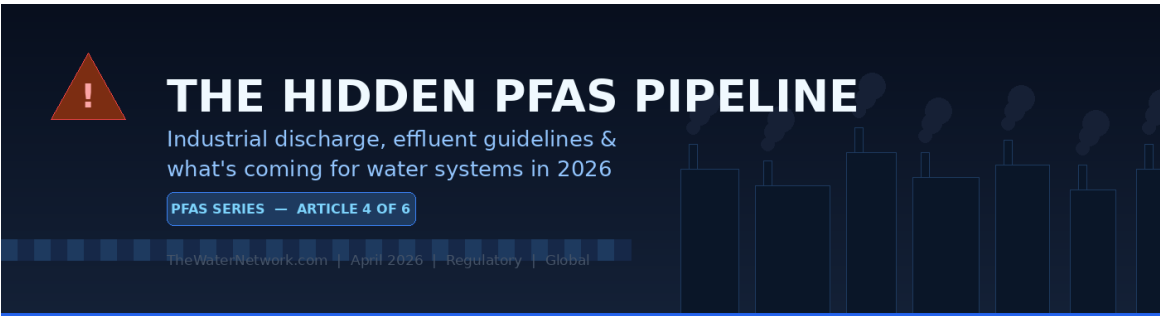




PFAS SERIES — ARTICLE 4 OF 6

The Hidden PFAS Pipeline

Industrial discharge, effluent guidelines, and what's coming for water systems in 2026

Most of the PFAS that reaches drinking water sources does not arrive directly from factories. It travels an indirect route: factory to drain, drain to sewer, sewer to wastewater treatment plant, and wastewater treatment plant to river — from which the next community draws its drinking water.

This is the industrial discharge problem. And in 2026, regulators on both sides of the Atlantic are beginning — slowly and unevenly — to close the gap between the source of the contamination and the systems being required to remove it.

"Water facilities are not producers or users of PFAS. They are receivers — they merely convey and manage the traces of PFAS coming into their systems daily." — Water Environment Federation

Figure 1: Industrial Discharge Pathway to Drinking Water
How PFAS moves from factory to tap — and where controls apply

WARNING: Most municipal wastewater treatment plants pass PFAS through largely untreated				
INDUSTRIAL FACILITY → Source of PFAS	SEWER SYSTEM → PFAS enters drain	MUNICIPAL WWTP → Passes through untreated	RIVER / RESERVOIR → PFAS accumulates	DRINKING WATER PLANT Must remove PFAS
No discharge controls at source yet	MSGP permit 40 PFAS quarterly ELG limits 2027	No federal PFAS removal required	Water quality criteria EPA benchmarks	EPA MCL: 4 ppt Deadline 2031

Source: WEF, Washington State Ecology, EPA · TheWaterNetwork.com / AquaSPE 2026
Figure 1: Controls at each stage shown below the relevant node.

The industries responsible

Not all industrial sectors pose the same risk. The highest-impact sources of PFAS discharge to water systems fall into a small number of well-identified categories.

Metal finishing and chrome plating — among the most significant point-source dischargers. Studies in Michigan found 15% of metal finishers discharging above PFAS screening criteria.

PFAS direct manufacturing — the highest-concentration source. Historical discharges have contaminated water supplies for hundreds of thousands of residents.

Semiconductor fabrication — etching, cleaning, and photolithography produce PFAS-containing wastewater. This sector is growing rapidly with AI infrastructure investment.

Textiles and leather — PFAS waterproofing is widely used; dyeing and finishing wastewater contains PFAS at concentrations conventional treatment cannot address.

Landfill leachate — one of the most concentrated PFAS waste streams anywhere. Concentrations can be orders of magnitude above drinking water limits.

Figure 2: PFAS Discharge Risk by Industrial Sector
Sectors posing the greatest risk to drinking water quality



Sources: EPA, ITRC, Michigan EGLE, Washington State Ecology, WEF, BCLP 2026 · TheWaterNetwork.com / AquaSPE
Figure 2: Industrial sectors ranked by relative PFAS discharge risk. Score is indicative.

The regulatory landscape — United States

The US regulatory response to industrial PFAS discharge operates across several parallel frameworks, each at a different stage of development.

Multi-Sector General Permit (MSGP)

The proposed 2026 MSGP includes quarterly PFAS monitoring using EPA Method 1633, covering 40 compounds, across 23–29 industrial sectors. It is a report-only requirement to generate baseline data. Its direct applicability is limited to EPA NPDES authority areas, but many states model their own permits on it.

Effluent Limitations Guidelines (ELGs)

OCPSF ELG (January 2026 proposal) — revisions to the Organic Chemicals, Plastics and Synthetic Fibers guidelines to address PFAS discharges from manufacturing facilities.

Metal Finishing ELG (July 2026 proposal) — addressing PFAS from metal finishing — a significant upstream contributor to PFAS in municipal WWTP influent.

CERCLA hazardous substance designation

The designation of PFOA and PFOS as hazardous substances under CERCLA means parties responsible for releasing them can be held financially responsible for remediation costs — including those borne by water utilities.

Figure 3: US Industrial PFAS Regulations 2024–2028

Three parallel regulatory tracks: monitoring · effluent limits · liability

MONITORING & REPORTING	2024–25 2026 MSGP proposed 40 PFAS, 29 sectors	2026 TSCA reporting Apr–Oct 2026	2028 State NPDES permits updated with PFAS
EFFLUENT LIMITS (ELGs)	2026 Jan OCPSF ELG revisions proposed	2026 Jul Metal Finishing ELG proposed	2027 Enforceable limits expected — key sectors
LIABILITY & ENFORCEMENT	2024 PFOA/PFOS CERCLA hazardous substance	2026 RCRA listing 9 PFAS compounds	2027+ CERCLA enforcement grows — cost recovery

Sources: EPA Spring 2025 Unified Agenda, BCLP 2026 · Timeline reflects stated intentions — subject to change
Figure 3: US regulatory timeline across three parallel tracks.

The regulatory landscape — globally

Outside the US, industrial PFAS discharge regulation is at earlier stages in most markets — but moving quickly, particularly in Europe.

Figure 4: Industrial PFAS Discharge Regulation — Global Comparison 2026
Where the world stands on controlling PFAS at industrial source

UNITED STATES	EUROPEAN UNION	UNITED KINGDOM	AUSTRALIA
CERCLA LIABILITY PFOA/PFOS hazardous substances — active NOW	FRANCE LEVY €100 / 100g PFAS discharged to water	DWI ACTION 34 enforcement notices to water companies 2025	DEFENCE AUD \$807M+ committed 28 priority military sites
MSGP 2026 40 PFAS monitored across 29 sectors	REACH BAN Universal PFAS restriction legislation — 2027	EA GUIDANCE Updated PFOS guidance 2025 — case by case	NEMP National Env. Management Plan — discharge guidance
ELG LIMITS OCPSF + Metal Finishing proposed → 2027	ZERO TARGET Eliminate industrial aqueous PFAS by 2030	PERMITS Industrial discharge permits being updated	LEGAL Class actions vs manufacturers growing
Strong liability tool Monitoring ahead of limits	Most advanced globally Strongest polluter-pays law	Progressing — behind EU DWI pressure increasing	Primarily defence-focused Legal route growing

Sources: EPA, BCLP 2026, DLA Piper 2026, UK DWI, Australian DoD, French Law 2025-188 · April 2026
Figure 4: Global regulatory comparison across US, EU, UK, and Australia.

What this means for water utilities

- Engage in industrial pretreatment programmes.** Source investigation and control can dramatically reduce PFAS concentrations entering treatment plants.
- Track CERCLA liability developments.** The hazardous substance designation creates the legal basis for utilities to pursue cost recovery from industrial dischargers.
- Monitor ELG finalisation closely.** When limits are finalised, PFAS in municipal WWTP influent should decrease — reducing downstream treatment burden.
- Plan treatment for current loads.** ELG timelines are uncertain. Treatment systems must be sized for current contamination, not hoped-for future reductions.
- Participate in regulatory consultation.** Water utilities have a legitimate voice in shaping industrial discharge standards and the polluter-pays principle.

The most efficient PFAS management strategy is prevention at source. Every kilogram not entering the water cycle is one that does not have to be removed at enormous cost downstream.

PFAS Series — progress & coming next

- Article 1 — Funding PFAS Compliance: A Global Guide for Water Utilities ✓ Published
- Article 2 — Why Your Jurisdiction Matters More Than the National Regulator ✓ Published
- Article 3 — Europe's PFAS Crackdown: Source Bans, Treatment Standards & What They Mean ✓ Published
- Article 5 — The Disposal Dilemma: What Happens to PFAS After You Remove It?

- [Article 6 — PFAS and Environmental Justice: Why the Burden Falls Hardest on Vulnerable Communities](#)

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Disclaimer: This article was researched and drafted with the assistance of Claude AI (Anthropic). Regulatory figures reflect publicly available information as of April 2026 and are subject to change. Nothing in this article constitutes legal or financial advice.