

December 11, 2024

RE: Comments on Biosolids PFAS Strategy

To the Minnesota Pollution Control Agency (MPCA) Biosolids PFAS Strategy Review Team,

The Rochester Water Reclamation Plant (WRP) appreciates the opportunity to provide feedback on the Minnesota Biosolids PFAS Strategy (strategy) concerning the land application of biosolids. We want to thank the MPCA for recognizing that wastewater treatment facilities receive wastewater containing PFAS rather than being the sources of PFAS themselves. This important distinction should remain at the forefront of PFAS-related regulatory decision-making.

We commend the MPCA for developing a strategy that supports the continued land application of biosolids, and we acknowledge the excellent communication from the Municipal Wastewater team involved in this important effort.

Before addressing the specific strategies, it's important to highlight ongoing concerns about PFAS in Minnesota and nationwide, mainly due to the lack of regulation on PFAS-containing products. While we appreciate the passage of Amara's Law, we believe it falls short in scope and urgency compared to advancing requirements on wastewater permit holders.

PFAS substances are found in high concentrations in commonly used products, exposing individuals in Minnesota daily. Consumer products with PFAS concentrations significantly exceeding proposed Tier 4 limits exist. For example, cosmetic foundations can have PFAS levels 1,280 times higher than these limits, while food packaging can be 120,000 times higher (Sunderland et al., 2022). The lack of consumer notification and labeling restricts the reduction potential for consumers and impacts our ability to work with dischargers to reduce PFAS effectively. Additionally, the proposed limits measure in parts per billion, whereas many consumer products contain PFAS in parts per million (Dewapriya et al., 2023).

To protect human health and the environment, we must prioritize prevention and reduction, targeting the root causes of PFAS pollution. This approach will reduce exposure pathways and achieve lower PFAS levels in biosolids as harmful products are phased out.

Altering biosolids management practices before taking a more active approach to state and nationwide prevention and reduction efforts reflects an approach that merely manages symptoms rather than addresses the root cause of the problem.

We offer the following comments and questions on the proposed strategy.

Timing: We believe implementing Amara’s law will require considerable time before it takes full effect. The ongoing presence of PFAS resulting from everyday commercial and residential activities significantly constrains municipalities’ capacity to achieve meaningful reduction levels. The proposed approach attributes PFAS primarily to industrial sources, suggesting reductions can be realized more expeditiously. While this perspective may hold validity in specific contexts, it is essential to recognize that residential and commercial users contribute significantly to the overall PFAS load.

For instance, in Rochester, PFAS samples from domestic sources indicated that these contributions correspond to roughly 30% of the total load. Should this pattern apply to commercial flows, it would imply that 60-70% of PFAS is derived from residential and commercial wastewater sources. Achieving reductions in these sectors requires time, which will be influenced, in part, by the enactment of Amara’s law.

Therefore, we propose adjusting the established tiers to provide municipalities with the necessary time to engage in public outreach and address the issue within the commercial and residential sectors alongside the gradual implementation of Amara’s law. The table below presents a potential illustration of this tier adjustment.

Table 1. Proposed Tiers based on Amara’s Law Implementation schedule

Years	Tier 4 Level	Tier 3 Level	Tier 2 Level	Tier 1 Level
2025 – 2028	>201 µg/kg	101-200 µg/kg	41-100 µg/kg	<40 µg/kg
2028 - 2031	>176 µg/kg	76-175 µg/kg	31-75 µg/kg	<30 µg/kg
2032 and beyond	>126 µg/kg	51-125 µg/kg	21-50 µg/kg	<20 µg/kg

Values Selected: If the above schedule is not supported, Tier 4 should be set at 150 µg/kg. The MPCA based its tier values on Michigan's guidance, which identifies a natural breakpoint between wastewater from significant industrial and non-industrial sources. Michigan set a value of 150 µg/kg, assuming pretreatment at facilities would keep concentrations below this threshold. Levels below this most likely come from residential and commercial wastewater. Since the MPCA's Tier 4 designation is lower than Michigan's benchmark, it means Municipalities will need to find reductions from residential and commercial use. Solutions will rely on labeling and public education, which take time and are largely out of municipalities' control. Thus, the selected values seem overly conservative, especially given the implementation timeline.

Tier 4 land application ban: The immediate ban on biosolids should not be all-encompassing but considered on a case-by-case basis. Outright bans on the land application or other beneficial reuse of biosolids—like what was enacted in Maine—have proven to be disastrous. If the landowners are willing to accept biosolids, reduced application rates and/or other risk mitigation should be allowed. This measure is



premature until trustworthy risk assessment data indicates the need to ban the land application of biosolids.

Tier 4 effluent monitoring requirement: Tier 4 mandates the sampling of effluent; however, this does not contribute to the primary goal of identifying and eliminating the source of PFAS. WRP recommends removing the effluent monitoring requirement and keeping additional efforts focused on source identification and reduction/elimination.

Tier 3 reduced application rate: The 1.5 dry tons/acre limit may create a pseudo-ban by limiting nitrogen availability for landowners. Allowing for a risk mitigation plan provides flexibility but requires time and resources. A range of 1.5-3.5 dry tons/acre should be permitted based on biosolid type and application methods. This follows a similar approach to the risk mitigation plan route but does so on a larger and more expedited scale.

Allow sampling outside of the cropping year as long as it is representative: WRP is concerned with the amount of time it takes to get results back from the lab. The increased number of facilities sampling could create further delays. Additionally, should a municipality fall into Tier 3 and pursue a risk mitigation plan, it will need time to develop the plan and get it approved by the MPCA. Implementation flexibility or expanding the sampling period is required to provide the necessary time.

Questions on implementation: We have the following questions on how components of the plan will be implemented.

1. Is “year” defined as a calendar year or biosolids cropping year?
2. How will values that exceed the detection limit but fall below the reporting limit (or J values) be treated in the analysis?
3. If we collect a sample and deem it unrepresentative, what procedures will we need to take for resampling?
4. Is obtaining a new representative sample permissible if a source of PFAS is identified and mitigated partway through the year?
5. In scenarios where we take a split sample, and the results are inconsistent, how should those results be used?
6. Will a Frequently Asked Questions document and/or online training tutorials be completed, especially regarding sampling procedures? We have struggled to develop expertise in this area and have noted that others have as well. It is recommended that the MPCA provide additional comprehensive resources to support this strategy.

In conclusion, WRP appreciates the opportunity to provide feedback on the strategy and acknowledges the MPCA’s efforts to address this important issue. While we support



continued land application of biosolids and recognize the need to monitor and regulate PFAS levels, we urge a more balanced, long-term approach that considers the broader context of PFAS contamination, particularly from consumer products. The emphasis on prevention and reduction of PFAS at the source—such as in manufacturing and consumer goods—is critical to achieving meaningful environmental and human health protection.

Additionally, we suggest adjustments to the proposed tier levels and timelines to allow municipalities adequate time to address the complexities of PFAS reductions across residential and commercial sectors. A collaborative, flexible approach, combined with clear and accessible guidance, will help ensure that the strategy's goals are met without undue burden on utilities and stakeholders.

Respectfully,

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References

Sunderland et al., Chen, J., Jr., Tang, L., Chen, W.-Q., Peaslee, G. F., Jiang, D., Whitehead, H. D., Venier, M., Wu, Y., Eastman, E., Urbanik, S., Diamond, M. L., Shalin, A., Schwartz-Narbonne, H., Bruton, T. A., Blum, A., Wang, Z., Green, M., Tighe, M., . . . McGuinness, S. (2022). PFAS Concentrations and Exposures Factsheet. In *Understanding PFAS in Landfill Leachate Relative to Common Exposure Sources and Pathways* [Report]. https://wasterecycling.org/wp-content/uploads/2022/10/PFAS-Concentrations-Exposures-Factsheet_FINAL_Nov-20228.pdf

Dewapriya, P., Chadwick, L., Gorji, S. G., Schulze, B., Valsecchi, S., Samanipour, S., Thomas, K. V., & Kaserzon, S. L. (2023). Per- and polyfluoroalkyl substances (PFAS) in consumer products: Current knowledge and research gaps. *Journal of Hazardous Materials Letters*, 4, 100086. <https://doi.org/10.1016/j.hazl.2023.100086>

