P39-04

PFAS Treatment as an Opportunity for Broader Drinking Water Improvements: Evidence from U.S. Water Systems

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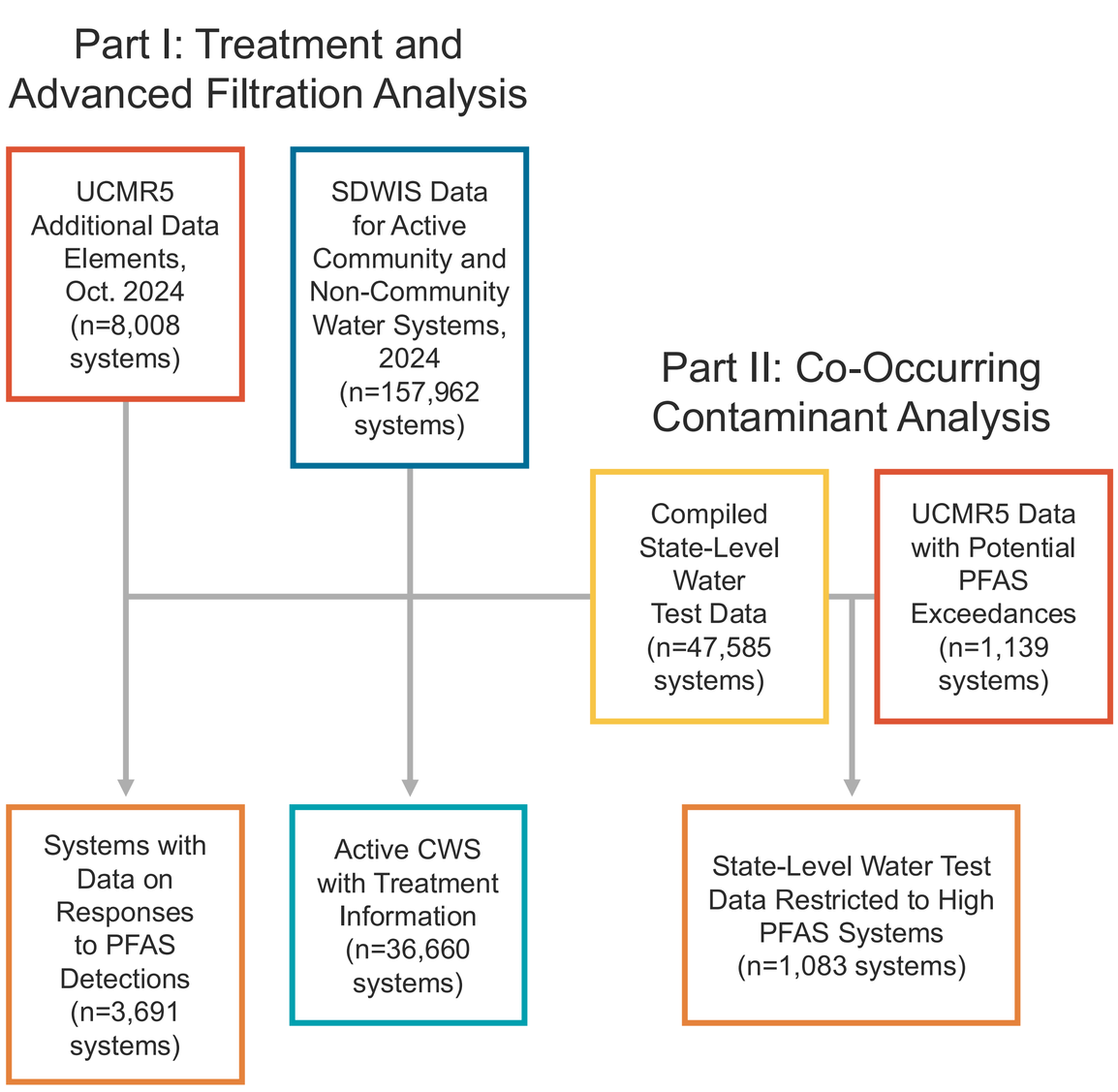
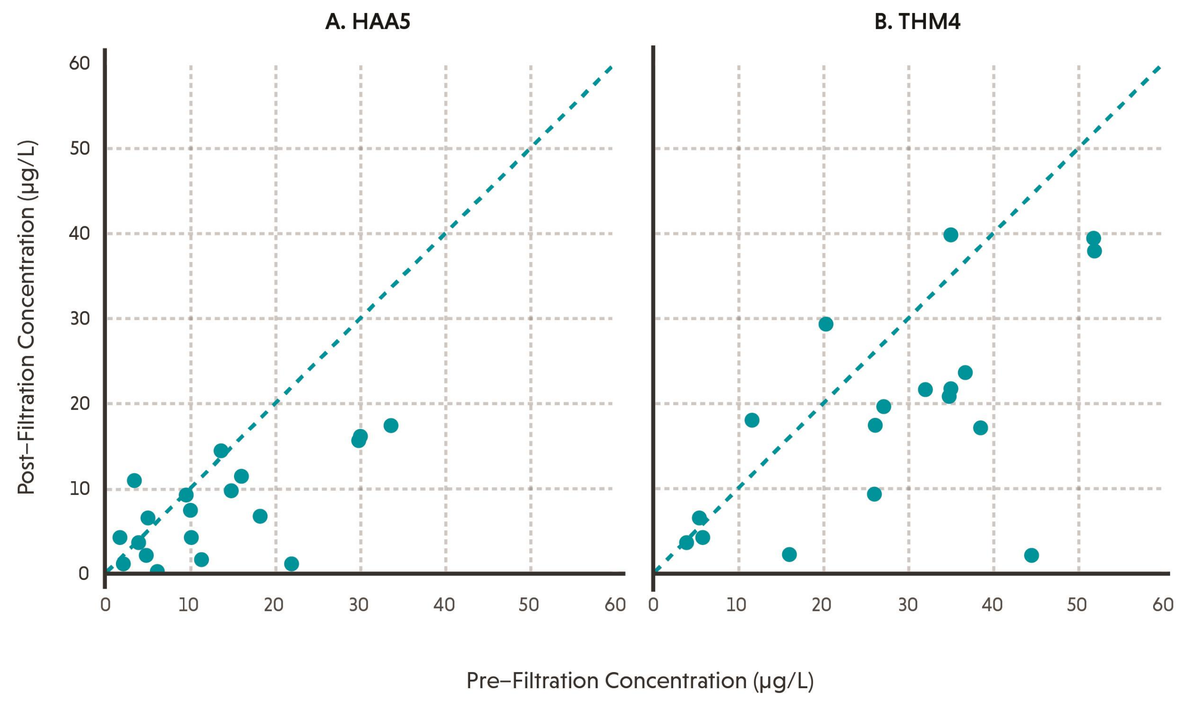
The benefits of installing PFAS-removal technologies are broad, due to the potential for simultaneous removal of diverse co-occurring contaminants. Here, we present evidence that co-removal benefits of PFAS filtration extend beyond just disinfection byproducts (DBPs), highlighting the need for more comprehensive and health-protective accounting of co-occurring contaminant reductions in setting legal limits.

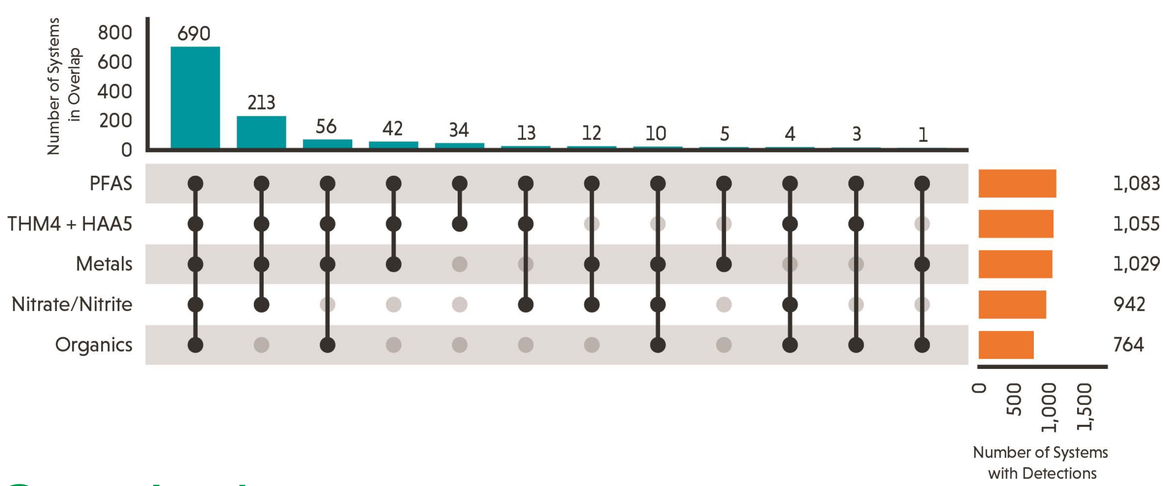
Methods and Datasets Used



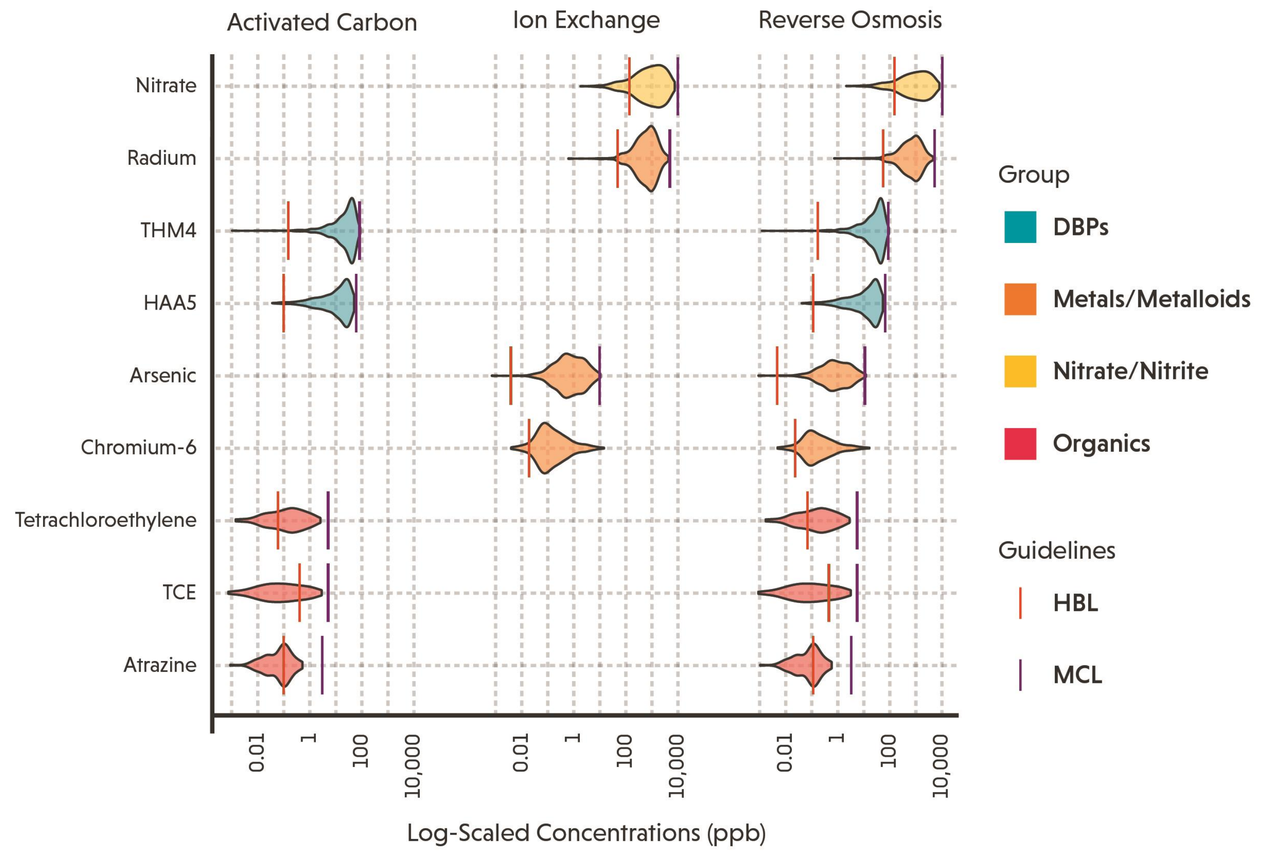
Finding 1: 98% of community water systems have not installed PFAS-treatment, despite detections. 16/19 systems that did install PFAS-removal treatment saw considerable DBP reductions.



Finding 2: PFAS contaminants co-occurred with DBPs, metals, nitrate/nitrite, or organics in all 1,083 high-PFAS systems. PFAS are never detected alone.



Finding 3: PFAS-treatment has the potential to remove several contaminants, many of which meet legal standards but exceed health guidelines.



Conclusions

- Current limits for PFAS underestimate co-removal benefits.
- Institutional support is necessary for smaller systems to install and maintain advanced filtration technologies like GAC, IX, or RO.
- Enforceable limits are essential to incentivize adoption of technologies with broad co-removal benefits.

Implications

- A multi-contaminant approach to CBA can better capture the full public health value of advanced treatment.
- The 2024 U.S. EPA PFAS limits can serve as a catalyst for future revisions of contaminant standards and broader treatment upgrades.

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