PARTS PER TRILLION: ILLINOIS PROPOSES STRINGENT GROUNDWATER QUALITY STANDARDS FOR PFAS COMPOUNDS

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US Policy and Regulatory Alert

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On 7 March 2024, the Illinois Pollution Control Board (Board) proposed amendments to its Ground Water Quality regulations,[1] which would set standards for selected per- and polyfluoroalkyl substances (PFAS) compounds at or near their levels of detection and would result in some of the most stringent standards in the country.[2] While the Board states that these are neither drinking water standards nor remediation standards, these standards will be applied statewide to serve both purposes. From a remediation standpoint, these standards are so low that they will be extremely difficult and expensive to achieve. As a result, the proposal will impact many different sectors, especially those that manage or receive wastes potentially containing PFAS such as landfills, water and drinking water treatment operations and agricultural properties fertilized with biosolids. It may have an even broader impact to the extent the Board's standards become a default for any administrative decisions involving PFAS

BACKGROUND

Under Illinois' bifurcated system, the Board is charged with adopting environmental regulations and the Illinois Environmental Protection Agency (IEPA or Agency) is charged with implementing them. The Board adopted the current Groundwater Quality Standards regulations in 1991 pursuant to the Illinois Groundwater Protection Act[3] and has not significantly revised them since. The rules established a comprehensive program intended to protect groundwater resources while acknowledging that not all groundwater is used for drinking water. The Board established a classification system ranging from Class I “Potable Resource Waters” to Class IV “Other Groundwater” and assigned groundwater quality standards protective of the uses reflected in those tiers. The rules also provided for Groundwater Management Zones (GMZ) within which the standards could be exceeded pending remediation and allowed owner and operators of facilities to seek adjusted standards reflecting actual groundwater conditions and use. The rules recognized that not all groundwater was available for drinking water, that some groundwater was impacted, and that those impacts would require time to be addressed. The rules also require persons already monitoring groundwater pursuant to Agency programs to notify the Agency of exceedances and to take “preventive response actions” to address the conditions.

The Agency originally proposed the PFAS standards in December of 2021. The Board held three hearings, taking testimony from the IEPA as well as members of the regulated community. The Board closed its record on 3 March 2024 and issued its First Notice Order a year later on 7 March.

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STRINGENT STANDARDS

The Board adopted IEPA's extremely stringent proposed standards for the PFAS compounds listed in the below table and reduced the standards for several metals including Molybdenum, Cobalt, Selenium, and Vanadium. While the Board produced a detailed opinion, in each instance the Board rejected the testimony of the industry experts in favor of the Agency's witnesses. It also rejected any efforts to examine the science behind any United States Environmental Protection Agency (USEPA) decisions regardless of whether they had been subjected to regulatory scrutiny. The Board rejected concerns that standards set at the level of detection level in the parts per trillion range would be subject to numerous lab errors and believed that the stringent levels could be met by Illinois certified laboratories. In short, although a great deal of scientific information was presented to the Board, it chose to accept only that information presented by the IEPA.

CONSTITUENT	PROPOSED STANDARD
Perfluorooctanoic acid (PFOA)	0.000002
Perfluorooctane sulfonic acid (PFOS)	0.0000077
Perfluorononanoic acid (PFNA)	0.000012
Perfluorobutane sulfonate (PFBS)	0.0012
Perfluorohexanesulfonic acid (PFHxS)	0.000077
Hexafluoropropylene Oxide-dimer Acid (HFDO-DA)	0.000012

While state law requires the Board's regulations to be both technically feasible and economically reasonable, the Board did not evaluate the potential impact of its proposal on the industrial and municipal sectors that must manage PFAS-containing waste. For example, the waste industry is already seeing impacts as municipalities refuse to accept their leachate due to concerns regarding levels of PFAS. Similarly, those municipalities will find it more difficult to dispose of their biosolids for the same reason. While the Board stated, as it has in the past, that Part 620 Groundwater Quality Standards are not remediation or drinking water standards, it refused to acknowledge that the Agency and others will use the PFAS standards for exactly those reasons, until actual drinking water and remediation standards are established under their respective programs.

GROUNDWATER MANAGEMENT ZONES

Although not part of the Agency's proposal, the Board also proposed new rules on GMZs. These are three dimensional areas of the groundwater where the groundwater quality standards are allowed to be exceeded so long as the site is undergoing remediation overseen by the Agency. The GMZ had been part of the original Groundwater Quality Standards, but the process for how they were established, maintained, and terminated was not explicit and had been subject to unwritten Agency rules. The Board proposed rules intended to better define the process.

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In doing so, however, the Board avoided connecting the GMZ proposed rules with its existing rules for establishing risk based corrective action objectives called Tiered Approach to Corrective Action Objectives (TACO).[4] The Board proposal would require some level of corrective action until the Groundwater Quality Standards are achieved or until the corrective action was otherwise deemed complete by the Agency. In the latter instance the proposal would require that the GMZ remains in place and that the site be evaluated every five years to confirm the adequacy of controls and management of the groundwater is sufficient. In contrast, TACO allows the Agency to determine that remediation is complete with the use of barriers and legal restrictions, which eliminate the risk associated with the contamination. Under Illinois' Site Remediation Program,[5] (SRP) the existing levels explicitly become the appropriate groundwater quality standards and there is no need for a GMZ, adjusted groundwater standards, or five-year reviews when the Agency determines that no further remediation is necessary. Yet the Board's proposal would prevent users of remediation programs other than the SRP to obtain closure despite residual, localized exceedances of groundwater quality standards when it is determined under TACO that there is no remaining risk. These other programs include corrective action under the Resource Conservation and Recovery Act[6] or the state's Underground Storage Tank (UST) remediation program.[7] This will be especially problematic for the UST program, which has strict rules not allowing the use of the UST reimbursement fund to pay for groundwater remediation where controls on groundwater use are available.

NEXT STEPS

This order and the proposed regulatory changes will be published in the Illinois Register and allow for a 45-day comment period. If there is sufficient demand, the Board will likely schedule additional hearings. Once the First Notice process is complete, the Board will issue a second notice, which would forward the proposal for review by a legislative joint regulatory review group. After that group approves the rule, the Board will issue the Final Rule, which will be effective after it is published in the Illinois Register.

The Board's proposal will present immense and expensive difficulties for persons deemed responsible for remediating PFAS releases, both because of the stringent levels and because of its proposed GMZ program. The Board adopted the strictest standards possible despite considerable information that these lack scientific support. The Board also failed to apply its own risk-based tools that could alleviate some of this burden. All of these issues will need to be presented to the Board during the first notice comment period or presented in testimony should the Board choose to have additional hearings.

FOOTNOTES

[1] 35 Ill. Adm. Code 620.

[2] *In the Matter of Proposed Amendments to Groundwater Quality Standards*, *35 Ill. Adm. Code 620, R22-18*; opinions at https://pcb.illinois.gov/documents/dsweb/Get/Document-109817 and https://pcb.illinois.gov/documents/dsweb/Get/Document-109818.

[3] 415 ILCS 55/1 415 ILCS-58.17

[4] 35 Ill. Adm. Code 742.

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[5] 35 Ill. Adm. Code 740.

[6] 42 U.S.C. § 6901-6992k

[7] 35 Ill. Adm. Code 740.

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