for subsurface emplacement or discharge of fluids," then the stormwater green infrastructure will be regulated under Division 44 of Chapter 340.

Injection systems injecting storm water into the ground are Class V IUWs and must be authorized either by permit as stated above or as directed by Section 340-044-0018 of the regulations.[700] This authorization will be granted as long as inventory and registration information are submitted to the DEQ and nine basic requirements are met.[701] Some include:

[699] OR. ADMIN. R. 340-071-0100(6), (11) (2020). In general, Division 71 regulates all aspects of onsite wastewater treatment systems.
[700] OAR 340-044-0035 includes the mandate for a permit and provides the caveat of authorization that is discussed hereafter.
[701] 340-044-0012(b), 340-044-0018(3)(a).

keeping sanitary waste from mixing with the wells; having site development, design, and management practices to minimize storm water runoff; maintaining a distance of 500 feet from drinking water wells or a 2 year time-of-travel zone, whichever is more protective; and designing and operating the system in a manner that protects groundwater from accidentally or illicitly disposing wastes or contaminants and that can be temporarily blocked to prevent drainage into the injection system in the event of an accident or spill.[702]

Further, the DEQ cannot issue permits for "construction, maintenance or use of an underground injection system where any other treatment or disposal method that affords better protection of public health or water resources is reasonably available or possible."[703] Best management practices are required for municipal stormwater management plans with more than 50 injection systems, and, among other things, must be monitored to evaluate their effectiveness and summarized and submitted to the director.[704] These regulations for stormwater GI are comparable to federal requirements, and also seem to include additional oversight to ensure that groundwater is protected and that stormwater GI is running most efficiently. In addition to groundwater protection, alternative methods of discharge that must be evaluated before authorization include those that consider management of surface water quality and watershed health issues.[705] Lastly, the Director at any time may request and review information and elements of a storm water management plan, and can determine that the results require either (1) regulation under a permit instead of authorization or (2) an enforcement action in order to

[702] OR. ADMIN. R. 340-044-0018(3)(a)(A), (B), (D), (E), (I) (2020). In addition to these basic requirements, there are regulations for municipal or other governmental units with storm water injection systems depending on the size, industrial and commercial facilities of various types, and other systems such as residential properties and parking lots. 340-044-0018(3)(b)-(h).
[703] 340-044-0012(2).
[704] 340-044-018(3)(b)(C)(iii), (b)(D).
[705] 340-044-0018(3)(a)(C).

minimize impact to groundwater or other sensitive waters of the state.[706] This permit and authorization system for storm water discharges not only seems more stringent than federal regulations, but also supports the notion that Oregon is prepared for a post-*Maui* regulatory scheme. The basic requirements that serve to protect surface waters as well as the director's involvement in reviewing authorized storm discharges aligns similarly with the rationale in *Maui* that point source discharges include hydrological connections to the surface water. It is likely that if these discharges are reviewed by the DEQ with awareness of *Maui*'s decision that any storm discharge providing a hydrological connection to surface waters will likely be mandated to acquire an NPDES permit.

Scenario 3) Drinking Water: Water Reuse

The UIC program heavily refers to drinking water, and prohibitions to UIWs are in place to protect groundwater contamination.[707] Most importantly, owners or operators of UIWs are prohibited from allowing direct or indirect movement of fluids containing contaminants into groundwater if the presence of that contaminant may cause a violation of the SDWA or groundwater quality protection requirements in 340-040.[708] Even if the UIW has the potential to cause a violation, owners and operators must ensure closure of the injection system to prevent violation, obtain a permit if the injection was previously authorized by rule, and be subject to enforcement action if appropriate.[709]

Class V UICs include groundwater management injection systems that can be used for aquifer recharge.[710] Certain injection wells that recharge aquifers may be authorized under

[706] OR. ADMIN. R. 340-044-0018(3)(i) (2020).
[707] OR. ADMIN. R. 340-044-0014 (2020).
[708] 340-044-0014(1). In addition, they have the burden to show that SDWA/groundwater quality requirements are met.
[709] 340-044-0014(2).
[710] 340-044-0011(5)(e).

Division 18 as previously discussed, or otherwise must be operated under a permit. Authorization is accompanied with compliance requirements of other local, state, and federal laws. Some aquifer recharge activities mentioned in the regulations include wells returning fluids to the supply aquifer after use for non-contact heating or cooling, wells returning low-temperature geothermal fluids into the same aquifer or one of equivalent quality, and wells recharging aquifers for dewatering activities.[711]

In addition to injection wells for aquifer recharging, the state also mandates recycled water use plans. Wastewater treatment system owners may not provide any recycled water unless authorized by a NPDES or WPCF permit, and the plan must describe how wastewater treatment system owners will comply with the regulations.[712] Recycled water will not be authorized for use unless all groundwater quality protection requirements in Division 40 are met.[713] This means that any protections related to surface water that have already been mentioned above apply to water reuse. If Class A recycled water is to be used for artificial groundwater recharge, then the water use plan must also include, among other things, a groundwater monitoring plan, the distance from the recharge area to the nearest point of withdrawal, and the retention time in the aquifer until the time of withdrawal.[714] These plans are considered NPDES permit requirements[715] and thus will be applicable to federal requirements post-*Maui*.

[711] OR. ADMIN. R. 340-044-0018(2)(b)(B), (C), (E) (2020).
[712] 340-055-0020
[713] 340-055-0020.
[714] 340-055-0020(3)(a), (d).
[715] 340-055-0020(4).

XX. Pennsylvania

a. Statutory Regulation

Pennsylvania's discharge permit program is more stringent than federal standards and belongs in Category 1 of Appendix A's 'more stringent than' states. Pennsylvania's Clean Streams Law is one of the primary statutory authorities for the protection of the state's groundwater resources.[716] Section 691.1 of Title 35 of Pennsylvania's Statutes defines "waters of the commonwealth" as "all rivers, streams, creeks, rivulets, impoundments, ditches, water courses, storm sewers, lakes, dammed water, ponds, springs and all other bodies or channels of conveyance of surface and underground water, or parts thereof, whether natural or artificial, within or on the boundaries of this Commonwealth."[717] The phrase "underground water" here most likely means groundwater because it is referred to similarly within the definition of groundwater, which is defined as "bodies of water below the surface of the ground."[718] Pennsylvania law is more stringent than federal standards because its regulatory reach includes groundwater.

Pennsylvania law includes groundwater in the definition of waters of the commonwealth and state law also recognizes the connection between surface and groundwater. It defines a "hydrologic unit" as a "unit of surface water or groundwaters, or both, which are interconnected and hydrologically related. The term includes a surface watershed or basin, groundwater basin, aquifer or aquifer system."[719] The Clean Streams Law prohibits the direct and indirect discharge of sewage, industrial waste and "other pollutions" into the waters of the commonwealth.[720] It

[716] THE CLEAN STREAMS LAW, 35 PA. STAT. AND. CONS. STAT. ANN. §§ 691.1-691.8 (West 2020).
[717] § 691.1.
[718] 27 PA. STAT. AND CONS. STAT. ANN. § 3102 (West 2020).
[719] *Id.*
[720] § 691.201; § 691.301; § 691.401.

also regulates any other discharge which may impact "any source of water for present or future supply to the public."[721] The term "other pollutions" most likely covers discharges such as treated municipal wastewater.[722] It's unclear from the text of the statute alone what the Legislature means by prohibiting discharges "into" the waters of the commonwealth: whether this means that only discharges directly into a water source are protected or whether discharges which travel from one source of water (such as from groundwater to navigable water) are also prohibited.

b. Caselaw

Courts in Pennsylvania regulate discharges to water according to the initial point of entry, rather than the migration of pollutants into or among other waters, such as from groundwater to surface water.[723] In *EQT Production Company v. Department of Environmental Protection of the Commonwealth of Pennsylvania* the operator of a natural gas well appealed its violation of the Clean Streams Law when leaks from its impoundment used to contain impaired water flowing back from hydraulic fracture gas wells travelled through subsurface soil and into groundwater and then surface water.[724] The Department of Environmental Protection (DEP) maintained a water-to-water theory of liability.[725] It argued that the Clean Stream law "prohibits the continuing or indirect flow of unpermitted industrial waste or other substances causing pollution into *any part* of a water of the Commonwealth—even after an initial release is corrected at the source—and that the movement of contaminants from a given water (or a given part thereof) into another water (or part thereof) gives rise to serial violations."[726] The DEP pointed to the

[721] § 691.501.
[722] § 691.1.
[723] *EQT Prod. Co. v. Dep't of Envtl. Prot. of Commonwealth*, 181 A.3d 1128, 1146 (2018).
[724] *Id.* at 1129.
[725] *Id*. at 1141.
[726] *Id.* at 1140.

definition of "waters of the Commonwealth" and noted that it was entirely natural to speak of pollution flowing from one body of water into another.[727] The court held that although the Legislature used very broad terms, it found it most reasonable to "conclude the Legislature was focused on protecting the waters of the Commonwealth with reference to the places of initial entry."[728] The court explained that it the Legislature had intended to codify the water-to-water theory, it should have used more specific language such as sanctioning the movement of contaminants "'into *or among*' any of the waters of the Commonwealth, rather than merely 'into' any such waters."[729] The court further explained that a theory of liability that the DEP proposed was too drastic due to the serial and continuing daily civil penalties of up to $10,000 per day, as well as potential criminal liability, for each potentially affected the agency may be able to identify.[730] It reasoned that if the Legislature had intended for such a potent statute, it should have legislated it expressly.[731]

c. Appendix A Scenarios

Scenario 1) Municipal Wastewater Management

There are no specific regulations on how underground injection wells for municipal wastewater management would be regulated under Pennsylvania law. In general, the Clean Streams Law prohibits any municipality or person from "discharge[ing] or permit[ing] the discharge of sewage in any manner, directly or indirectly, into the waters of this Commonwealth unless such discharge is authorized by the rules and regulations of the department or such person or municipality has first obtained a permit from the department."[732] Permits will be needed for

[727] *Id.*
[728] *Id.* at 1146.
[729] *Id.* at 1147.
[730] *Id.*
[731] *Id.* at 1148.
[732] 35 PA. STAT. AND. CONS. STAT. ANN. § 691.202.

the point at which discharges first enter water but not for where the pollutants subsequently travel.[733] On the other hand, in the case of sewer systems that may back up into basements and directly into the ground, it is more likely that permits would be needed. There is no case law addressing the question of whether soil-to-water discharges are regulated by the Clean Streams since the court in *EQT Production Company* declined to comment on this theory of liability. However, these systems likely would be liable for wastewater leaking directly into the ground since the court in *EQT Production Company* held that liability under the Clean Streams Law attached to the entry of the pollutants into waters of the Commonwealth.[734]

Scenario 2) Storm Water Management: Green Infrastructure (GI)

There do not appear to be very many regulations on green infrastructure in Pennsylvania, except to require riparian buffers for certain stormwater discharges. Stormwater is regulated by the Storm Water Management Act.[735] Pennsylvania is divided into six major watersheds. The Storm Water Management Act requires each county to adopt a management plan for the watershed within the county for natural stormwater runoff to "protect and conserve ground waters and ground-water recharge areas."[736] Plans are highly variable from one county to the next. Section 691.402 requires that for NPDES permit stormwater discharges under 25 Pa. Code Ch. 102 (relating to erosion and sediment control), the person may use or install either:

> (i) a riparian buffer or riparian forest buffer; or
> (ii) another option or options among available best management practices, design standards and alternatives that collectively are substantially equivalent to a riparian buffer or riparian forest buffer in effectiveness to ensure compliance with 25 Pa. Code Ch. 93 (relating to water quality standards).[737]

[733] *EQT Prod. Co.,* 181 A.3d at 1146.
[734] *Id.* at 1149.
[735] STORM WATER MANAGEMENT ACT, 32 PA. STAT. AND CONS. STAT. ANN. §§ 680.1-680.17 (West 2020).
[736] § 680.3.
[737] 35 PA. STAT. AND. CONS. STAT. ANN. § 691.402.

Scenario 3) Drinking Water: Water Reuse

As with storm water, there does not appear to be a statewide plan on groundwater recharge, and regulations more specific to discharges of treated wastewater will vary from county to county. Section 691.501 prohibits the pollution of any source of drinking water "rendering the same inimical or injurious to the public health or objectionable for public water supply purposes."[738] In the case that treated wastewater would be used to recharge aquifers, this type of discharge would most likely need to comply with county wastewater treatment requirement standards each county determine is sufficient to protect its groundwater resources because of the potential to violate Section 691.501.

XXI. Rhode Island

a. Statutory Regulation

Rhode Island governs pollution in its waters through the rules found in Chapter 12 of Title 46 of the General Laws of Rhode Island. In Rhode Island, it is "unlawful for any person to place any pollutant in a location where it is likely to enter the waters."[739] Further, it is illegal "to place or cause to be placed any solid waste materials, junk, or debris of any kind whatsoever, organic or non-organic, in any waters."[740] Rhode Island also prohibits the construction or installation of any industrial or commercial establishment from "undertak[ing] any development" that could result in pollution of the state's waters unless the discharge of the pollutant is made to a system or a pollution prevention method that is approved by the state's director of the Department of Environmental Management.[741]

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[738] § 691.501.
[739] 46 R.I. GEN. LAWS ANN. § 46-12-5 (a) (West 2020).
[740] *Id*.
[741] 46 R.I. GEN. LAWS ANN. § 46-12-5 (c) (West 2020).

Rhode Island governs pollution in its waters through the rules found in Chapter 12 of Title 46 of the General Laws of Rhode Island. In Rhode Island, it is "unlawful for any person to place any pollutant in a location where it is likely to enter the waters."[742] Further, it is illegal "to place or cause to be placed any solid waste materials, junk, or debris of any kind whatsoever, organic or non-organic, in any waters."[743] Rhode Island also prohibits the construction or installation of any industrial or commercial establishment from "undertak[ing] any development" that could result in pollution of the state's waters unless the discharge of the pollutant is made to a system or a pollution prevention method that is approved by the state's director of the Department of Environmental Management.[744]

To put this prohibitive statute into context, Rhode Island defines "waters" as inclusive of "all surface waters including all waters of the territorial sea, tidewaters, all inland waters of any river, stream, brook, pond, or lake, and wetlands, as well as all groundwaters."[745] Furthermore, a "pollutant" is classified as:

> any material or effluent which may alter the chemical, physical, biological, or radiological characteristics and/or integrity of water, including but not limited to, dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, [or] biological materials . . . .[746]

With this statutory bedrock, it is possible to determine in which category of leniency Rhode Island's laws fall.

In relation to federal regulation under the Clean Water Act, Rhode Island should be considered a "more than stringent" state in accordance with the criteria outlined above. Groundwater is explicitly mentioned in the statute that defines "waters" that are regulated. This

[742] § 46-12-5 (a).
[743] *Id*.
[744] § 46-12-5 (c).
[745] § 46-12-1(23).
[746] § 46-12-1(15).

means that Rhode Island's regulations are more stringent than the CWA by virtue of explicitly applying to a point source that the CWA does not mention in its text.

b. Caselaw

There is scarce case law in Rhode Island that directly implicates the application of the state's prohibitive pollution statutes, with only 7 cases since 1931directly mentioning Rhode Island's prohibitive pollution statute and only 10 cases mentioning Rhode Island's definition of "waters" since 1926. However, one case may provide insight as to how Rhode Island would regulate discharges in groundwater that reach navigable waters.

In *Dunellen, LLC. v. Power Test Realty Co. Ltd. Partnership,* the district court for the District of Rhode Island was tasked with determining which party was responsible for groundwater contamination at a petroleum storage facility.[747] The plaintiffs, owners and operators of the facility, sued the defendants, owners of nearby parcels of land, which were home to various pipelines.[748] Engineers working for the plaintiffs discovered light non-aqueous phase liquid ("LNAPL") in the plaintiff's groundwater monitoring well.[749] The defendant whose pipelines were determined to be the origin of the discharge, Getty Properties Corp., suspended use of the pipelines while the state's Department of Environmental Management ("DEM") initiated an adjudicatory hearing after issuing a letter of responsibility along with a notice of an intent to enforce against Getty and other defendants.[750] After the adjudicatory hearing, the Rhode Island DEM found that:

(1) "[t]here is no evidence that there has been a discharge or release of petroleum product from the active pipelines on the site operated by [Getty Marketing] between March 21, 1997 and April, 2003 and operated by

[747] *Dunellen, LLC. v. Power Test Realty Co. Ltd. Partnership*, No. 09-cv-211-JNL, WL 164486, at *1 (D. R.I. Jan. 15, 2013).
[748] *Id*. at 2.
[749] *Id*. at 3.
[750] *Id*.

[Getty Properties] and its predecessors in interest between February 1, 1985 and March 21, 1997";

(2) the defendants and Getty Marketing "did not cause the petroleum product to be initially released onto the subject premises"; and

(3) while "[t]he petroleum product is leaching through the deep aquifer in and below the property owned by [Power Test]," Getty Properties and Getty Marketing "are not responsible for the continuing discharge."[751]

The plaintiffs brought this case before the court in order to attain damages for the harm caused by the pollution via groundwater to their facility. In response, one of the defendants, Getty, filed a motion for summary judgement on various matters.[752] One matter in the defendant's motion for summary judgment concerned liability under the state's Water Pollution Control Act.[753] The court found for the defendant on this issue, finding that there was no evidence the discharge came from pipelines in use by the defendants.[754] Further, while the DEM hearing is not binding on parties, the hearing officer involved determined that the defendant was not liable under the Water Pollution Control Act.[755] The court dismissed the claim against this particular defendant.[756]

While *Dunellen* covered a wide range of issues, a limited forecast can be derived from the court's ruling concerning how Rhode Island courts will treat discharge that travels through groundwater into navigable water. First, the court's ruling on the defendant's motion for summary judgment implies that if there was enough evidence directly linking a polluter to the discharge found in groundwater, a court would hold them liable for the damage caused by that discharge. Further, the court showed a tempered deference to the findings of the DEM in their

[751] *Id*. at 4.
[752] *Id*. at 1.
[753] *Id*. at 16.
[754] *Id*.
[755] *Id*.
[756] *Id*.

adjudicative hearings. While these hearings are not necessarily binding on the parties, the decision in *Dunellen* shows that if a DEM official would find a party guilty under the state's laws, the court is likely to defer to the DEM's judgment. Overall, the limited caselaw in Rhode Island narrows the range of conclusions that can be drawn from an analysis of the caselaw. However, at least one case provides at least some usefulness in determining Rhode Island's post-*Maui* future.

c. Appendix A Scenarios

Scenario 1) Municipal Wastewater Management

Rhode Island's Department of Environmental Management has promulgated rules relating the approval of Onsite Water Treatment Sites (OSWTs) and groundwater quality, but there is not a rule specifically on discharges from public wastewater systems to groundwater.[757] Discharges from public sewer systems to groundwater will probably be governed by Rhode Island regulations on surface water discharges and the Supreme Court's ruling in *Maui* rather than by new, groundwater-specific statutes.

Section 46-12-28 of the Rhode Island General Laws explicitly treats groundwater as a "water of the state."[758] More specifically, the statute charges the DEM with promulgating rules regulating the "[s]ubsurface containment systems used to store wastewaters. . ."[759] Under this authority, the DEM promulgated 250-RICR-150-05-3.[760] Rule 3.8 (B) holds that "[n]o person shall cause or allow a discharge of any pollutant to groundwater without the approval of the

[757] Rules For The Priority Determination System For Federal and State Assistance to Local Governmental Units For Construction of Water Pollution Abatement Projects, 250-RICR-150-20-2 (2017); Groundwater Quality Rules, 250-RICR-150-05-3 (2019).
[758] 46 R.I. GEN. LAWS ANN. § 46-12-28 (West 2020).
[759] § 46-12-28(b).
[760] Groundwater Quality Rules, 250-RICR-150-05-3 (2019).

Director. . .”[761] The definition of “person” includes any municipality or municipal agency.[762] Further, “[n]o person shall operate or maintain a facility in a manner that may result in a discharge of any pollutant to groundwater without the approval of the Director.”[763] This means municipal wastewater discharges into groundwater need to be explicitly be approved by the director of the DEM in order for a municipality to potentiality avoid penalties. Accordingly, a state regulatory scheme for municipal wastewater discharges into groundwater exists, albeit a patchwork one.

Scenario 2) Stormwater Management: Green Infrastructure (GI)

In Rhode Island, every stormwater drainage system that is part of a small municipal separate storm sewage system must develop a stormwater management program plan as a condition of that small MS4’s general Rhode Island Pollutant Discharge Elimination System (“RIPDES”) permit.[764] This means that all stormwater discharges that flow into the “waters of the state” are subject to regulation by the state’s Department of Environmental Management.[765] Accordingly, stormwater discharge is thus subject to the state’s prohibitions on pollutants discharged into groundwater.[766] Groundwater is explicitly included in the statutory definition of “waters,” meaning stormwater discharges into groundwater are statutorily regulated in Rhode Island.[767]

Further, according to Section 8 of the Groundwater Regulations, “No person shall cause or allow a discharge of any pollutant to groundwater without the approval of the Director

[761] 250-RICR-150-05-3.8(B).
[762] 250-RICR-150-05-3.7(37).
[763] 250-RICR-150-05-3.8(C).
[764] 45 R.I. GEN. LAWS ANN. §61.1-2(b) (West 2020).
[765] 46 R.I. GEN. LAWS ANN. § 46-12-1(23) (West 2020).
[766] *Id*.
[767] *Id*.

pursuant to these and other Department Regulations."[768] Additionally, "No person shall operate or maintain a facility in a manner that is likely to result in a discharge of any pollutant to groundwater without the approval of the Director."[769]

Given this existing regulatory framework, it does not appear that discharges of stormwater require additional permits other than the standard RIPDES under *Maui*. It appears that the Rhode Island DEM will evaluate each municipality's application for a RIPDES permit on a case-by-case basis under the same procedure as before *Maui*.

Scenario 3) Drinking Water: Water Reuse

In Rhode Island, any discharge that may pollute a public drinking water supply or may present a risk that the water supply will become injurious is prohibited.[770] This prohibition broadens to "any activity "in or on or in the immediate vicinity of any water body used as a source of public drinking water supply" which the director of the DEM deems a public health risk.[771] While there is not an explicit mention of discharges into a public drinking water supply, the broad prohibition against *any* discharge that may endanger the purity of a public drinking water supply is good indication that discharges through groundwater that affect public drinking water supplies would not be constrained post-*Maui*.

XXII. South Dakota

a. Statutory Regulation

South Dakota fits into Category 2 of the more stringent than states we identified. Its regulations are more stringent than those of the CWA because its statutes specifically prohibit

[768] Arpad Merva, AAD No. 93-024,1,2 (1996)
[769] *Id*.
[770] 46 R.I. GEN. LAWS ANN. §14-1 (West 2020).
[771] *Id*.

discharges entering groundwaters of the state. South Dakota's clean water regulations are set out in Chapter 34A-2, Water Pollution Control, of the South Dakota Codified Laws ("SDCL").

Through the statutes set out in this Chapter, the South Dakota Legislature intends to conserve, protect, maintain, and improve the quality of the "waters of the state."[772] The state defines "waters of the state" to include "all waters within the jurisdiction of [the] state, including…all other bodies or accumulations of water, surface and underground, natural or artificial, public or private."[773] On their face, these broad terms encompass groundwater.

South Dakota prohibits discharge of wastes "into any waters of the state which reduce the quality of such waters below the water quality level existing on March 27, 1973."[774] Violation is subject to criminal and civil penalties and may be abated as a public nuisance. Importantly, the state describes an exception for economic or social necessity: "there may be a discharge, if the discharge will not result in the violation of applicable water standards, and if the discharge is found justifiable as a result of necessary economic or social development."[775] Since groundwater fits into the sweeping statutory definition of "waters of the state," these provisions indicate the general prohibition of discharges into groundwater.

South Dakota law prohibits a person from "caus[ing] pollution of any waters of the state, or plac[ing] or caus[ing] to be placed any wastes in a location where they are likely to cause pollution of any waters of the state,[776] unless pollution arises from a discharge authorized by permit under one of the SDCL's subsequent provisions. This provision is more stringent than those of the CWA because even though groundwater does not fall explicitly within the definition

[772] S.D. CODIFIED LAWS § 34A-2-1 (2020).
[773] § 34A-2-2(12).
[774] § 34A-2-24.
[775] § 34A-2-24.
[776] § 34A-2-21.

of "waters of the state," discharges of pollutants into groundwater that are likely to enter "waters of the state" have, for the most part, been prohibited.

Under Section 34A-2-36, permits are required for parties to "discharge any waste, pollutant, or combination of pollutants, into surface waters from a point source." In these instances, permits are issued by the Department of Environment and Natural Resources ("DENR") to achieve the effluent limitations set out in or that are more stringent than those established in the CWA.[777] Though the CWA requires permits for point source discharges into surface waters, Section 34A-2-37 makes clear the South Dakota Legislature's intent to use state regulations and EPA-delegated NPDES authority to implement heightened clean water regulations.

Additionally, South Dakota law requires parties to receive construction permits from the DENR's Water Management Board ("Board") for activities, which "are, or may" cause the discharge of wastes into the groundwaters of the state.[778] Even if groundwaters are not "waters of the state" nor conduits for discharges into "waters of the state" (regulated under Section 34A-2-21), discharges into them are regulated through a state permitting requirement.[779] The *Maui* decision does not go so far as to require permits for discharges into all groundwaters, so this provision is significantly more stringent than the CWA and its interpretations; a number of groundwater discharges will remain solely subject to state regulation even in the wake of the *Maui* decision.

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[777] S.D. CODIFIED LAWS § 34A-2-37 (2020).
[778] § 34A-2-27.
[779] *Id*. (Requiring the secretary's approval of plans and specifications for the (1) "construction, installation, modification, or operation of any disposal system or part thereof, or any extension or addition thereto;" (2) "increase in volume or strength of any wastes in excess of permissive discharge specified under any existing permit;" (3) "construction, installation, or operation of any…establishment, or any extension or modification thereof or addition thereto…which would cause an increase in the discharge of wastes into the groundwaters of the state or would otherwise alter the physical, chemical, or biological properties of any groundwaters of the state in any manner not already lawfully authorized").

Section 34A-2-99 authorizes the Board to promulgate rules regulating releases from underground storage tanks.[780] Section 34A-2-98 defines underground storage tanks as "any tank or combination of tanks including connected underground pipes which contain an accumulation of regulated substances, and the volume of which, including the volume of the connected underground pipes, is ten percent more beneath the surface of the ground." The definition excludes: "A septic tank;"[781] "A surface impoundment, pit, pond or lagoon;"[782] "A storm water or wastewater collection system;"[783] and "Any pipes connected to any tank which is described in subsections (a) to (i), inclusive of this subdivision."[784]

Similarly, Section 34A-2-101 authorizes the Board to promulgate rules to "safeguard the public health and welfare and prevent pollution of the waters of the state from the leakage, spillage, release, or discharge of regulated substances from above ground stationary storage tanks." Section 34A-2-100 defines above ground storage tanks as "any stationary tank or combination of stationary tanks above ground, including connected pipes, which stores an accumulation of regulated substances." The definition excludes: "Any septic tank;"[785] "Any surface impoundment, pit, pond, or lagoon;"[786] "Any storm water or wastewater collection system;"[787] and "Any pipe connected to any tank which is exempted in this subdivision."[788]

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[780] § 34A-2-99. (Requiring maintenance of a leak detection system, maintenance of records monitoring leaks, reporting of releases and corrective action taken in response to releases, corrective action in response to releases, closure of tanks to prevent future risks, maintenance of evidence of financial responsibility for taking corrective action and compensating injured third parties, standards of performance for new underground storage tanks, and notification of existing underground storage tanks).
[781] § 34A-2-98(c).
[782] S.D. CODIFIED LAWS § 34A-2-98(e) (2020).
[783] § 34A-2-98(f).
[784] § 34A-2-98(j).
[785] § 34A-2-100(3).
[786] § 34A-2-100(5).
[787] S.D. CODIFIED LAWS § 34A-2-100(6) (2020).
[788] § 34A-2-100(10).

Lastly, the relevant regulatory structure that sets standards for the South Dakota public water supply arises in Chapter 34A-3A, Safe Drinking Water, of the SDCL and includes provisions regulating bodies of water entering and in the public distribution system. The Chapter sets out to ensure that public water systems in the state "meet or exceed minimum standards for drinking water quality…pursuant to the Federal Safe Drinking Water Act.[789] The Board is authorized to promulgate rules "establishing: (1) Safe drinking water standards with maximum contaminant levels…[that are not] more stringent than those established under the Federal Safe Drinking Water Act ("FSDWA"); and (2) Procedures to ensure compliance…including quality control, testing, monitoring, record keeping, reporting, and public notice."[790] Section 34A-3A-17 also authorizes the development of "procedures to…prevent pollution of public water supply systems," including:

> Guidelines for a wellhead protection program to protect the public water supplies from new and existing facilities which may be potential or actual pollution sources, including, but not limited to, [guidelines for] the design of new facilities and modification of existing [ones and] department approval or denial…of plans and specifications for new facilities or modifications to existing [ones, and] operation and maintenance criteria.[791]

This provision alone suggests that facilities with discharges entering South Dakota's public water supply are subject to regulations under Chapter 34A-3, which must also ensure compliance with the minimum water contamination standards of the FSDWA.

b. Caselaw

There is no South Dakota caselaw further defining groundwater or directly litigating prohibition or permitting of discharges to groundwater under the SDCL. *Krsnak v. South Dakota DENR* is the only prominent case dealing with the issue of construction permits under Section

[789] § 34A-3A-1.
[790] § 34A-3A-2.
[791] § 34A-3A-17(1).

34A-2-27. In this case, however, the court dealt with the permit requirement process rather than the scope of groundwater discharge regulation under the permit requirement.[792]

In *Krsnak*, the plaintiffs, Jimmy and Linda Krsnak, challenged the Brant Lake Sanitary District's ("District") wastewater treatment expansion project.[793] The Brant Lake facility plans proposed to join and expand the Chester Sanitary District's existing system and, to accommodate the increased flow of wastewater from Brant Lake, included the construction of another treatment lagoon and additional piping that would transport wastewater between the existing and newly constructed lagoons.[794] Chester's existing wastewater system operated under a surface water discharge permit that was previously issued by the DENR under Section 34-A-2-36.[795]

The plaintiffs filed a complaint requesting a writ of mandamus for the DENR to require the district to obtain a Section 34A-2-27 permit for the construction of the Brant Lake facility.[796] The defendant, the DENR, had approved construction of the project without requiring the district to obtain this permit.[797] The trial court struck down the writ of mandamus and on appeal, the plaintiffs argued that the decision was improper because "seepage" from the Brant Lake facility would inevitably discharge into the surrounding groundwater.[798] The court ruled that though the Brant Lake facility would discharge surface water, there was no evidence that it would discharge into groundwaters; hence, there was no clear duty for the District to obtain a construction permit under Section 34-2-27(1).[799]

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[792] *Krsnak v. S. Dakota Dept. of Env. and Nat. Resources*, 824 N.W.2d 429 (S.D. 2012).
[793] *Id*. at 433.
[794] *Id*. at 432.
[795] *Id*. at 433.
[796] *Id*.
[797] *Krsnak*, 824 N.W.2d at 433.
[798] *Id.* at 435.
[799] *Id*.

Through this holding, the court indicated that the burden of proof to show discharges into groundwater rested with the plaintiff. In cases of groundwater discharge, the plaintiffs would be required to provide specific evidence regarding the looming discharges into groundwater, thus suggesting an example of a substantial hurtle for challenges to DENR project approval. Under prior caselaw, the high evidentiary bar courts required to establish the presence of discharges into groundwater made it difficult for plaintiffs to file suit under Chapter 34A-2 of the SDCL; as a result, the operation of the code's statutes was less stringent than the language contained in them, reaching only some of the discharges that the plain language would have encompassed. Now, following the new *Maui* decision, certain discharges from point sources into groundwater reaching navigable waters will be regulated by the CWA NPDES program, thereby alleviating room for state interpretation of proof for discharges into groundwater.

The plaintiffs also argued that, since the permit for the existing Chester facility would be up for renewal at the time of the construction of the Brant Lake facility, the DENR abused its authority under Section 34A-2-27(2).[800] But, the court highlighted that in Chapter 34A-2, the Legislature established South Dakota's overall policy regarding the prevention and regulation of water pollution and in it, granted the DENR the power to carry out these legislative objectives (SDCL Section 34-A-2-28 stating, "The [B]oard shall promulgate rules…governing application, public notice, and public participation for permits to discharge sewage, industrial waste, or other wastes into state waters).[801] Moreover, the DENR had no clear duty to act under the provisions of Section 34-A-2-27 because this and other provisions of Chapter 34A-2 established the DENR's discretion to require plans and specifications as the DENR deemed necessary to carry

[800] *Id.*
[801] *Id.*

out applicable administrative rules.[802] Hence, the court upheld the trial court's decision in denying the writ of mandamus.[803]

This outcome again reinforced that the burden of proof to challenge agency decisions rested with the plaintiff, who, as the court noted, often had less expertise on water pollution matters than the DENR did.[804] Post *Maui*, the distribution of permits for certain groundwaters reaching waters of the state will be regulated via the EPA-delegated NPDES authority, so, there will be less instances in which plaintiffs will bring suit regarding discharges into groundwaters. Because of this, the burden of proof will not be as impactful on the implementation of permit requirements for discharges into groundwaters, and South Dakota's clean water regulations will carry out the broader, more stringent standard their statutes suggest.

c. Appendix A Scenarios

There is no South Dakota litigation regarding discharges into groundwater in Appendix A scenarios. Nevertheless, the state's statutory language and *Krsnak* decision, which speaks to the application of Chapter 34A-2 statutory provisions, offer insight into how these scenarios might be handled. In South Dakota, most discharges arising from Appendix A scenarios are exempt from regulation under Sections 34A-2-99 and § 34A-2-101.

Scenario 1) Municipal Wastewater Management

Discharges from underground municipal wastewater systems are exempted from state regulations under Section 34A-2-99 and related provisions because Section 34A-2-98(c) exempts sewer systems, Section 34A-2-98(e) exempts constructed wastewater treatment system components, such as lagoons, and Section 34A-2-98(f) exempts underground injection wells.

[802] *Krsnak*, 824 N.W.2d at 435.
[803] *Id*.
[804] *Id*. at 436.

Discharges from above ground municipal wastewater systems are also exempted from state regulations under Section 34A-2-101 and related provisions because Section 34A-2-100(3) exempts sewer systems, and Section 34A-2-100(5) exempts constructed wastewater treatment system components such as lagoons. This means that under South Dakota law, the only state regulation of under and above ground storage tanks in Scenario 1 would arise under Sections 34A-2-21 and 34A-2-27, which together prohibit discharges into waters of the state without a valid construction permit. This will be significantly impacted by the *Maui* decision because permits issued via South Dakota's NPDES delegation will have to include discharges from these structures into groundwater conduits.

Scenario 2) Stormwater Management: Green Infrastructure (GI)

Discharges from underground stormwater management systems are also exempted from state regulations under Section 34A-2-99 and related provisions because that, which is exempt under Section 34A-2-98(f) includes all stormwater collection infrastructure. Discharges from above ground stormwater management systems are also exempted from state regulations under Section 34A-2-101 and related provisions because that, which is exempt under Section 34A-2-100(6) includes all stormwater collection infrastructure. This means that under South Dakota law, the only state regulation of under and above ground green infrastructure in Scenario 2 arises under the water pollution prohibition detailed in Section 34A-2-21 and the permitting requirements detailed in 34A-2-27. Following *Maui*, discharges from green infrastructure into groundwaters entering waters of the state will move under the state's NPDES authority, while the others will remain under the aforementioned TCA regulations.

Scenario 3) Drinking Water: Water Reuse

Similarly, the relevant regulatory structure that sets forth standards for the South Dakota public water supply does not directly regulate discharges into groundwaters reaching the public water supply distribution system structures. Instead, Section 34A-3A-17 authorizes development of guidelines for facilities that do or have the potential to pollute public water supplies. This provision suggests that the structures with the potential to pollute public water supplies that are regulated under Chapter 34A-2 provisions Sections 34A-2-21 and 34A-2-27, must also comply with the contamination standards set out in the FSDWA. Through this framework, groundwater entering the South Dakota public water supply distribution system is only more stringent than the regulations laid out in the CWA inasmuch as the application of regulations under Sections 34A-2-21 and 34A-2-27 is; room for interpretation of these statutes means that the DENR is able to decide whether regulations of discharges from groundwaters into public water supplies are subject to permit requirements. This will not likely change under *Maui* because public water supplies are not considered "waters of the state" under the CWA, so discharges from groundwater into them are not covered by the EPA-delegated NPDES authority.

The statutory language in Section 34A-2-22(12) indicates that Appendix A scenarios are subject to DENR regulation insofar as releases from Scenario 1, 2, and 3 structures might cause discharges into groundwater. However, the Krsnak decision and the discretionary language in the SDCL Sections 34A-2-21 and 34A-2-27, indicate that the DENR has broad discretion to decide whether or not to apply regulations to stationary tank discharges of regulated substances into waters of the state. This broad discretion greatly reduces the level to which South Dakota statutes are more stringent than those of the CWA in regulating discharges to groundwater in municipal wastewater and stormwater management and drinking water systems. Many Scenario

1, 2, and 3 structures will no longer be subject to statutory exemptions in Section 34A-2-98 and 34A-2-100 nor to agency deference in the application of Section 34A-2-21 and 34A-2-27 provisions. Instead, certain discharges from these structures into groundwater reaching navigable water will be subject to permit requirements under EPA-delegated NPDES authority; others will remain subject to permit requirements under SDCL Sections 34A-2-21 and 34A-2-27, so, due to agency deference, might remain less stringently regulated.

XXIII. Tennessee

Tennessee fits into Category 1 of the more stringent than states identified. Its regulations are more stringent than those of the CWA because its statutory definition of waters regulated by the state uses broad terms, which encompass groundwater. Tennessee's clean water regulations are set out in Titles 68, Health Safety and Environmental Protection, and 69, Waters, Waterways, Drains and Levees, of the Tennessee Code Annotated ("TCA"), and in Chapter 40, Division of Water Resources, of the Rules of the Tennessee Department of Environment and Conservation Water Resources Division ("Rules").

a. Statutory Regulation

Chapter 3, Water Pollution Control, of Title 69 of the TCA sets out the general framework for the abatement and prevention of pollution into Tennessee waters.[805] This Chapter was designed by the Tennessee Legislature to be "liberally construed for the accomplishment of its policy and purpose;"[806] "All grants of power to the board or commissioner shall be liberally construed,"[807] and "any list…preceded by 'include' or including' shall not be construed as

[805] TENN. CODE ANN. § 69-3-102(b) (West 2020), stating that "the purpose of this part is to abate existing pollution of the waters of Tennessee, to reclaim polluted waters, to prevent the future pollution of waters, and to plan for the future use of waters so that the water resources of Tennessee might be used and enjoyed to the fullest extent consistent with the maintenance of unpolluted waters."
[806] § 69-3-120(b).
[807] § 69-3-120(c).

exhaustive or otherwise limiting unless specifically stated."[808] In part, this Chapter also establishes Tennessee's "full participation" in the CWA's NPDES program, thus indicating EPA delegation of permitting power for point sources.[809]

Importantly, Tennessee defines waters as "any and all water…on or beneath the surface of the ground…except those bodies of water confined to and retained within the limits of private property…that do not combine or effect a junction with natural surface or underground waters."[810] The same Section defines discharge to mean "the addition of pollutants to waters from a source,"[811] source to mean "any activity, operation, construction, building, structure, facility, or installation from which there is or may be the discharge of pollutants,"[812] and pollution to mean "alteration…of the waters of the state that will…(A) Result or will likely result in harm, potential harm or detriment to the public health, safety, or welfare…[or will] (D) Leave or likely leave the waters in such condition as to violate any standards of water quality established by the board."[813] Under Tennessee law:

> It is unlawful for any person to discharge any substance into the waters of the state or to place in any location where such substances, either by themselves or in combination with others, cause [pollution], unless such discharge shall be due to an unavoidable accident or unless such action has been properly authorized. Any such action is declared to be a public nuisance.[814]

From the statutory definition of regulated waters and discharge, it seems Tennessee is a more stringent than state because its statutes prohibit pollution into waters including

[808] § 69-3-120(d).
[809] TENN. CODE ANN. § 69-3-102(c) (West 2020).
[810] § 69-3-103(45).
[811] § 69-3-103(10).
[812] § 69-3-103(38).
[813] § 69-3-103(29), stating also that pollution also means any "alteration…of the waters of the state that will…(B) Result or will likely result in harm, potential harm or detriment to the health of animals, birds, fish, or aquatic life; (C) Render or will likely render the waters substantially less useful for domestic, municipal, industrial, agricultural, recreational, or other reasonable uses."
[814] TENN. CODE ANN. § 69-3-114(a) (West 2020).

groundwaters. The pollution of groundwaters is only permissible if it is authorized, and the only method of authorization under Tennessee clean water law is issue of a permit by the Tennessee Water Quality Control Association (including, but not limited to, NPDES permits). This means that Tennessee law expands permitting to include entities polluting groundwater, a methodology that includes the *Maui* decision's establishment of permit requirements for groundwater conduits. Hence, based on Tennessee statute, there will be no substantial change in the state's general clean water law or permitting scheme following the decision.

This is reinforced by the relevant administrative provisions of the Rules. Chapter 0400-40-05, Permits, Effluent Limitations and Standards, states that "A permit is designed to allow the holder thereof to conduct activities listed in [TCA Section] 69-3-108 only after strict compliance with conditions and applicable effluent limitations."[815] Under TCA section 69-3-108, a permit is required for "The alteration of the physical, chemical, radiological, biological, or bacteriological properties of any waters of the state;"[816] "The construction, installation, modification, or operation of any treatment works, or part thereof, or any extension or addition thereto;"[817] "The increase in volume or strength of any wastes in excess of the permissive discharges specified under any existing permit;"[818] "The development of…any establishment or any extension or modification thereof or addition thereto, the operation of which will or is likely to cause an increase in the discharge of wastes into the waters of the state;"[819] "The construction or use of any new outlet for the discharge of any wastes into the waters of the state;"[820] "The discharge of sewage, industrial wastes or other wastes into waters, or a location from which it is likely that the

[815] TENN. COMP. R. & REGS. 0400-40-05.01 (2020).
[816] TENN. CODE ANN. § 69-3-108(b)(1) (West 2020).
[817] § 69-3-108(b)(2).
[818] § 69-3-108(b)(3).
[819] § 69-3-108(b)(4).
[820] TENN. CODE ANN. § 69-3-108(b)(5) (West 2020).

discharged substance will move into waters;"[821] and "The discharge of sewage, industrial wastes, or other wastes…or the underground placement of fluids and other substances that do or may affect the waters of the state;"[822] Additionally, under the TCA, "any person operating or planning to operate a sewerage system shall file an application with the commissioner for a permit or, when necessary, for modification of such person's existing permit."[823]

The Rules also make clear that Tennessee regulation already identified and regulated, via permits, the hydrological connections implicated in the *Maui* decision.[824] Section 40, determining the specific instances requiring issue of permits for discharges into Tennessee waters, solidifies the statutory notion of strict regulation of discharges into waters including groundwater.

Under the NPDES permit program specifically, general permits are issued to "authorize discharges from a category of sources within a geographical area."[825] "A permit is a license to conduct" one of the TCA-regulated activities listed above, and, as stated in the TCA, "under no circumstances shall the Commissioner issue a permit for an activity which would cause a condition of pollution either by itself or in combination with others."[826]

Aside from these general permits, certain structures are subject to permits requiring maintenance of criteria laid out in regulations narrowly tailored to the pollution risks of the structures. For example, public sewerage systems, storm water management structures, and underground injection wells are subject to specific and stringent regulations under the TCA and Rules. Under Chapter 221, Water and Sewage, of Title 68 of the TCA, sewage is defined to

[821] § 69-3-108(b)(6).
[822] § 69-3-108(b)(8).
[823] § 69-3-108(c).
[824] TENN. COMP. R. & REGS. 0400-40-05-.02(36) (2020).
[825] 0400-40-10-.02(3).
[826] 0400-40-10-.03.

mean "water-carried waste or discharges from human beings or animals, from residences, public or private buildings, or industrial establishments, or boats, together with such other wastes and ground, surface, storm, other water as may be present,"[827] and sewerage systems are defined to mean "conduits, sewers, and all devices and appurtenances by means of which sewage and other waste is collected, pumped, treated, or disposed."[828] The TCA mandates "general supervision over the construction of public water supplies and public sewerage systems throughout the state"[829] and states that "No public sewerage system…shall be approved or certified by the commissioner which proposes to use land having a water table at an elevation which would preclude adequate treatment of the wastewater and which may result in surface or ground water pollution as provided in" Chapter 3 of Title 69."[830] From these provisions, it is clear that the more stringent than language of Tennessee law applies to sewer systems, which are prohibited from discharging into state waters, including groundwaters.

Under Part 11, Storm Water Management, of the same TCA Chapter, the Legislature sets out "to facilitate compliance with the [CWA], by municipalities which are affected by [EPA] storm water regulations."[831] The powers and duties of the municipalities include to "Establish standards to regulate the quantity of storm water discharged[,] to regulate storm water contaminants as may be necessary to protect water quality,"[832] and to "Issue permits for storm water discharges, or for the construction, alteration, extension, or repair of storm water facilities."[833] According to this Chapter:

> Municipalities shall provide permit conditions for storm water discharges associated with activities that are consistent with any permits issued pursuant to

[827] TENN. CODE ANN. § 68-221-101(11) (West 2020).
[828] § 68-221-101(9).
[829] § 68-221-102(a)(1).
[830] § 68-221-10(2)(a)(4).
[831] § 68-221-1101.
[832] TENN. CODE ANN. § 68-221-1105(3) (West 2020).
[833] § 68-221-1105(5).

> the [NPDES power], unless the discharge contains hazardous substances in excess of reporting quantities, or the facility and the municipality are not in compliance with applicable provisions of the NPDES permits issued to them for storm water, or the discharge materially affects the municipal storm water facilities through either the quantity of wastewater or its contamination.[834]

This indicates that discharges from stormwater management structures are subject to NPDES or more rigorous permitting regulations that will not change as a result of the *Maui* decision.

Under Chapter 45-06, Underground Injection Control, of the Rules, the Tennessee Department of Environment and Conservation sets out regulations intended "to protect the ground water resources of the State, [by exercising] the authority given to the board to protect waters of the State pursuant to [the TCA and its definition of 'Waters']."[835] In this Chapter, "the construction of an injection well, the conversion of a well into an injection well, and the use or operation of an injection well is prohibited unless authorized by an injection well permit or by the rule of the Commissioner."[836] "These rules do not limit the authority of the Commissioner to abate and prevent pollution of surface or ground water resulting from any injection activity, or other discharge of pollutants,"[837] thus indicating that the general mission—preventing discharge of pollutants into groundwater—set out in TCA protection of state waters, applies to discharges from underground injection wells.

The Chapter states that "all injection wells and activities must be authorized by permit or by rule."[838] Another provision states that, "All UIC permits shall contain permit conditions…set at levels to prevent adverse effects to persons utilizing ground water resources after

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[834] § 68-221-1110.
[835] TENN. COMP. R. & REGS. 0400-45-06-.01 (2020).
[836] 0400-45-06-.03(1).
[837] 0400-45-06-.03(4).
[838] 0400-45-06-.07(1).

consideration of at least the following factors: any guidelines set for certain pollutants by [the EPA], the flow characteristics of ground water, risk to humans and the risk of migration."[839] From this, it is evident that underground injection wells are heavily regulated via permit requirements that are more stringent than the requirements of the *Maui* decision—Tennessee regulations require permits to cover discharges of pollutants into groundwaters not only in cases of groundwater conduits, but also in cases where discharges impact the listed and/or other considerations.

Lastly, pretreatment structures are subject to Tennessee's more stringent than regulations via Rules regulating discharges from them. Under Chapter 40-14, Pretreatment Requirements, "A User may not introduce into a [wastewater facility] any [pollutant] which cause[s] Pass Through or Interference."[840] The term wastewater facility includes "any devices and systems used in the storage, treatment, recycling and reclamation of municipal sewage or industrial wastes of a liquid nature [and] sewers, pipes and other conveyances only if they convey wastewater to a [wastewater facility] Treatment Plant."[841] Wastewater facility also refers to "the municipality…which has jurisdiction over the indirect discharges to and the discharges from such a treatment work."[842] Pass Through "means a discharge which exits the [wastewater facility] into waters of the United States in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the [wastewater facility's] NPDES permit."[843] Tennessee's NPDES already covers discharges into groundwater, so these permits and the inclusion of Pass Through in the

[839] 0400-45-06-.08(13).
[840] TENN. COMP. R. & REGS. 0400-40-14-.05 (2020).
[841] 0400-40-14-.03.
[842] *Id*.
[843] *Id*.

provision apply the more stringent than standard to discharges from wastewater facilities, thus requiring no change following the *Maui* decision.

b. Caselaw

Because Tennessee's clean water regulations are tremendously detailed, there has been little room for litigation regarding the scope of prohibitions/permit requirements for discharges into groundwater. In *Wayne County v. Tennessee Solid Waste Disposal Control Board*, the Solid Waste Disposal Board found that the evidence presented was sufficient to establish that it was "more likely than not" that leachate from the county's landfill "contributed to the contamination of the groundwater supplying the Gallagher's two wells."[844] The court found that there was "substantial and material evidence" in support of the plaintiff's findings,[845] and that the standard contained in the TCA was "couched in very broad language," thus requiring less than a preponderance of evidence.[846] Though this decision did not speak directly to the issue of regulating discharges into groundwater conduits, the court's interpretation of "substantial and material evidence" reinforced the more stringent than characterization of Tennessee's clean water regulations. Even if it is not certain that discharges into groundwater cause contamination of waters, including drinking waters, these discharges are still subject to state regulation.

In a more recent case, *StarLink Logistics, Inc.v. ACC, LLC*, the court addressed the regulation of pollution from the ACC's landfill into Sugar Creek and Arrow Lake.[847] In part, the court set out to decide whether or not the ACC violated statutory provisions by not obtaining an NPDES permit for its continued leachate discharges.[848] StarLink argued that it did because under

[844] *Wayne County v. Tennessee Solid Waste Disposal Control Bd*., 756 S.W.2d 274, 278 (Tenn. App. 1988).
[845] *Id*. at 279.
[846] *Id*. at 280.
[847] *StarLink Logistics, Inc. v. ACC, LLC*, 2018 WL 63794, at *1 (Tenn. App. Jan, 31, 2018).
[848] *Id*. at 4.

the CWA, the "federal precedent surrounding the [applicable Tennessee] statute," polluting parties must either stop polluting or obtain an NPDES permit to "limit and monitor the amount of pollutant released into the waterway in question;" instead, the Order granted allowed the ACC to continue its "harmful behavior of allowing the leachate to seep into Sugar Creek and Arrow Lake" sans NPDES oversight.[849] The court held that under the applicable TCA provision, 69-3-108, the commissioner *may* grant permits authorizing discharges or activities described in the relevant section and *could not* issue a permit for an activity that "would cause a condition of pollution either by itself or in combination with others."[850] The court held that "The wording of [the] statute [could] be read to give leniency in granting permits, putting the decision in the hands of the Commissioner," and that "issuing a permit for…the leachate flowing from ACC's…would actually be in direct conflict with the language of the statute [because without] any mitigating efforts, the leachate would still be causing a condition of pollution into Sugar Creek and Arrow Lake."[851]

Through this holding, the case tangentially addressed Tennessee's more stringent than clean water regulations in its treatment of NPDES permitting. The court's narrow and textual interpretation of the statute provided for greater discretion in issuing of NPDES permitting than will be allowed following the *Maui* decision. Following the Supreme Court ruling, Tennessee's NPDES delegation will require strict adherence to permitting for groundwater conduits irrespective of commissioner discretion and polluting parties' efforts to limit discharges into groundwater conduits.

[849] *Id*. at 5.
[850] *Id*. at 6.
[851] *Id*.

c. Appendix A Scenarios

All in all, the detail and expansiveness of Tennessee's clean water regulations leaves little room for litigation concerning permission for discharge into groundwater. In Tennessee, many Appendix A Scenarios are specifically regulated via statutes or administrative regulations, which, by discharge prohibition or permit requirement, regulate discharges into groundwater. The few Appendix A scenarios that are not specifically referenced by such more stringent than provisions, are still generally prohibited from or require permits for discharging into groundwater because of the broad language of Tennessee's clean water regulations under Title 69 of the TCA.

Scenario 1) Municipal Wastewater Management

Tennessee has detailed regulations for discharges from municipal wastewater treatment system components. Generally, under Chapter 0400-40 of the Rules, the construction, use, and alteration of municipal wastewater systems requires permits issued in compliance with conditions and effluent limitations. Since these limitations are subject to the TCA's more stringent than regulations of discharges into groundwaters, including explicitly, the discharge or increase of discharge into "waters of the state,"[852] permits apply to municipal wastewater management systems' discharges or potential discharges into groundwaters. This permit system will not substantially change with the advent of the *Maui* approach because Tennessee's current permit requirement pertains to more than just discharges into groundwater conduits (also to discharges into groundwater and discharges with the potential to enter groundwater).

Pretreatment structures are subject to permit requirements, which similarly regulate discharges into groundwaters via NPDES permits.[853] These permits apply to discharges that

[852] TENN. CODE ANN. § 69-3-108(b)(4)-(5) (West 2020).
[853] TENN. COMP. R. & REGS. 0400-40-14-.05 (2020).

alone or in conjunction with another violate permit requirements,[854] so likewise, the current regulation is more stringent than the *Maui* decision in its application of NPDES permits to discharges that contribute to discharges into groundwaters.

The discharge of sewage is also specifically subject to this permit requirement as indicated by the Rules and TCA, so systems discharging sewage wastes into waters or locations from which they will likely enter or affect waters, must obtain permits.[855] The language used in this TCA provision sets a low bar for proof of discharge, indicating that the Tennessee Water Quality Control Association is able to apply the permit requirement to any and all structures that discharge, might discharge, or might contribute to the discharge of sewage into state waters, including groundwater.

Finally, discharges from underground injection wells are subject to more stringent than regulation via permit requirements that consider the adverse effects a discharge might have on the use of groundwater resources. This is more stringent than the regulation of conduits set out in *Maui* because it regulates all discharges into groundwaters; the present regulation of underground injection wells will thus not be altered by *Maui* expansion of the NPDES' reach, aside from transitioning other permits to NPDES ones.[856]

Scenario 2) Stormwater Management: Green Infrastructure (GI)

Storm water management infrastructure is subject to permit requirements under the TCA. The permits issued for discharges from these structures must be consistent with permits issued under the state delegated NPDES power.[857] This means that storm water management structures, including green infrastructure, are subject to more stringent than regulations, since under

[854] 0400-40-14-.03.
[855] TENN. CODE ANN. § 69-3-108(b)(6), (8) (West 2020).
[856] TENN. COMP. R. & REGS. 0400-45-06-.08(13) (2020).
[857] TENN. CODE ANN. § 68-221-1110 (West 2020).

Tennessee law, NPDES permits apply to structures discharging waste into state waters, including groundwater. The *Maui* decision will affect no change in the permit structure of stormwater management infrastructure.

Scenario 3) Drinking Water: Water Reuse

None of Tennessee's drinking water regulations address discharges from aquifers and other water reuse structures into state waters. Nevertheless, these structures discharge into groundwaters, and since groundwaters fall within the Tennessee definition of regulated waters, require permits for discharges into groundwater under TCA's more stringent than Chapter 69 regulations.[858]

XXIV. Texas

a. Statutory Regulation

Texas water pollution is regulated mainly under Subtitle D of Title 2 of the Texas Water Code and Part 1 of Title 30 of the Texas Administrative Code. It defines waters of the state a little differently than most states in this analysis:

> 'Water' or 'water in the state' means *groundwater, percolating or otherwise*, lakes, bays, ponds, impounding reservoirs, springs, rivers, streams, creeks, estuaries, wetlands, marshes, inlets, canals, the Gulf of Mexico, inside the territorial limits of the state, and all other bodies of surface water, natural or artificial, inland or coastal, fresh or salt, *navigable or nonnavigable*, and including the beds and banks of all watercourses and bodies of surface water, that are wholly or partially inside or bordering the state or inside the jurisdiction of the state.[859]

Because Texas defines even groundwater that does not percolate or filter gradually into surface waters it is clear that the state promulgates regulations that are more stringent than federal EPA regulations. Additionally, the state prohibits discharges into or adjacent to any

[858] § 69-3-114(a).
[859] TEX. WATER CODE ANN. § 26.001(5) (2020) (emphasis added).

water in the state which "in itself or in conjunction with any other discharge or activity causes…or will cause pollution of any of the water in the state." The only exception to this is if the discharge complies with a water pollution and abatement plan approved by the commission.[860] These regulations place Texas into Category 1 of Appendix B.

The Texas Commission on Environmental Quality ("TCEQ") is the primary agency responsible for water pollution control in the state and implements the NPDES program for Texas, which is referred to as the Texas Pollutant Discharge Elimination System (TPDES) program. The TCEQ has authority under sections 26.121 and 26.027 of the Texas Water Code to regulate discharges from most facilities in the state and has authority under sections 26.121 and 26.047 to regulate discharges from POTWs and privately owned treatment works. It also is primarily responsible for implementing a pretreatment program in accordance with section 26.047. In a Memorandum of Agreement dated in June 2020, the TCEQ declared the following:

> The TCEQ operates the TPDES permit program in accordance with the Clean Water Act as amended, applicable federal regulations, applicable TCEQ legal authority, applicable state statutes and rules, and taking into consideration published EPA policy. The TCEQ has the primary responsibility to establish the TPDES program priorities, so long as they are consistent with Clean Water Act and NPDES goals and objectives.[861]

All of TCEQ's general powers and duties, including those mentioned above are provided in subchapter B of chapter 26 in the water administration title 2 of the water code (hereinafter referred to chapter 26). This chapter also provides the prohibitions against pollution and a specific subchapter dedicated toward underground and aboveground storage tanks.[862] The prohibitions include unauthorized discharges (mentioned above) and pretreatment effluent

[860] TEX. WATER CODE ANN. § 26.121(2) (2020).
[861] *Memorandum of Agreement Between the Texas Commission on Environmental Quality and the U.S. Environmental Protection Agency, Region 6 Concerning the National Pollutant Discharge Elimination System*, TQEQ (June 2020), https://www.tceq.texas.gov/assets/public/permitting/wastewater/municipal/2020-tpdes-moa.pdf.
[862] These storage tanks are discussed in Scenario 1 below and are regulated in subchapter I.

standards. The pretreatment effluent standards require the Texas Natural Resource Conservation Commission to adopt regulations to administer a program regulating pollutants introduced into POTWs.[863] As for other prohibitions, causing or allowing the discharge from a point source of any waste into any water in the state is not allowed unless authorized by the Texas Natural Resource Conservation Commission ("TNRCC"). This can be understood as allowing a pollutant to enter into a point source, which is then discharged into waters in the state. As a result, the regulations may very well already reflect *Maui* standards.

Finally, chapter 26 briefly discusses groundwater protection and is the source for creating the Texas Groundwater Protection Committee. This Committee provides joint groundwater monitoring and contamination reports as well as protection and enhancement plans dedicated to water quality and developed in conjunction with federal regulations and policy.[864] Municipalities have discretion to establish a water pollution control and abatement program, which must cover the entire city and must be submitted to the TCEQ for review and approval.[865]

Enforcement is handled by the Executive Director of the TCEQ. Anyone with information about alleged violations may submit it to the department, and remedies available to the TNRCC are found in the Water Code and include "administrative orders with or without penalties; referrals to the Texas Attorney General's Office for civil judicial action; referrals to the Environmental Protection Agency for civil judicial or administrative action; referrals for criminal action; or permit, license, registration, or certificate revocation or suspension."[866]

[863] TEX. WATER CODE ANN. § 26.1211 (2020).
[864] § 26.406.
[865] *See* § 26.177.
[866] 30 TEX. ADMIN. CODE § 70.5 (2020).

b. Caselaw

'Water in the state' has been interpreted by courts in Texas in the past and the overall takeaway is that these courts are well aware of a hydrological connection between groundwater and surface water and will enforce same. In *Watts v. State*, while upholding a criminal conviction the 14th Court of Appeals classified a drainage ditch as 'water in the state.'[867] The court noted the distinction between water in the ditch and the ditch itself – "the beds and banks of the watercourse" and explained that both were considered water in the state.[868] The court also explained that 'watercourse' is not defined by the Water Code, and thus decided that its meaning is the ordinary usage of the word: "any body of water flowing in a reasonably definite channel with bed and banks…[and] may be either artificial…or natural."[869] Other cases, particularly those where parties have challenged an order made by the TCEQ, demonstrate that courts support the theory that contaminated groundwater will likely percolate through to and pollute fresh water.[870]

c. Appendix A Scenarios

Scenario 1) Municipal Wastewater Management

Backups into basements that could find their way into groundwater are prohibited discharges as specified above. These are regulated under section 26.039 of the Water Code and Chapter 327 of the TCEQ regulations. They are called 'accidental discharges,' which means "an act or omission through which waste or other substances are inadvertently discharged into water

[867] *Watts v. State*, NO. 14-99-00811-CR, 2004 Tex. App. LEXIS 799, at *14 (Tex. Ct. App. January 29, 2004).
[868] *Id*.
[869] *Id*. at *15 (quoting BLACK'S LAW DICTIONARY 1585 (7th ed. 1999)).
[870] *See generally Dyer v. Tex. Comm'n on Envtl' Quality*, NO. 03-17-00499-CV, 2019 Tex. App. LEXIS 9023, at *2 (Tex. App. October 11, 2019) (court emphasized that the purpose of the Injection Well Act is to maintain quality of fresh water in the state to the extent consistent with public health to prevent underground injection that may pollute fresh water).

in the state."[871] The regulations consist of notification requirements,[872] reportable quantities,[873] and necessary actions.[874] Notification typically requires 24 hours from the time of the spill and written reports must also be submitted within a longer time period. TNRCC does not need to be notified, however, if the spill is over 1000 gallons, occurs at a wastewater treatment facility, is not associated with another simultaneous accidental discharge or spill, will not endanger human health or safety, and most importantly, "is controlled or removed before the accidental discharge or spill enters water in the state."[875] This means that if a basement backup causes a pollutant to enter groundwater, then the TCEQ must be notified. If the spill results from a wastewater treatment facility or a collection system (wastewater treatment component such as pipes, and other appurtenant appliances used to transport domestic wastewater to a treatment facility), then it does not need to be reported if the volume of the spill is 1000 gallons or less, it is not associated with other spills, it is controlled or removed before the spill enters water in the state or adversely affects drinking water, and it is not otherwise subject to local regulatory control and reporting requirements.[876]

Class V Injection wells relevant to *Maui* are regulated similarly to federal EPA requirements and are found in chapter 331 of the Code. Construction standards are found in section 331.132 and include additional protection measures. Similarly, closure standards are found in section 331.133 and require owners to seal injection points in order to protect underground sources of drinking water and prevent the percolation of the waste into surface waters. Large capacity septic systems, such as lagoons, must be constructed in accordance with

[871] TEX. WATER CODE ANN. § 26.039(a)(1) (2020).
[872] 30 TEX. ADMIN. CODE § 327.3 (2020).
[873] 30 § 327.4.
[874] 30 § 327.5.
[875] TEX. WATER CODE ANN. § 26.039(g) (2020).
[876] 30 TEX. ADMIN. CODE § 327.32(2) (2020).

consolidated wastewater discharge permits that are obtained under chapter 305. Aboveground and underground storage tanks are regulated under chapter 334. There are release reporting and corrective action requirements (subchapter D), which includes mandated investigations for soil and groundwater cleanup, corrective action plans, and abatement measures.[877] The state legislates even further and requires secondary containment requirements for underground tank systems installed, upgraded, or replaced after September 1, 2001, that is located in certain areas. This all lends support to the notion that the state is adequately regulating in congruence with the *Maui* doctrine.

Scenario 2) Stormwater Management: Green Infrastructure (GI)

Texas does not have a dedicated section of its statutes or regulations for stormwater management but does provide information in the Texas Water Code for municipalities to administer their own stormwater pollution programs (referred to above as water pollution control and abatement programs). This is assumedly their MS4 program. The program is discretionary unless "watershed water quality assessment reports[878]…or other commission assessments or studies identify water pollution that is attributable to non-permitted sources in a city that has a population of 10,000 or more."[879] If that is the case, the TCEQ, "after providing the city a reasonable time to correct the problem and after holding a public hearing, may require the city to establish a water pollution control and abatement program."[880]

For the sake of this analysis, one important function that the city must include in this program is "the development and execution of reasonable and realistic plans for controlling and abating pollution or potential pollution resulting from generalized discharges of waste *which are*

[877] 30 §§ 334.74, 334.75, 334.77.
[878] These reports are required by section 26.0135 in the Texas Water Code.
[879] TEX. WATER CODE ANN. § 26.177(a) (2020).
[880] *Id*.

not traceable to a specific source, such as storm sewer discharges and urban runoff from rainwater.[881] This is directly relevant to the issue addressed in *Maui* and our analysis, and shows that the state is aware of stormwater or wastewater that may come from unknown sources, such as Green Infrastructure, and migrate into point sources that might require a TPDES permit or similar TCEQ authorization. They would effectively be regulated under the municipality's MS4 program.

Scenario 3) Drinking Water: Water Reuse

Aquifer recharge wells must comply with subchapter O of chapter 331 of the Code.[882] The radius for an aquifer recharge ("AR") project is one half mile from each proposed well.[883] When an applicant requests authorization, they must provide information on the activities within that area including: locations of all artificial penetrations (water wells, waste disposal wells, other injection wells etc.) and springs and any other bodies of water or subsurface features that connect to the injection interval.[884] The subchapter also includes construction, operating, and monitoring and reporting requirements.[885]

Finally, the Executive Director must consider federal SDWA drinking water standards; the effect of the AR project on existing water wells, existing springs and other surface features that connect to the injection interval; and whether the introduction of water into the receiving geologic formation will alter the quality of the native groundwater that would render it harmful to humans, animals, vegetation, or property.[886] Further, upon completion of an AR water reuse project, analyses and test results must be submitted, which must include hydrogeologic modeling

[881] § 26.177 (b)(5) (emphasis added).
[882] 30 TEX. ADMIN. CODE § 331.131 (2020).
[883] 30 § 331.263.
[884] *Id*.
[885] §§ 331.264, 331.265, 331.266.
[886] 30 § 331.267(a).

predicting injection fluid movement.[887] This oversight essentially ensures that AR programs that have the potential to pollute surface water under a hydrological connection theory will be scrutinized by the state.

XXV. Utah

a. Statutory Regulation

Utah regulates water pollution under the directive of the Utah Water Quality Act ("UWQA"), found in Title 19, Chapter 5. The corresponding regulations are found in Title R317 of the Utah Administrative Code. The Water Quality Board makes rules, including for effluent limitations and underground wastewater disposal systems, and governs the permit system.[888] It also develops programs for prevention of pollution to WOTUS, modifies standards of water quality as needed, and is responsible for meeting the requirements of federal law related to water pollution.[889] Under section 19-5-105, the Board is restricted from administering a CWA program more stringent than federal regulations "which address the same circumstances."[890] The exception for stringency is where "a written finding after public comment and hearing [is found that is] based on evidence in the record that the corresponding federal regulations are not adequate to protect public health and the environment of the state."[891] As directed by the Board, the Division of Water Quality ("DWQ") is responsible for administering the UWQA.[892]

The DWQ defines waters of the state to mean:

> All streams, lakes, ponds, marshes, water-courses, waterways, wells, springs, irrigation systems, drainage systems, and all other bodies or accumulations of

[887] 30 § 331.267(b)(6).
[888] UTAH CODE ANN. § 19-5-104(1)(a) (LexisNexis 2020).
[889] UTAH CODE ANN. § 19-5-104(3) (LexisNexis 2020).
[890] § 19-5-105(1).
[891] § 19-5-105(2).
[892] § 19-1-105(e).

> water, *surface and underground*, *natural or artificial*, public or private, which are contained within, flow through, or border upon this state or any portion thereof.[893]

An exception to this is for bodies of water that are confined to private property and do not constitute a nuisance or public health hazard.[894] Utah's mirroring of the NPDES program (discussed below) combined with its definition of WOTUS to include surface water lends ample support to demonstrate that the state regulates discharges more stringently than the CWA, and thus it is included in Category 1 of appendix B.

Administered by the director of the DWQ, Utah's Pollutant Discharge Elimination System (UPDES) program requires permits for discharges of pollutants from any point source into waters of the state.[895] If there are conflicting provisions, then UPDES requirements that are more stringent will apply.[896] The rules are intended to mirror the NPDES program and federal regulations and requirements.[897] If the Utah Water Quality board upgrades or reclassifies WOTUS, it must be done only using procedures and in a manner consistent with the requirements of both state and federal law.[898] Its regulations also apply to treatment works treating domestic sewage (even if a permit is not required) and permits may be required on a case-by-case basis.[899]

Utah's ground water quality standards are outlined in title R317-6-6 and require either a discharge permit or authorization by rule to discharge pollutants into groundwater. No person may construct or operate, a new facility, or modify a facility, if discharges "would probably result in a discharge of pollutants that may move directly or indirectly into ground water"

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[893] UTAH ADMIN. CODE r. 317-1-1 (2020) (emphasis added).
[894] *Id*.
[895] 317-8-2.1.
[896] 317-8-1.2.
[897] 317-8-1.10. The state adopts federal standards and procedures and replaces the term "NPDES" with "UPDES."
[898] 317-8-1.8.
[899] UTAH ADMIN. CODE r. 317-8-2.1(3) (2020).

without a discharge permit from the director.[900] There is a long list of facilities that do not require a discharge permit, and instead require authorization by rule.[901] Those applicable to the scenarios are mentioned in the respective section below, but one worth mentioning in light of *Maui* is facilities and modifications thereto which the director determines would have a de minimis actual or potential effect on ground water quality.[902] Application requirements for discharges are listed in Title R317-6-6.3 of the Code, and include providing "information which shows that the discharge can be controlled and will not migrate into or adversely affect the quality of any other waters of the state, including the applicable surface water quality standards, [and] that the discharge is compatible with the receiving ground water…."[903]

Utah's water quality standards apply to all WOTUS and are assigned specific classification procedures under R317-2-6 of the regulations.[904] The antidegradation policy includes a review program to determine whether the proposed activity complies with applicable antidegradation requirements,[905] and as part of the review will inquire into whether statutory and regulatory requirements are met, whether there are reasonable less-degrading alternatives, and whether activities (including federally regulated activities) resulting in discharge to surface waters provide economic and social benefits.[906]

Turning to enforcement, the state prohibits any discharge of wastewater or other substance in violation of the requirements of the regulations.[907] In order to maintain water quality, no person shall discharge wastes into WOTUS except in compliance with the

[900] 317-6-6.1.
[901] 317-6-6.2.A.1-25.
[902] 317-6-6.2.A.24.
[903] 317-6-6.3.G.
[904] UTAH ADMIN. CODE r. 317-2-2 (2020).
[905] 317-2-3.5.
[906] UTAH ADMIN. CODE r. 317-2-3.5(c)(3) (2020).
[907] 317-1-2.1.

regulations.[908] Anyone who does so must provide the degree of wastewater treatment determined necessary to ensure compliance,[909] and those discharging wastes from point sources into WOTUS must provide treatment processes to produce secondary effluent that will meet or exceed effluent quality standards.[910] A discharge into WOTUS that results from waste placed in a location where there is even a probable cause that it will cause pollution is also unlawful.[911]

Injunctive relief may be granted for any violation of Section 19-5-107 of the UWQA which specifies discharges of pollutants into WOTUS and managing sewage sludge contrary to the regulations of the act.[912] The reasoning being that the violation is considered a public nuisance.[913] Civil penalties can be up to $10,000 per day for violation of any permit, rule, or order under the UWQA; and for violations under Section 19-5-107, including any condition or limitation associated with a permit, $25,000 per day for criminal negligence, and $50,000 per day for knowingly violating it.[914] Criminal penalties include both misdemeanors and felonies depending on the *mens rea*.[915]

b. Caselaw

Case law in Utah has not covered any discharges related to effluent or stormwater, but some cases discussing the pollution regulations and hydrological connections to WOTUS are worth mentioning. In *Living Rivers v. U.S. Oil Sands, Incorporated*, the Utah Supreme Court analyzed a challenge to an authorization by rule outside the UPDES permit system for a discharge that the DWQ considered to be *de minimis*.[916] The court acknowledged that in making

[908] 317-1-2.3.
[909] 317-1-3.1.
[910] 317-1-3.2.
[911] UTAH CODE ANN. § 19-5-107(1)(a) (LexisNexis 2020).
[912] § 19-5-107.
[913] *Id*.
[914] UTAH ADMIN. CODE r. 317-1-8.1 (2020).
[915] UTAH CODE ANN. § 19-5-115(1)-(3) (LexisNexis 2020).
[916] *Living Rivers v. U.S. Oil Sands, Inc.*, 344 P.3d 568, 569 (Utah 2014).

its decision, the DWQ evaluated the connection (or lack thereof) of water at the oil-sands site to other ground water, as well as the propensity for it to pollute WOTUS.[917] In the end, the court protected both the site and the DQW's decision to authorize the de minimis permit outside of the UPDES program and stressed that operators have a reliance interest when moving forward with development plans that must be protected when interveners fail to petition the ruling within thirty days.[918]

The challenge was brought by Living Rivers again, this time to a modification that was also allowed under the authorization by rule due to the DWQs *de minimis* determination.[919] Little River alleged that a study of the site demonstrated a hydrologic connection between the area of the project and perennial springs below the mine.[920] Unfortunately, and to the Supreme Court's disappointment, the substantive issue could not be addressed due to similar procedural issues attributed to Little River.[921]

The hydrological connection theory from *Maui* has been discussed before by the Utah Supreme Court. In *Branch v. Western Petroleum*, the Utah Supreme Court held an oil company strictly liable for damage to landowners' wells where its ponding of polluted water in an area adjacent to the wells constituted an abnormally dangerous use of the land given proximity to their property.[922] The court recognized that a polluter should not be absolved from liability just because they may not be able to anticipate the movement of their pollutants in groundwater.[923] The court continued, believing that the defense should not be recognized because the hydrology of groundwater movement is well known, and even if tests are not conducted to ensure

[917] *Id*. at 572.
[918] *Id*.
[919] *Living Rivers v. Exec. Dir. Of the Utah Dep't of Envtl. Quality*, 417 P.3d 57, 59 (Utah 2017).
[920] *Id*. at 61.
[921] *Id*. at 70.
[922] *Branch v. Western Petroleum*, 657 P.2d 267, 274 (Utah 1982).
[923] *Id*. at 275, n. 6.

groundwater is not polluting surface water, polluters should be responsible as if they should have known.[924] They adopted the rationale that because the defense to nuisance liability is not recognized in surface water cases, it should also not be recognized in groundwater pollution cases.[925]

c. Appendix A Scenarios

For the benefit of the analysis and future concerns in Utah with regard to *Maui*'s applicability, it is important to note the following: Even apart from the efforts to mirror the NPDES program, Utah's water regulations are likely already up to *Maui* standards. In drafting the regulations, the Water Quality Board has explicitly applied the hydrological connection theory to regulating discharges from Animal Feedlots Operations ("AFO"). The regulation was promulgated in the following way that lends support to the proposition that the theory also applies (or should apply) to all other permitted discharges to WOTUS. The regulations specific to AFO's start by restricting the definition of "discharge" to only include additions of pollutants to surface waters (cutting out discharges to groundwater),[926] but then redefine "surface waters of the state" to mean "[WOTUS as quoted above] that are not ground water, except ground water that has hydrologic connection to surface waters of the state."[927] This means that when the legislature defined WOTUS, they likely intended the definition of "groundwater" to include groundwater that has a hydrological connection to surface waters. Therefore, the state UPDES program should essentially already be requiring permits for discharges to groundwater that have a hydrological connection to surface water.

[924] *Id*.
[925] *Id*.
[926] UTAH ADMIN. CODE r. 317-8-10.2 (2020).
[927] *Id*.

Scenario 1) Municipal Wastewater Management

Utah heavily regulates spills that affect WOTUS. Section 18-5-114 of the UWQA notes that spills or discharges of *any substance* that causes pollution to waters of the state must be immediately reported to the director of the DWQ, and also must report "containment procedures undertaken, and a proposed procedure for cleanup and disposal, in accordance with the rules of the board."[928] Further, Title R317-801 of the regulations, which requires compliance from all entities that own or operate a sewer collection system (including federal and state agencies), sets forth the Utah Sewer Management Program ("USMP"). The program requires a general permit for Sewer Collection Systems ("SCS"),[929] which collect and convey wastewater or sewage from domestic, industrial, and commercial sources.[930]

Sanitary Sewer Overflows ("SSO") – defined as the escape of wastewater or pollutants from, or beyond the intended or designed containment of a sewer collection system[931] – are prohibited if they result in a discharge of untreated or partially treated wastewater to waters of the state or that is a threat to the environment.[932] Permit holders must take all steps feasible to eliminate SSOs; then if it does occur, to control, contain, or limit the volume of the un- or inadequately-treated wastewater; terminate the discharge; recover as much of the wastewater discharged as possible for proper disposal; and mitigate the impacts of the SSO.[933] They must also report SSOs in accordance with requirements found in Title R317-801-4.[934] Reporting is based on whether the SSO is class 1 (significant, including discharges to WOTUS) or class 2

[928] UTAH CODE ANN. § 19-5-114 (LexisNexis 2020).
[929] UTAH ADMIN. CODE r. 317-801-2.1 (2020).
[930] 317-801-1.2(9). This does not include systems that collect and convey stormwater exclusively.
[931] 317-801-1.2(12).
[932] 317-801-3.1.
[933] 317-801-3.2(1)-(2). The provision offers a handful of steps to take for prevention, including properly maintaining all parts of SCSs, and allocating adequate resources for maintenance and repair. UTAH ADMIN. CODE r. 317-801-3.1(1)(a)-(c).
[934] UTAH ADMIN. CODE r. 317-801-3.2(3) (2020).

(non-significant). Class 1 SSOs must be reported to the DWQ orally within 24 hours and in a written report within five days,[935] and class 2 SSOs are only reported in a USMP annual report.[936]

Permittees must also have a Sewer System Management Plan ("SSMP") in place, which includes a wide array of plans and information to regulate the sewer systems.[937] SSMPs must be certified, available to the DWQ, and regularly monitored and reviewed for efficacy and success.[938]

These regulations clearly monitor sewer systems posing risks of backup into basements and or leaks into the ground. Given that it defines Class 1 SSOs as those that discharge to WOTUS and that a general permit is required, these spills are regulated as *Maui* would direct.

UIWs are also regulated under the state adopted federal UIC program. The one-quarter mile distance required under the federal program and federal standards was replaced with a two-mile distance,[939] which shows greater stringency in Utah for UIWs. Separated into five classes, the UIWs are regulated depending on the appropriate. Class V is relevant for this discussion in that it covers large capacity cesspools, as well as large underground domestic wastewater disposal systems used to inject effluent from a domestic wastewater treatment system (*Maui*).[940] If the director of the DWQ at any time determines that a Class V well might cause a violation of primary drinking water rules, then the injector must either obtain an individual permit, close the UIW if necessary to prevent violation, or otherwise enforce the rules.[941] Otherwise, a new or existing UIW needs to operate under permit to ensure compliance with regulations, otherwise

[935] 317-801-4.1.
[936] 317-801-4.2.
[937] 317-801-5.1(1)-(7).
[938] UTAH ADMIN CODE r. 317-801-5.1, 5.3, 6.1 (2020).
[939] 317-7-1.1.B.
[940] 317-7-3.5.B, -3.5.I. Not included for *Maui* type UIWs is those with a design flow rate of less than or equal to 5,000 gallons per day.
[941] 317-7-5.5.

authorization by rule is sufficient.[942] The application for a permit includes a requirement to provide a topographic map extending one mile beyond the property boundary depicting, among other things, surface water bodies, wells, and springs.[943] These application requirements combined with Utah's groundwater quality regulations mentioned above demonstrate that the DWQ is likely aware of the effects of UIWs on surface water and will likely mandate that an UIW that has any chance of hydrologically polluting surface water to operate under a UPDES permit.

Utah also regulates what it calls Large Underground Wastewater Disposal ("LUWD") systems under Title R317-5. These regulations prohibit drainages from roofs, roads, yard, or other similar sources into any portion of a LUWD system; wastewater flow that exceeds the design flow of a LUWD system; discharges of effluent to surface waters or the surface of the ground *from* any LUWD system; and discharges of wastewater into abandoned or unused wells or similar openings.[944] Approval comes from the division, which will determine the feasibility, and consider, among other things, the location of creeks, drainages, and other surface and subsurface water conveyances within 1500 feet of the proposed LUWD system.[945] This program demonstrates the DWQ's and the state's commitment to a hydrological connection theory without even consideration of the *Maui* doctrine.

In regards to wastewater treatment system components, as stated above, the UWQA makes it unlawful to "construct, install, modify, or operate any…part of…extension…or addition to any treatment works, or construct…or operate any establishment…of or addition to a

[942] 317-7-6.3, 6.4.
[943] 317-7-9.1.D.7.
[944] UTAH ADMIN. CODE r. 317-5-3.3, -3.4, -3.8 (2020).
[945] 317-5-4.1.A.5.

treatment works, the operation of which would probably result in a discharge."[946] For example, municipal wastewater treatment lagoons that receive wastewater from a significant industrial discharger must operate under a permit.[947] Further, Title R317-14 provides that if a POTW changes the point from which it discharges water, it must first apply and receive approval from the director, and they must determine the change is necessary.[948] It is clear that the legislature desired to regulate all wastewater component types – whether they are discharged from or into a sewage treatment system – to be subject to the UPDES permit system. Even further, Title R317-14 shows that the Utah Board of Water Quality promulgated regulations with the focus of monitoring where the point source effectively begins for wastewater treatment components, and ensuring it is appropriate to enhance environmental quality and protect public health and safety.

Scenario 2) Stormwater Management: Green Infrastructure (GI)

In general, stormwater discharges are typically exempt from the UPDES permit requirement. The groundwater regulations do not require a permit for "discharges for flood control systems including detention basins, catch basins and wetland treatment facilities used for collecting or conveying storm water runoff."[949] Additionally, drainage wells used to drain surface fluid, primarily storm runoff, into a subsurface formation are Class V UIWs that require authorization by rule as opposed to a discharge permit, unless the director determines it will violate primary drinking water regulations.[950]

That said, Title R317-8, which regulates UPDES permits, includes storm water discharges as an example of specific categories of point sources requiring a UPDES permit.[951] It

[946] UTAH CODE ANN. § 19-5-107(3)(b) (LexisNexis 2020).
[947] UTAH ADMIN. CODE r. 317-5-6.2.A.24 (2020).
[948] UTAH ADMIN. CODE r. 317-14-2.2, -2.3 (2020).
[949] 317-6-6.2.A.5.
[950] 317-7-3.5.D.
[951] 317-8-2.1(1)(d).

provides the regulatory scheme for MS4s and other storm water component systems. Definitions applicable to storm water discharges are found in Title R317-8-1.6 and include various sizes of MS4s. Discharges that are not composed entirely of storm water or otherwise covered by a UPDES permit are considered illicit discharges and are included in stormwater management programs mandated by the state.[952]

Title R317-8-3.9 specifically regulates storm water discharges and requires permits for discharges that are composed entirely of storm water associated with industrial activities or are from large or medium MS4s.[953] In addition, the director of the DWQ may require permits for the same type of discharges that they determine contributes to a violation of water quality standard or is a significant contributor of pollutants to WOTUS.[954] "This designation may include a discharge from any conveyance or system of conveyances used for *collecting* and *conveying* storm water runoff or a system of discharges from [MS4s]."[955] The director will determine significance by considering the location of the discharge with respect to WOTUS, the size, quantity and nature of pollutants discharged to WOTUS, and any other relevant factors.[956] This list of considerations demonstrates that stormwater GI even that is composed entirely of stormwater might be mandated by the UPDES permit system, particularly if the director considers *Maui* in its determinations as a relevant factor. This is notwithstanding the fact that the hydrological connection theory likely applies to Utah's definition of WOTUS as explained above. Therefore, where it has the potential to deteriorate water quality in the state, stormwater GI is likely

[952] UTAH ADMIN. CODE r. 317-8-1.6(2) (2020).
[953] 317-8-3.9(1)(a)2-4. Further regulations for medium and large MS4s are found in Title R317-8-3.9(1)(c).
[954] 317-8-3.9(1)(a).
[955] *Id*.
[956] 317-8-2.5(2)(c)1ai-1aiv.

considered a point source in Utah and will require a permit, regardless of where it fits into an MS4.

For reference, Title R317-8-3.9(2) provides application requirements for storm water discharges associated with industrial and small construction activities. It requires that these discharges–if not from an MS4–not operating under an individual permit or covered under the umbrella of a general MS4 permit must submit a UPDES application under the general UPDES permit requirements in Section 3.1 of the Title.[957] Title R317-8-3.9(3) provides application requirements for medium and large MS4s, one of which is that operators are encouraged, at a minimum, to prohibit illicit discharges to MS4s.[958] These MS4s must provide a proposed management program, and the director will consider the program when developing permit conditions to reduce pollutants in discharges to the maximum extent practicable.[959] This regulatory scheme strives to match the federal regulations for MS4s.

Scenario 3) Drinking Water: Water Reuse

Water reuse projects to treat domestic wastewater require approval by the Water Quality Board.[960] If the project involves "construction, installation, modification or operation of any collection system, treatment works, reuse water distribution system or part thereof, or any extension or addition thereto" then a construction permit is required in accordance with Titles R317-3 (design requirements for disposal systems) and R-317-13.[961] If approved by the director of the DWQ, an operating permit will be issued, but this does not absolve the obligation to obtain groundwater discharge permits as well.[962]

[957] UTAH ADMIN. CODE r. 317-8-3.9(2)(a) (2020).
[958] 317-8-3.9(3)(b)1b.
[959] 317-8-3.9(3)(b)4.
[960] 317-13-1.6.
[961] 317-13-2.4.B.
[962] 317-13-2.4.C, -2.4.D.

Design requirements for effluent disposal or water reuse of municipal wastewater treatment plan effluents must comply with requirements in Title R317-3-11. For example. water reuse distribution systems must maintain certain horizontal and vertical distances from treated effluent distribution lines.[963] The title also requires an operator desiring to participate in reuse projects to submit a project plan, which provides information on requirements for ground water discharge permits and UIC permits.[964] Where they would otherwise violate regulations relating to groundwater quality and the UPDES program, these permits must be provided before any water deliveries are made.[965] Therefore, if the reuse distribution system discharges into groundwater, then a UPDE permit is required. If it is operated through UIWs used to recharge aquifers, they are considered Class V and, as stated above, and are authorized by rule unless there is a potential for the UIW to cause a violation of drinking water rules; then an individual permit is required.[966] These regulations taken together and combined with the state's possible tolerance of the hydrological connection theory suggests that water reuse will either be authorized by rule if no effluent is part of the discharge or will be regulated under the UPDES permit program.

XXVI. Vermont

a. Statutory Regulation

Vermont's discharge permit program is "more stringent than" federal standards and belongs in Category 1 of Appendix A 'more stringent than' states. Vermont's Water Pollution Control statute, Indirect Discharge Rules and Groundwater Protection Rule and Strategy are the primary state statutory and regulatory authorities for the protection of Vermont's groundwater

[963] UTAH ADMIN. CODE r. 317-3-11.8.A.1 (2020).
[964] 317-3-11.3.E.
[965] 317-3-11.3.
[966] 317-7-5.5

resources.[967] Section 1251(13) of the Code of Virginia defines "waters" as "all rivers, streams, creeks, brooks, reservoirs, ponds, lakes, springs, and all bodies of surface waters, artificial or natural, that are contained within, flow through, or border upon the State or any portion of it."[968] Unlike other states, Vermont law does not include groundwater in its definition of "waters."[969] Nonetheless, Vermont is still a "more stringent than" state because it prohibits the indirect discharge of wastes into Class B surface water without a permit.[970] § 1251(15) defines indirect discharge as "any discharge to groundwater, whether subsurface, land-based, or otherwise."[971] Class B waters are waters suitable for primary contact activities, irrigation, boating, fishing and for public drinking water with filtration.[972] Vermont already recognizes and regulates the hydrogeologic connection between ground and surface waters identified by the court in *Maui.*

Vermont law recognizes a hydrogeologic connection from discharges to groundwater reaching surface water but does not require the indirect discharge to be the "functional equivalent" of a direct discharge as identified in *Maui*.[973] For example, permits for indirect discharges into Class B waters are not issued, unless the applicant demonstrates by clear and convincing evidence, that the discharge:

(1) will not significantly alter the aquatic biota in the receiving waters;
(2) will not pose more than a negligible risk to public health;
(3) will be consistent with existing and potential beneficial uses of the waters; and
(4) will not cause a violation of water quality standards.[974]

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[967] WATER POLLUTION CONTROL STATUTE, VT. STAT. ANN. tit. 10, §§ 1250-1284 (West 2020); Indirect Discharge Rules, 16-3 VT. CODE R. § 302 (2020); Groundwater Protection Rule and Strategy, 16-3 VT. CODE R. § 502 (2020).
[968] VT. STAT. ANN. tit. 10, § 1251(13).
[969] *Id.*
[970] § 1259 (e).
[971] § 1251 (15).
[972] § 1252 (a).
[973] 16-3 VT. CODE R. § 302-14-2102.
[974] VT. STAT. ANN. tit. 10, § 1259 (e) (2020).

Vermont law is "more stringent than" federal law because permits are issued with this indirect connection already in mind and discharge systems are regulated by the Indirect Discharge Rules to minimize pollution of surface water from indirect discharges.[975] It appears that the mere possibility that discharges to groundwater will reach navigable water is baked into the law in Vermont.

The Indirect Discharge Rules are the regulatory authority governing the hydrogeologic connection between groundwater and surface water for sewage discharges.[976] The Indirect Discharge Rules require that all disposal systems be designed in compliance with certain isolation distances separating the discharge sources from protected waters in order to minimize the risk of pollution from indirect discharges.[977] In addition, the Indirect Discharge Rules presume that geological conditions, such as the depth to the aquifer or the nature of the overburden material, exist that would further prevent the movement of contaminants from the indirect discharge source to the water supply.[978] If these precautions fail and a study of the water determines that a hydrogeologic connection exists between the water supply and indirect discharge, then the discharge will be approved only if, among some other criteria, it does not increase the level of contamination of any drinking water supply to more than one-half the enforcement standard for the Primary Groundwater Quality Standards of the Groundwater Protection Rule and Strategy.[979]

Indirect discharge permits fall into one of three categories: permit applications for existing indirect discharges of sewage, permit applications for new indirect discharges of

[975] 16-3 VT. CODE R. § 302-14-2102(a)(2) (2020).
[976] § 302-14-103.
[977] § 302-14-2101.
[978] § 302-14-1401(h)(b).
[979] § 302-14-2102.

sewage, and permit applications for indirect discharges of non-sewage waste.[980] Existing indirect discharge of sewage waste means an indirect discharge with a design flow of 6,500 gallons per day or more that existed on or before May 17, 1986.[981] New indirect discharge of sewage waste is waste which came into existence after May 17, 1986.[982] Existing indirect discharges of sewage waste that "have increased design flows or changed the nature of the waste discharged after May 17, 1986" are also classified as "new indirect discharges of sewage waste."[983] Non-sewage waste means "any waste other than sewage which may contain organisms pathogenic to human beings but does not mean stormwater runoff."[984] The indirect discharge rule does not apply to stormwater; it only applies to sewage and injection wells.

b. Caselaw

Case law in Vermont on discharges to groundwater reaching navigable water is limited and the existing on point case law does not make clear when the state will regulate discharges to groundwater reaching navigable waters. While the Supreme Court held in *Mauii* that discharges to groundwater reaching navigable waters require a permit if they are the "functional equivalent" of a direct discharge, the court did little to explain what this meant. It identified "distance travelled" and "time" as important factors in making this distinction but did not map out how much distance or time is required. Similarly, Vermont case law does little to clear up whether the state makes a similar distinction or whether all indirect discharges, regardless of time or distance travelled before mixing with navigable water, will require permitting. Based on reading the existing statutory authority and case law together, it appears that the latter is true.

[980] § 302-14-401.
[981] § 302-14-300 (13).
[982] § 302-14-300 (24).
[983] *Id.*
[984] § 302-14-300 (27).

In *In re Hawk Mountain Corp.* a real estate developer, Hawk Mountain Corporation (HMC), was granted a land use permit for a proposed expansion of its vacation home development.[985] The town in which the development was located, Pittsfield, appealed the land use permit grant because the accompanying expansion of the HMC development's expanded sewage system had not been granted a discharge permit.[986] The town found that although the proposed sewage system would remove eighty to ninety percent of various contaminants from wastewater, the unremoved material would leach into the groundwater and, ultimately, be discharged into the Tweed river in "identifiable, but highly diluted amounts."[987] The court held that a water discharge permit was required before HMC could be granted a land use permit.[988] The court explained that the burden was on HMC to show that the expansion of the sewage system would not cause undue pollution in order to receive a discharge permit.[989] The court did not make clear whether it considered the timeframe over which the contaminants from the wastewater plant would enter the Tweed River or the distance of the development from the River. It seems that as long as one of the parties can successfully demonstrate that the pollutants will eventually end up in the river, then a water discharge permit is required. In this case, it seems that a new discharge permit, rather than an amendment, is required if the permit is for the expansion of an already existing sewage system. Vermont law seems to go much farther than *Maui* because discharges do not need to be "the functional equivalent" of a direct discharge in order to be permitted.

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[985] *In re Hawk Mountain Corp.,* 542 A.2d 261, 262 (1988).
[986] *Id.*
[987] *Id.*
[988] I*d.* at 264.
[989] *Id.*

If a permit has been properly granted, then subsequent changes to the system do not require a new permit if those changes are not "major revisions."[990] In *In re Unified Buddhist Church, Inc.*, the Agency of Natural Resources (ANR) issued a permit authorizing the United Buddhist Church (UBC) "to indirectly discharge treated domestic sewage from a wastewater system serving the Dharma Center to the ground water and indirectly into Lull's Brook."[991] UBC later filed for and was granted an amended permit when they planned to use composting toilets in place of flush toilets, a change which UBC thought would reduce the wastewater volume by forty percent.[992] Appellants, the Lull's Brook Watershed Association, Inc. argue that the ANR erred in issuing the permit before addressing water quality impact issues brought up the change in toilet type.[993] Wastewater system servicing composting toilets would treat only "gray water," (wastewater from sinks, showers, laundry, etc.) but a system servicing flush toilets would treat both gray water and "black water," (wastewater containing human waste).[994] As a result, appellants argued that UBC's toilet conversion would have a negative impact on the pollution flowing into the groundwater and eventually into Lull's Brook.[995] The court held that a change in the nature of the sewage entering the disposal system does not affect the discharge and the permit did not need to be re-evaluated on the basis of environmental impact.[996] The court explained that the definition of "sewage" in the Indirect Discharge Rules is "waste containing human fecal coliform and other potential pathogenic organisms from sanitary waste," a definition which is already inclusive of both grey and black water.[997] The court does not discuss the period of time

[990] *In re Unified Buddhist Church, Inc.,* 904 A.2d 1139, 1145 (2006).
[991] *Id.* at 1141.
[992] *Id.* at 1142.
[993] *Id.*
[994] *Id.*
[995] *Id.*
[996] *Id.* at 1145.
[997] *Id.* at 1144.

or distance from which contaminants from UBC's development would end up in Lull's Brook, reinforcing that as long as a party can prove that the contaminants will eventually end up there, then a permit is required.

c. Appendix A Scenarios

Scenario 1) Municipal Wastewater Management

The Water Pollution Control statute and Indirect Discharge Rules govern municipal wastewater management in Vermont. Vt. Stat. Ann. tit. 10, §1259 (e) prohibits "any new or indirect discharges of wastes into Class B waters without a permit" from sewage systems greater than 6,500 gpd capacity.[998] The burden is on the applicant to demonstrate by clear and convincing evidence that the indirect discharge (1) will not significantly alter the aquatic biota in the receiving waters, (2) pose more than a negligible risk to public health, (3) will be consistent with existing and potential beneficial uses of the waters, and (4) will not cause a violation of water quality standards.[999] Since Vermont applies the more rigorous standard of "clear and convincing evidence," municipal wastewater agencies operating in Vermont will likely have to account for scenarios such as sewer systems backing up into basements or leaking directly into the ground when applying for indirect discharge permits since these are prime scenarios in which indirect discharges would occur.

Indirect discharges from certain types of underground injection wells require permits. Injection wells are regulated by the Underground Injection Control regulations and Wastewater System and Potable Water Supply Rules.[1000] In general, Class V and Class IV wells need a

[998] VT. STAT. ANN. tit. 10, § 1259 (e) (West 2020).
[999] *Id.*
[1000] Underground Injection Control, 16-3 VT. CODE R. § 303 (2020).

permit.[1001] Class IV wells are shallow hazardous waste disposal wells.[1002] Class V wells are wells that do not meet the definition of Class 1 (municipal waste), Class II (oil and natural gas) or Class III (salts, uranium, sulfur) wells.[1003] It appears that Class V injection wells operated by municipal wastewater plants will need a permit if that injection well "receives backwash from water treatment units" or "receive discharges from the operation of in line analyzers at water treatment plants."[1004] With regards to other types of wells, the Underground Injection Control Regulations state that "no person shall construct, operate, maintain, or convert any Class I, Class II, or Class III well."[1005] It doesn't appear that a scenario like *Maui* would arise in Vermont since Class I wells are prohibited.

Scenario 2) Stormwater Management: Green Infrastructure (GI)

Stormwater discharges are regulated by Vt. Stat. Ann. tit. 10, § 1264. While § 1264 does include green infrastructure among its list of best management practices to prevent or reduce water pollution resulting from stormwater runoff, neither the statute nor the accompanying regulations make clear whether a permit is required for GI. § 1264 states that stormwater discharged from a municipal road or other impervious surface needs a permit.[1006] It is thus likely that GI diverting stormwater from roads and impervious surfaces would need a permit, such as a municipal roads stormwater permit, but there is a lack of legal authority on whether different types of GI would be regulated differently.[1007]

[1001] § 303-11-302.
[1002] § 303-11-201 (8).
[1003] § 303-11-201 (9).
[1004] § 303-11-302 (b)(3); § 303-11-302 (b)(4).
[1005] § 303-11-301 (a).
[1006] VT. STAT. ANN. tit. 10, § 1264 (c)(6)(a) (2020).
[1007] Stormwater Permitting Rule, 16-3 VT. CODE R. § 506-22-1101 (2020).

Scenario 3) Drinking Water: Water Reuse

How discharges of treated wastewater to recharge aquifers will be regulated depends on the classification of groundwater that is discharge is directed towards. Wastewater systems are not permitted to operate in Class I groundwater areas, so treated wastewater most likely would not be permitted to be discharged there.[1008] High potential risk activities are not permitted in Class II groundwater areas but treated wastewater is not listed as a high potential risk activity so discharge may be permitted in this area.[1009] It seems stormwater, rather than treated wastewater, is used to recharge groundwater in Vermont. If wastewater was discharged into Class II groundwater areas, then it is reasonable to assume that it would need to be permitted it under the Indirect Discharge Rules if there is a risk it will eventually mix with navigable waters.

XXVII. Virginia

a. Statutory Regulation

In Virginia, it is prohibited for "any person to . . . [d]ischarge into state waters sewage, industrial wastes, other wastes, or any noxious or deleterious substances..."[1010] Virginia defines "state's waters" as "all water, on the surface and under the ground, wholly or partially within or bordering the Commonwealth or within its jurisdiction, including wetlands."[1011] Furthermore, it is prohibited in Virginia for any person "to dump, place or put…into, upon the banks of or into the channels of any state waters any object or substance, noxious or otherwise, which may reasonably be expected to endanger…the lawful use or enjoyment of such waters and their environs by others."[1012]

[1008] Groundwater Protection Rule and Strategy, 16-3 VT. CODE R. § 502-12-105 (2020).
[1009] *Id.*
[1010] VA. CODE ANN. § 62.1-44.5(A) (2020).
[1011] VA. CODE ANN. § 62.1-44.3 (2020).
[1012] § 62.1-194.1.

Further, pollution is defined as "alteration of the physical, chemical, or biological properties of any state waters as will or is likely to create a nuisance or render such waters (a) harmful or detrimental or injurious to the public health…"[1013] Virginia also regulates and defines substances that may cause or are likely to cause pollution.[1014]

In relation to federal regulation under the Clean Water Act, Virginia should be considered a "more than stringent" state in accordance with the criteria outlined above. Groundwater is explicitly mentioned in the statute that defines "waters" that are regulated. This means that Virginia's regulations are more stringent than the CWA because it includes a more expansive definition of "waters."

b. Caselaw

In Virginia, there is no case that specifically discusses how the state's regulatory agencies regard groundwater was a point source of pollution. However, one case may provide some insight into how *Maui* will shape the regulatory landscape of the state. In *State Water Control Board v. Captain's Cove Utility Co.,* the Virginia Court of Appeals demonstrated how the state courts should interpret and apply state environmental statutes and the decisions of the State Water Control Board.[1015]

In this memorandum opinion, the court decided whether to overturn a trial court's decision that required the Virginia State Water Control Board ("Board") to issue a Virginia Discharge Elimination System Permit ("VPDES permit") to Captain's Cove Utility Company ("CCUC"), an entity charged with managing a residential development's sewage facilities.[1016]

[1013] § 62.1-44.3.
[1014] "'Other wastes' means decayed wood, sawdust, shavings, bark, lime, garbage, refuse, ashes, offal, tar, oil, chemicals, and all other substances except industrial wastes and sewage which may cause pollution in any state waters." VA. CODE ANN. § 62.1-44.3.
[1015] *State Water Control Brd. v. Captain's Cove Utility Co., Inc.*, No. 2735–07–1, 2008 WL 2963851, *1 (Va. Ct. App. Aug. 5, 2008).
[1016] *Id.*

The Board had originally denied CCUC a VPDES permit for a proposed expansion of the existing sewer system after a public hearing and a recommendation from the Virginia Department of Environmental Quality.[1017] CCUC petitioned for a formal hearing in front of an administrative official in order to consider its application for a VPDES permit, where an engineer testified that nitrogen from the sewage system would seep into groundwater and then into Chincoteague Bay.[1018] Since this would impede recreational clamming boats in the area should the waters become condemned from nitrogen pollution, the Board denied CCUC a VPDES permit.[1019]

CCUC appealed this decision to the state trial court level.[1020] The trial court ruled that the Board "did not correctly interpret its own regulations."[1021] The trial court believed that the Board's denial of CCUC was overbroad, since any time a sewage system discharges into state waters, the state must condemn at least some part of the area.[1022] Under the Board's interpretation, any potential disruption of the use of state waters caused by condemnation would result in the Board denying VPDES permit to the polluter, regardless of the actual impact on the quality of the state waters in question.[1023]

On appeal, the Virginia circuit court of appeals determined that the trial court erred in reversing the Board's decision to deny the VPDES permit to CCUC.[1024] The appellate court established that when an agency makes a decision of law within the field that it is delegated power in, that decision holds a special weight within the court system and is only subject to

[1017] *Id.* at 2.
[1018] *Id.* at 3.
[1019] *Id.* at 4.
[1020] *Id.*
[1021] *Id.* at 5.
[1022] *Id.*
[1023] *Id.*
[1024] *Id.* at 6.

judicial interference if it is arbitrary or capricious.[1025] With that standard of review, the appellate court found that the Board's ruling was neither arbitrary nor capricious, given the rules promulgated by the Board that state ""[w]hen the [B]oard finds that the proposed project will result in shellfish bed condemnation and if the condemnation will violate the general standard, it shall disapprove the proposal."[1026] Further, the court emphasized the general standard governing water quality states:

> State waters, including wetlands, shall be free from substances attributable to sewage, industrial waste, or other waste in concentrations, amounts or combinations which contravene established standards or interfere directly or indirectly with designated uses of such water or which are inimical or harmful to human, animal, plant, or aquatic life.[1027]

Given the wording of the regulation, the appellate court reasoned that the regulation "clearly contemplates that some substances may not violate water quality standards, while still interfering with designated uses of state waters."[1028] Thus, the Board's decision to deny the VPDES permit was not arbitrary nor capricious, even though CCUC claimed its new sewage system would reduce the amount of nitrogen in the water.[1029] The appellate court reversed the trial court's decision and affirmed the agency's denial of CCUC's VPDES permit, reiterating that the Board has statutory authority to prohibit discharges into state waters when that discharge would violate the general standard by interfering with the use of that water, even if the applicant does not have an avenue to discharge into state waters.[1030]

Some conclusions about how Virginia's courts interpret and decide upon issues relating to pollution of waters of the state. First, this case represents an illustration of the standards of

[1025] *Id.* at 5.
[1026] *Id.* at 7 (citing 9 VA. ADMIN. CODE § 25–260–270 (2020)).
[1027] *Id.* (citing 9 VA. ADMIN. CODE § 25–260–20 (2020)).
[1028] *Id.* at 8.
[1029] *Id.*
[1030] *Id.* at 10.

review which the courts shall use to determine appeals of the Board's decisions regarding denials of VPDES permits. Second, this case demonstrates that the Board can use certain provisions that do not directly regulate groundwater pollution directly in order to deny the grant of a VPDES permit. Here, the Board used a regulation that forbids the discharge of pollutant that would cause condemnation of an area that would disrupt the use of a state water to deny CCUC a VPDES permit. Overall, this case shows that there are many factors to consider when trying to forecast the impact *Maui* will have on Virginia's regulatory landscape. What can be held certain is that the Virginia courts will uphold the Board's decision on certain administrative decisions—including the denial of VPDES permits unless the decision is arbitrary or capricious. The Board also has a track record of denying VPDES permit applications based on how discharge will the enjoyment of a state water. Even without the Supreme Court's decision in *Maui*, if a groundwater discharge inhibited the enjoyment of a state water due to condemnation, that discharger would not be granted a VPDES permit for their discharge.

c. Appendix A Scenarios

Scenario 1) Municipal Wastewater Management

Virginia regulates stormwater discharges through a general permit issued by the State Water Control Board.[1031] The administrative code makes it clear that the general permit only applies to surface water discharges made by small MS4s.[1032] Further administrative rules highlight this distinction by clearly permitting discharges to "surface waters" of the state.[1033] For instance, a later rule holds that "permittees of small municipal separate storm sewer systems are authorized to discharge to surface waters within the boundaries of the Commonwealth of

[1031] 9 VA. ADMIN. CODE §25-890-10 (2018).
[1032] *Id.*
[1033] §25-890-40 (2018).

Virginia" once their registration statement is accepted by the State Water Control Board.[1034] There is no mention of groundwater in these rules regulating discharges made by MS4s.

Without mention of groundwater in these regulations, it is hard to predict the effect *Maui* will have on these regulations governing municipal water systems. By the language of these rules, it is clear that a discharge into groundwater would constitute an unpermitted discharge. That means any discharge into groundwater, whether it seeps through into another water of the state or not, is unpermitted by this section of regulations. Thus, on some level, discharges that travel through groundwater are regulated, in that any discharge into groundwater from a MS4 is banned. However, it is difficult to predict the impact *Maui* will have on these Virginia regulations.

Scenario 2) Stormwater Management: Green Infrastructure (GI)

In Virginia, stormwater regulations are governed by rules promulgated by the State Water Control Board.[1035] For instance, the Board has promulgated rules that require every stormwater management plan must follow in order to be approved by the Board.[1036] In particular, a stormwater management plan must include "all sources of subsurface and groundwater flows converted to surface runoff."[1037] Any discharge that deviates from this plan is considered unpermitted.[1038] There are no other stormwater rules or regulations that mention groundwater in Virginia.

The lack of a mention for stormwater makes it hard to predict just how *Maui* will affect Virginia's stormwater regulations. Additionally, the regulations do not specify how stormwater

[1034] *Id.*
[1035] 9 VA. ADMIN. CODE § 25-870-55 (2018).
[1036] *Id.*
[1037] § 25-870-55(A)(2).
[1038] *Id.*

dischargers would be held liable if they discharged into groundwater, meaning there is no comparable parallel between *Maui* and the regulations present in Virginia.

Scenario 3) Drinking Water: Water Reuse

The rules regulating the quality of Virginia's drinking water are promulgated by the State Water Control Board.[1039] The Control Board issues permits called Virginia Pollution Abatement ("VPA") permits that exempt some discharges from attaching liability to those who caused the discharge in accordance with Virginia's State Water Control Law.[1040] For pollutant management activities covered by a VPA permit, no point source discharge should be maintained if that discharge empties into a surface water of the state.[1041] Further, it is unlawful for any person to "[d]ischarge into, or adjacent to, state waters sewage, industrial wastes, other wastes, or any noxious or deleterious substances" unless in compliance with a VPA permit.[1042] Additionally, this rule requires anyone "who discharges or causes or allows a discharge that may reasonably be expected to enter state waters in violation of subsection B" to report the discharge upon discovering it.[1043]

While Virginia does not directly mention groundwater discharge as a point source, it almost treats it as such by forbidding discharges that are simply adjacent to waters of the state and have a high chance of entering other waters of the state. Virginia effectively bans the effects of groundwater as a point source of pollutants without explicitly mentioning groundwater as a point source for discharge.

[1039] § 25-32-20.
[1040] *Id.*
[1041] § 25-32-20(A).
[1042] 9 VA. ADMIN. CODE §25-32-20 (B)(1) (2018).
[1043] §25-32-20 (C).

XXVIII. West Virginia

a. Statutory Regulation

In West Virginia, "[i]t is unlawful for any person, unless the person holds a permit therefor from the department…. [to][a]llow sewage, industrial wastes or other wastes, or the effluent therefrom, produced by or emanating from any point source, to flow into the waters of this state."[1044] Furthermore, it is illicit to ""[a]cquire, construct, install, modify or operate a disposal system or part thereof for the direct or indirect discharge or deposit of treated or untreated sewage, industrial wastes or other wastes, or the effluent therefrom, into the waters of this state."[1045] "Waters" is defined in West Virginia as:

> Any and all water on or beneath the surface of the ground, whether percolating, standing, diffused or flowing, wholly or partially within this state, or bordering this state and within its jurisdiction, and includes, without limiting the generality of the foregoing, natural or artificial lakes, rivers, streams, creeks, branches, brooks, ponds (except farm ponds, industrial settling basins and ponds and water treatment facilities), impounding reservoirs, springs, wells, watercourses and wetlands.[1046]

In relation to federal regulation under the Clean Water Act, West Virginia should be considered a "more than stringent" state in accordance with the criteria outlined above. Groundwater is explicitly mentioned in the statute that defines "waters" that are regulated. This means that West Virginia's regulations are more stringent than the CWA because it includes a more expansive definition of "waters."

b. Caselaw

In West Virginia, there has never been a case on the state level that provides direct precedent for determining whether groundwater should be treated as a point source for NPDES

[1044] W. VA. CODE ANN.§ 22-11-8 (West 2020).
[1045] *Id.*
[1046] W. VA. CODE ANN. § 22-11-3(23) (West 2020).

purposes. However, West Virginia caselaw holds that the Department of Environmental Protection can only seek remediation "only from those who originate contamination that results in a threat to groundwater."[1047] In *Cookman Realty Group, Inc. v. Taylor*, the appellee, the Cookman Realty Group, argued that it should not be forced to undertake environmental remediation on a plot of land it owned.[1048] When Cookman purchased the abandoned lot, it discovered there were discarded oil filters in a ditch on the property.[1049] Cookman subsequently decided to sell the property to a bank.[1050] The bank retained an engineering firm to perform an environmental assessment of the property, which confirmed the presence of motor oil contamination in the soil and groundwater of the property.[1051] The Department of Environmental Protection ("DEP") ordered a second survey, which concluded that the contamination probably emanated from an adjacent parcel owned by an automobile servicing company.[1052]

Based off the results of the two reports, the DEP used its statutory authority to order the automobile servicing company and Cookman to undertake environmental remediation of their respective parcels.[1053] West Virginia law charges the DEP with " 'develop[ing] groundwater protection practices to prevent groundwater contamination from facilities and activities within their respective jurisdictions'."[1054] To do so, the DEP is endowed with the authority to promulgate regulations. Section 47–57–4.1 of the code states:

> except for any source or class of sources which has been granted a variance for the particular contaminant at issue, any person who owns or operates a source subject to the Act which has caused, in whole or in part, the concentration of any

[1047] Cookman Realty Group, Inc. v. Taylor, 556 S.E2d 294,409 (W. Va. 2002).
[1048] *Id.*
[1049] *Id.*
[1050] *Id.*
[1051] *Id.*
[1052] *Id.*
[1053] *Id.*
[1054] *Id.* (citing W. VA.CODE § 22–12–5(d) (1994)).

> constituent to exceed any applicable groundwater quality standard subject to the Act, must cease further release of that contaminant...[1055]

Those regulations promulgated by the DEP also specify that a "source" is "'any facility or activity which has caused a release or is reasonably likely to cause a release,'" while a release includes "'any act or omission that results in the...leaching of materials or contaminants in a manner that has caused...entry of a constituent to groundwater.'"[1056] It was on this statutory foundation that the DEP ordered Cookman to undertake environmental remediation.[1057]

Cookman appealed the DEP's order, arguing that the contamination on the Cookman parcel was actually caused by the pollution on the adjacent parcel, making the adjacent parcel the "source" of pollution and absolving Cookman from responsibility for environmental remediation on its own parcel.[1058] The lower court agreed with Cookman and vacated the DEP's order.[1059]

On appeal, the DEP argued that the regulations in question were ambiguous—thus, the lower court was obligated to refer to the agency's interpretation.[1060] The Supreme Court of Appeals disagreed, finding that "the regulations at issue here unambiguously limit administratively-enforced remediation to parties who have actually caused or originated pollution that threatens groundwater."[1061] With the court determining that the regulations at hand were unambiguous, the discussion pivoted to determining whether Cookman's property was the "source" of pollution, since the contamination on the Cookman property was unquestionably violating water quality standards.[1062]

[1055] *Id.* at 10 (citing W. VA. CODE R. § 47–57–4.1 (1994)).
[1056] *Id.* (citing W. VA. CODE R. § 47–57–2.13 (1994); W. VA. CODE R. § 47–57–2.12 (1994)).
[1057] *Id.*
[1058] *Id.*
[1059] *Id.*
[1060] *Id.* at 411.
[1061] *Id.*
[1062] *Id.*

A "source" in this context means "'any facility or activity which has caused a release or is reasonably likely to cause a release.'"[1063] Since "facility" and "activity" were not defined elsewhere, the court applied the words' "common, ordinary, and accepted" meanings.[1064] In doing so, the court found that Cookman's ownership of the parcel did not constitute a "facility" since there was nothing "defined, built, installed, etc., to serve a specific function affording a convenience or service."[1065] Furthermore, the court found that Cookman's ownership of the land did not constitute an "activity" since there was no "positive act on the part of the landowner."[1066] Thus, the court concluded, "a 'source' of groundwater pollution does not include the form of passive land ownership and unauthorized depositing of contaminants involved in this case."[1067] Consequently, the court upheld the lower court's decision vacating the DEP's remediation order against Cookman.

While this case is not directly on point, it does serve as an illustration as to how West Virginia courts have interpreted pollutants travelling through groundwater as a point source of pollution. Here, the adjacent land was determined to be the source of groundwater pollution on a parcel of land, and the owner of the adjacent parcel of land was alone held responsible for the environmental remediation required on the land at issue.[1068] While the Supreme Court's decision in *Maui* applies to the definition of "point source" in the CWA, this case shows a parallel process undertaken in state courts to arrive at the same conclusion—that groundwater can act as a source of pollution.

[1063] *Id.* at 412 (citing W. VA. CODE R. § 47–57–2.13 (1994)).
[1064] *Id.*
[1065] *Id.*
[1066] *Id.*
[1067] *Id.*
[1068] *Id.* at 13.

c. Appendix A Scenarios

Scenario 1) Municipal Wastewater Management

In general, West Virginia's public water systems are governed by Series 4 of Title 64 of the Legislative Rule promulgated by the Bureau of Public Health.[1069] The rule generally outlines the classification system for the public water systems (PWSs) of West Virginia.[1070] For purposes of this rule, groundwater is defined as "a source of water under the ground, typically from a well, that is not open to the atmosphere (surface water) or under the direct influence of surface water. . ."[1071] PSWs are further regulated by Series 2 of Title 47 of the Legislative Rules promulgated by the Department of Environmental Resources.[1072]

While West Virginia does not explicitly prohibit or regulate discharges from groundwater, West Virginia does prohibit both concentrations of pollutions that exceed criteria for both aquatic and human health.[1073] Further, in the review process for an application of a discharge permit, the secretary for the Department of Environmental Resources must set "geometric limits for mixing zones for a discharge or a pollutant or pollutants within a discharge."[1074] So, if a groundwater discharge from a public water system exceeded these set limits, it would be per se illicit, regardless if groundwater was specifically mentioned or not. Thus, while *Maui* might not have an impact on a state rule that specifically regulates groundwater discharges, *Maui* may impact laws that indirectly govern groundwater discharges.

[1069] W. VA. CODE ANN. § 64-5-2(b) (2012).
[1070] W. VA. CODE ANN. § 64-4-1(2012).
[1071] W. VA. CODE ANN. § 64-4-3.18 (West 2012).
[1072] § 47-2-1.
[1073] § 47-2-5.2(a).
[1074] *Id.*

Scenario 2) Stormwater Management: Green Infrastructure (GI)

In West Virginia, the Water Pollution Control Act partly regulates the water quality standards in the state.[1075] Section 6 of that Act lists the requirements of "all persons" to comply with the standards of water quality and "effluent limitations."[1076] More specifically, Subsection 8(c) of Section 6 represents the guidelines the secretary of the Department of Environmental Protection must follow when promulgating regulations for stormwater discharge.[1077] Subsection 8(c) prevents the secretary from setting benchmarks that are more restrictive than "the federal benchmark" for stormwater effluent limitations.[1078] Other than this restriction, the secretary of the Department of Environmental Protection is required to "develop guidance" for determining how effluent limitation benchmarks get determined.[1079]

Here, the statutory language unambiguously ties the water quality standards dealing with groundwater to the federal standards regulating the same subject. Thus, whatever the impact *Maui* will have on federal water quality standards will echo on the state level in West Virginia. Since the benchmarks for stormwater permits are set by the secretary of the Department of Environmental Protection, it is difficult to predict precisely how *Maui* will shape West Virginian stormwater regulations. However, by determining that groundwater can count as a point source for pollutant discharge, *Maui* certainly sets a new ceiling for the benchmarks the Department of Environmental Protection can set.

[1075] § 22-11-2(a).
[1076] W. VA. CODE ANN. § 22-11-6(a) (West 2020).
[1077] § 22-11-8(c).
[1078] *Id.*
[1079] W. VA. CODE ANN. § 22-11-8(d)-(e) (West 2020).

Scenario 3) Drinking Water: Water Reuse

Chapter 16 of the West Virginia Code contains the regulations for the public health system of West Virginia.[1080] Section 9a of this chapter contains the more specific regulations for public water systems.[1081] Section 9c outlines the requirements for public water systems that "dra[w] and trea[t]" wate-0r from a "surface water influenced groundwater supply source."[1082] The section requires public water utilities to develop water management plans that catalog and identify any potential threats to the system's water supply source.[1083] Further, the public water utility must develop contingency plans in case the public water supply is contaminated.[1084] After the municipality develops a plan with the requisite contingencies, the commissioner for the Bureau of Public Health has the power to accept the public water system's plan and grant a permit.[1085]

While West Virginia does not directly regulate groundwater as a point source, operators of public water systems must account for pollutants that travel from groundwater into a public drinking water supply. They must plan for unpermitted effluent discharges and create contingency plans in case the supply is compromised. The commissioner for the Bureau of Public Health must ensure that all possible contaminants are accounted for before approval. Thus, while groundwater is not specifically listed as a point source of discharge in West Virginia's drinking water regulations, municipalities must account for discharge that travels via groundwater regardless of *Maui*.

[1080] § 16-1-9(a).
[1081] *Id.*
[1082] § 16-1-9(c).
[1083] *Id.*
[1084] *Id.*
[1085] W. VA. CODE ANN. § 16-1-9(c)(13)(d) (West 2020).

XXIX. Wisconsin

a. Statutory Regulation

Wisconsin heavily regulates water pollution, setting effluent standards and reporting requirements that are more vast than other states examined. Chapter 281 of the Wisconsin Statutes regulates water and sewage, and 283 regulates the pollution discharge system. The Department of Natural Resources ("DNR") is responsible for regulating environmental pollution, which includes the contamination of waters of the state.[1086] Under section 281.01 of the statute, waters of the state include:

> portions of Lake Michigan and Lake Superior within the boundaries of this state, and all lakes, bays, rivers, streams, springs, ponds, wells, impounding reservoirs, marshes, watercourses, drainage systems and *other surface water or groundwater*, natural or artificial, public or private….[1087]

Because groundwater is included in the definition, Wisconsin falls under Category 1 in Appendix B for implementing regulations that are more stringent than federal regulations.

The DNR is responsible for compliance of all groundwater protection standards outlined in Chapter 160 of the Statutes.[1088] It establishes enforcement standards, provides information to the public, reviews existing regulations, adopts rules for regulator responses for groundwater contamination, and enforces same.[1089] Enforcement is done in accordance with enforcement procedures in the state and subject to penalties established by statute for activities and practices regulated by the DNR.[1090] These penalties and remedial requirements are outlined in Chapter 292

[1086] WIS. STAT. § 299.01 (2020); The department's duties with respect to environmental pollution are outlined in section 299.13(2).
[1087] WIS. STAT. § 281.01(18) (2020) (emphasis added).
[1088] § 299.31.
[1089] See chapter NR 160 in general.
[1090] WIS. ADMIN. CODE NR § 160.26 (2020).

of the Statutes. Penalties are typical as found in other state analyses supra.[1091] Any municipality may petition for a review of an alleged violation or any rule relating to environmental repair.[1092]

The Wisconsin Administrative Code also provides groundwater quality standards and evaluation and response procedures under Natural Resources ("NR") section 140. The DNR has classified point sources in a numerical system, which includes domestic sewage treatment works.[1093] The purpose of this classification system is to establish a list of categories and classes other than POTWs in order to establish additional effluent limitations.[1094]

The State variation of the NPDES permit is known as the Wisconsin Pollutant Discharge Elimination System ("WPDES"), which is regulated under NR 200. Subchapter I sets out the purpose of the permit system and Subchapter II provides applicability and exclusions, requirements for reporting and applications, and requisite time periods. "An application for a discharge permit shall be filed by any person who discharges or proposes to discharge any pollutant from a point source to the waters of the state."[1095] This includes discharges, including cooling waters, to any surface water through any storm sewer not discharging to a POTW and discharges for the purpose of disposal, treatment, or land application, including land disposal systems such absorption pond systems.[1096] Discharges exempt from the WPDES system include discharged to POTWs, discharges under general permits, and discharges to storm water permitted under NR 216. This section of the code outlines MS4, industrial storm water, and construction site storm water discharge regulations.

[1091] WIS. STAT. § 292.99 (2020).
[1092] § 292.95.
[1093] WIS. ADMIN. CODE NR § 220.02 (2020).
[1094] § 220.01.
[1095] WIS. ADMIN. CODE NR § 200.03(1).
[1096] § 200.03(1)(a)-(d).

b. Caselaw

The Wisconsin courts have briefly addressed the hydrological connection theory in past decisions. In 1994, the Seventh Circuit addressed whether it was possible for water from an artificial pond to enter local ground waters and travel to aquifers that feed lakes and streams.[1097] The court admitted that groundwater could be part of waters of the state, but deferred to the fact that neither the EPA nor the CWA asserts authority over ground waters just because there may be a hydrological connection to surface waters.[1098] This decision is therefore outdated, but the sentiment felt by the courts may already be in line with *Maui*.

c. Appendix A Scenarios

Scenario 1) Municipal Wastewater Management

Sewer Systems that pose risk of backups into basements or leaks into groundwater are Heavily regulated in Wisconsin. Sewage overflows and collection systems are regulated under subchapter IV of NR 210. Sewer overflows and sewage treatment facility overflows are prohibited under NR 210.21 and permits cannot be authorized by the DNR, unless they're applicable to an 'overflow event'[1099] in which case WPDES permittees must provide information to the DNR to determine if the overflows was, *inter alia*, unavoidable to prevent loss of life, injury, or severe property damage.[1100] The permittee's response to an overflow must include:

> all feasible steps to control or limit the volume of untreated or partially treated wastewater discharged, and terminate the discharge as soon as practicable. Remedial actions shall be implemented consistent with an emergency response plan developed under s. NR 210.23 (4) (f).[1101]

[1097] *Village of Oconomowoc Lake v. Dayton Hudson*, 24 F.3d 962, 965 (7th Cir. 1994).
[1098] *Id*.
[1099] Overflow includes both sanitary sewer overflows and sewage treatment facility overflows.
[1100] WIS. ADMIN. CODE NR § 210.21(1) (2020).
[1101] § 210.21(3).

Permittees also are required to report the overflows to the DNR as directed under subsection 4 of NR 210.21. Lastly, the DNR also possesses discretionary power to enforce response remedies.[1102] Building backups that can cause groundwater contamination are not subject to the requirements in NR 210.21, however the DNR may modify a WPDES permit if the overflow becomes a recurring issue.[1103] Given that groundwater is considered a water of the state, Wisconsin's building backups regulations and reporting requirements shows efforts to further protect groundwater in this instance.

Wisconsin's injection well program is found under section NR 815 of the Code. It mirrors closely the federal regulations. It is worth noting that use of any cesspool is prohibited, as well as holding tanks and other POTW components, if a municipality so chooses to prohibit them.[1104] Lagoons are also regulated in the Code under section NR 213. It is applicable to all lagoons, tanks, stacking structures, and other storage or treatment structures that receive industrial, commercial, or agricultural wastewaters.[1105] Exclusions are listed in subsection 2 of NR 213.02, and lagoons existing prior to July 1, 1990, must comply with the regulations of this chapter or a corresponding WPDES permit. There are general design requirements and groundwater requirements, thus demonstrating the state's commitment to protecting groundwater and likely compliance with *Maui*.

Scenario 2) Stormwater Management: Green Infrastructure (GI)

Stormwater discharges are regulated under Chapter NR 216. Most importantly, MS4s are regulated under subchapter 1. The subchapter outlines the sizes of municipalities that need to

[1102] § 210.21(2).
[1103] § 210.22.
[1104] WIS. ADMIN. CODE SPS § 383.32 (2020).
[1105] NR § 213.02(1).

operate under a WPDES permit, and those that are exempt. Section 283.33 of the statute specifies rules for discharges *through* MS4s:

> In addition to obtaining a permit under this section, the owner or operator of [a discharge from a discernible, confined, and discrete conveyance of storm water associated with an industrial activity or construction site] that discharges storm water *through* a [permit-mandated MS4] shall submit the following information to the owner or operator of the municipal separate storm sewer system: [1] the name of the facility from which the release occurs, [2] the name and address of a person to contact for information about the discharge, [3] the location of the discharge, [4] a description of the principal products or services provided by the facility and the number of any permit covering the facility.[1106]

Those who are required to obtain a permit may apply for an individual permit or request coverage under a general MS4 permit issued by the department.[1107] If the MS4 is combined with a sanitary sewer system, then the owner must follow permitting requirements in section 283.31, which outlines the WPDES program.[1108] These regulations for MS4s allow stormwater dischargers to join municipal MS4 programs. The municipalities are then able to regulate stormwater runoff within their city limits. The DNR has encouraged municipalities on its website to promote safe and sustainable options to control stormwater runoff, which demonstrates compliance and proactive pollution control.

Scenario 3) Drinking Water: Water Reuse

Water wells are regulated under NR 811. This chapter regulates community water systems and requires that the owner of a community water system must submit plans and specifications laid out in the chapter.[1109] The DNR has the discretion to approve or deny the plans. An engineering report must be submitted with the plans, which must include details on the recharge area for the well, which is to be calculated under approved methods of the

[1106] WIS. STAT. § 283.33(4)(a) (2020).
[1107] § 283.33(5).
[1108] § 283.33(6).
[1109] WIS. ADMIN. CODE NR § 811.08(1) (2020).

department.[1110] Additionally, a wellhead protection plan must be provided for all new wells for municipal water systems. The owner (or its agent) of such a system must develop the plan and seek approval from the DNR.[1111] Among many other things, the plan must include the identification of the recharge area for the well.[1112]

Because the DNR can scrutinize the methodology used to calculate these recharge areas, then it will also likely consider *Maui* in deciding whether or not to approve of municipal or other systems that recharge aquifers for drinking water. That said, compared to other states in this analysis, Wisconsin seems to fall short in regulating and categorizing wells; in the least, the lack of organization of the regulatory provisions makes it difficult to determine how exactly Wisconsin will regulate water reuse programs. The only other provision regulating aquifer recharges is section 160.257 of the Statutes. It provides unique standards for protecting drinking water and states that the DNR is not required to promulgate rules defining standards for aquifer recovery systems to minimize the amount of substances in groundwater; however, the DNR must promulgate rules that define standards for aquifer recovery systems to maintain compliance with drinking water standards found in sections 280.11 and 281.17(8).[1113] This section also sets out a minimum distance for recovery wells to be located from a specified pollutant, which is 1200 feet.[1114]

C. Conclusion

The regulations and caselaw in many of these states reflects a willingness by state courts, legislatures, and environmental boards and commissions to regulate beyond what is required in

[1110] § 811.09(4)(j)(1)(L).
[1111] § 811.12(6).
[1112] § 811.12(6)(c).
[1113] WIS. ADMIN. CODE NR § 160.257(2) (2020).
[1114] § 160.257(3).

order to ensure adequate groundwater quality. Few states depart even further from basic CWA protection and often require polluters to report, monitor, and mitigate even the *potential* for contamination of groundwater. This is reflected most commonly in water quality statutory schemes that will often require detailed monitoring plans or programs. Some states will also require experts to report on potential spills in the acquisition or renewal of an NPDES permit.

That said, the statutory and regulatory framework of each state often reflects EPA regulations quite closely. The most difficult aspect of this research was identifying what was rarely if ever mentioned in the regulations – the state's explicit aim to regulate more stringently. However, given the implication of including groundwater in the definition of WOTUS as well as the efforts to regulate potential contamination and percolation through groundwater, it is clear that these states regulate discharges from point sources more stringently than the EPA and perhaps more stringently than in *Maui*. Regardless of the distance from the specified activity– whether it be aquifer recharge, wastewater components, or green infrastructure–to the nearest surface waters, it is likely that most if not all states in this analysis have already prepared municipalities and other owners and operators to comply with the decision handed down in *Maui*.

Appendix A

Scenario 1: Municipal wastewater management:

- sewer systems posing risks of backup into basements and/or leaks into the ground,
- underground injection wells (the *Maui* case), and
- constructed wastewater treatment system components (such as lagoons).

Scenario 2: Stormwater management, green infrastructure (GI):

- GI is generally used to divert stormwater, which carries pollutants, into the ground rather than into sewers or surface waters.
- Different types of GI may give rise to different analyses with respect to how that stormwater affects groundwater and/or influences surface waters that may be reached via groundwater (bioswales).

Scenario 3: Drinking water, water reuse:

- Drinking water requirements are applicable at the points where water enters a public water supply distribution system.
    - What is the relevant regulatory structure that sets standards for waters at these points?
    - What standards apply at these points?
    - What does regulation entail for use of treated wastewater to recharge aquifers?
- Groundwater standards would apply to discharges into it. It is unclear whether groundwater standards also apply when groundwater influences surface water.

Appendix B

Category 1 - The regulations implemented by these states are more stringent than those of the CWA because the statutory definitions of waters regulated by the states include groundwater either explicitly or via broad terms, which encompass groundwater.

Minnesota
Nebraska
South Dakota

Category 2 - The regulations implemented by these states are more stringent than those of the CWA because each state's statutes prohibit or require permits for discharges entering groundwater even if groundwater is not listed within the state's statutory definition of regulated waters.

South Dakota

Category 3 - Like in Category 1, the regulations implemented by these states include statutory definitions of waters that include groundwater, either explicitly, or via broad terms which encompass groundwater. This Category does not include the same states though because, unlike in Category 1, the regulations implemented by Category 3 states also include statutory provisions requiring justification for the adoption of rules applied to waters that are not included in the NPDES program. These provisions make it more onerous for these states to adopt more stringent than regulations, so the regulations in these states are more stringent than those of the CWA to a lesser degree than those implemented by the states in Category 1.

Arizona
California
Connecticut
Florida
Illinois
Indiana
Iowa
Kentucky
Maine

Maryland
Michigan
Nevada
New Hampshire
New Jersey
New York
Ohio
Oregon
Pennsylvania
Rhode Island
Tennessee
Texas
Utah
Virginia
West Virginia
Wisconsin