Applicant 13

Expanding the Clean Water Act to Better Protect Groundwater Resources

Over 115 million people in the United States rely on groundwater for drinking water (Mahler and Campbell). Despite the prevalent use of groundwater, it receives next to no legal or legislative protections. Major water protection legislation tends to focus on moving water, such as the Rivers and Harbors Appropriation Act of 1899, while other water legislation is concerned with surface water writ large, like the Compensatory Mitigation Rule issued by the EPA in 2008. Surprisingly, even the most comprehensive water protection in the United States – the Clean Water Act – does not protect groundwater because they define protected water sources under the Act as "navigable waters" (Fabricant and Morello). With over one-third of the American population dependent on groundwater, it is imperative to analyze the multiple pollutants invading this natural resource, and how we can resolve these problems. Ultimately, the best method to combatting the contamination of our water supply will be to rely on existing legislative frameworks and expand them to include groundwater reservoirs: namely, the Clean Water Act and the National Environmental Policy Act.

Groundwater contamination typically occurs when man-made products enter topsoil and slowly descend to the water table. This method of pollution can be caused by gasoline spills, septic systems, or uncontrolled waste ("Groundwater Contamination"). However, there are less well-known and more insidious methods of groundwater pollution. Human activities like pumping and irrigation have changed groundwater flows (Mahler and Campbell), making them more susceptible to above-ground contaminants by moving shallow groundwater deeper into aquifers. This has led to more than one in five groundwater wells containing at least one contaminant – commonly nitrate, pesticides, and chemicals from the surface – at a level harmful to humans (DeSimone, McMahon, and Rosen).

There are currently laws that regulate hazardous wastes that may leach into groundwater from the surface, like the Resource Conservation and Recovery Act. However, there are no laws that protect groundwater waste dumping, which forces all forms of enforcement surrounding groundwater contamination to be centered on either surface-level waste making its way into groundwater or groundwater contamination spilling over into surface water. A lack of guidelines and specificity have led to a lack of enforcement surrounding groundwater contamination. This is exemplified in an Environmental Integrity Project report from January 17 of 2019 that reported massive violations of the "Coal Ash Rule" that went unreported because it wasn't required. The Obama administration created the Coal Ash Rule to issue mandates that were intended to ensure that coal ash was properly disposed of ("Disposal of Coal"). In accordance with the rule, the EIP conducted on-site groundwater monitoring for 16 coal-fired power plants in Texas and found that groundwater under every plant was contaminated with carcinogens linked to coal ash. According to the rule, these power plants are required to conduct testing of groundwater and ensure that it falls within limits set by the Coal Ash Rule, however, companies are in charge of conducting their own tests and are not penalized if they fail to report the results. The current process requires additional testing to ensure that there are elevated levels of contaminants. EPA rules are also unclear about what happens to plants found to be in violation – after the publication of the non-profit's report, the executive vice president of the Lower Colorado River Authority commented that, "EPA rules do not require LCRA to take further action," and EIP attorney Russ stated that, "The process laid out in the federal coal ash rule is not complete," (Collier). Independently, the report also found that almost none of the plants were properly lined to prevent leakage – another violation of the Coal Ash Rule with no clear method to ensure compliance. The Coal Ash Rule is

just one example of the difficulties current legislation has with identifying and enforcing groundwater contamination.

There are a variety of court cases surrounding the Clean Water Act and its applications to groundwater. "Navigable waters" in the Act are defined as "waters of the United States", and the precise definition of the term has been the subject of intense litigation. Surprisingly, most courts assume that groundwater is not under the definition, and the legal battles have shifted to determining if contaminants that enter navigable waters from groundwater are covered under the CWA. For instance, in Hawai'i Wildlife Fund v. County of Maui, the Ninth Circuit determined that the Clean Water Act applies to pollutants that are indirectly discharged into a "water of the United States" (Dowell). Importantly, the court "assumed without deciding that groundwater was neither a point source discharge, nor a water of the United States" (Dowell) and determined that the Clean Water Act is only applicable if groundwater contamination makes its way into "navigable water". Similarly, in Upstate Forever v. Kinder Morgan Energy Partners, L.P., the Fourth Circuit determined that, "a plaintiff must allege a direct hydrological connection between ground water and navigable waters to state a claim under the CWA" (Chung and Dawson), upholding the Ninth Circuit's decision that the Clean Water act is not applicable for groundwater contamination. Additionally, Sierra Club v. Va. Electric and Power Co. determined that landfills, lagoons, and other passive waterways such as groundwater are not point sources (and therefore not covered under the Clean Water Act) because they are not, "discernable, confined and discrete conveyances" (Chung and Dawson). Sixth Circuit rulings in both Kentucky Waterways Alliance v. Kentucky Utilities Company and Tennessee Clean Water Network v. Tennessee Valley Authority have diverged on whether pollution entering waterways from groundwater is covered under the Clean Water Act, but both have upheld that groundwater on its own is not a "navigable

water" covered under the CWA. In early 2019, Supreme Court decided to take up the Hawai'i Wildlife Fund v. County of Maui case to determine if pollutants conveyed from groundwater to navigable waters are covered under the Clean Water Act, but their adjudication will ultimately still rest on the firm assumption that groundwater is not navigable (Soronen).

The Clean Water Act is the largest and most comprehensive water protection legislation in the United States. Because it is well-established, the best way to address problems with groundwater contamination detection and ensure the enforcement of regulations is to amend the Clean Water Act to include groundwater and utilize National Environmental Policy Act sampling standards to ensure compliance. First, through Congressional action, the Clean Water Act's definition of "waters of the United States" ought to be amended to include groundwater. Through this amendment, groundwater will be considered under the legal framework that the CWA has already established. Second, unlike moving water systems, groundwater only has one unified method for sampling for contaminants: EPA Source Water Assessment Steps. This method is regularly utilized in accordance with the National Environmental Policy Act (Brinckerhoff et al). Because of this, the NEPA offers the best metric of enforcement over groundwater regulations that could easily be applied to the Clean Water Act.

Status quo groundwater protections are insufficient to protect a growing source of drinking water in the United States. Without a new method, the number of wells with dangerous amounts of contaminants will continue to increase, and, as the number of Americans dependent on groundwater, increases, this problem will begin to affect more people than ever before. Because of this, the Clean Water Act must be amended to extend legal protections to groundwater.

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