

Per- and Polyfluoroalkyl Substances Compliance Determination: A Quick Reference Guide

Overview

Rule Title	Per- and Polyfluoroalkyl Substances (PFAS) National Primary Drinking Water Regulation 89 FR 32532, April 26, 2024, Vol. 89, No. 82
Focus of This Guide	This document describes how to determine compliance with individual Maximum Contaminant Levels (MCLs) for five PFAS and a Hazard Index MCL for mixtures of two to four specific PFAS.
Utilities Covered	The PFAS Rule applies to all community water systems (CWSs) and non-transient non-community water systems (NTNCWSs), hereafter referred to collectively as water systems.
Key Milestones	April 26, 2027: Initial monitoring ends and compliance monitoring begins. April 26, 2029: All regulated water systems must comply with the PFAS MCLs, and compliance determinations begin.
Code of Federal Regulations (CFR) Citations	See the following sections in Title 40, Part 141 of the CFR: <ul style="list-style-type: none"> ► For PFAS regulations, see Subpart Z. ► For Maximum Contaminant Levels (MCLs), see 40 CFR 141.61(c)(2). ► For Maximum Contaminant Level Goals, see 40 CFR 141.50. ► For compliance dates, see 40 CFR 141.6(l) and 40 CFR 141.900(b).

Key Terms

Running Annual Average (RAA)	An average of analytical results for samples taken during the previous four calendar quarters at each entry point (see 40 CFR 141.903(f)(1) and 40 CFR 141.903(f)(2) for how to calculate a running annual average for PFAS).
Practical Quantitation Level (PQL)	The lowest level at which a contaminant can be reliably quantified within specific limits of precision and accuracy during routine laboratory operating conditions using the approved methods (89 Federal Register (FR) 32573). (This is different from a Practical Quantitation Limit, as defined at 40 CFR 141.2.)
Reliably and Consistently	Reliably and consistently below the MCL means that each of the samples contains regulated PFAS concentrations below the applicable MCLs. For the PFAS Rule, this demonstration of reliably and consistently below the MCL would include consideration of at least four quarterly samples at an entry point below the MCL, but primacy agencies will make their own determination as to whether the detected concentrations are reliably and consistently below the MCL (89 FR 32660-32661, footnotes 21 and 23).

Compliance Determination (40 CFR 141.903)

PFAS MCLs and PQLs (40 CFR 141.61(c) and 40 CFR 141.903(f)(1)(iv)):

Contaminant	MCL (ppt)	Significant Figures ¹	PQL ² (ppt)
PFOA	4.0	Two	4.0
PFOS	4.0	Two	4.0
PFHxS	10	One	3.0
HFPO-DA (or GenX Chemicals)	10	One	5.0
PFNA	10	One	4.0
PFBS	N/A	N/A	3.0
Hazard Index (Mixture of two or more: HFPO-DA, PFBS, PFNA, and PFHxS)	1 (unitless)	One	N/A

¹ For more information see *Per- and Polyfluoroalkyl Substances: Significant Figures and Rounding Requirements* <https://www.epa.gov/system/files/documents/2024-12/pfas-sigfigs-rounding-dec24.pdf>

² All PQLs have two significant figures.

Monitoring Frequencies for Compliance Determination (40 CFR 141.902)

There are three different compliance monitoring frequencies (Quarterly, Annual, or Triennial) that may be assigned to each individual entry point to the distribution system (entry point) at a water system, dependent on the concentrations measured of regulated PFAS. An entry point will only be on one of these monitoring frequencies at any given time. For more information on compliance monitoring frequency, see *Per- and Polyfluoroalkyl Substances Compliance Monitoring: A Quick Reference Guide* at <https://www.epa.gov/system/files/documents/2025-01/pfas-compliance-monitoring-qrg-jan25.pdf>.

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Monitoring Frequencies for Compliance Determination (40 CFR 141.902) Cont.

Quarterly Compliance Monitoring

Quarterly compliance sampling requires one sample to be collected at the individual entry point per calendar quarter at a time designated by the primacy agency.

Compliance with the MCLs for regulated PFAS (both Individual and the Hazard Index) is determined by calculating RAAs using compliance monitoring results for each entry point.

For calculating MCL compliance, if a sample result is less than the PQL for a regulated PFAS, zero is used for that analyte result solely to calculate the RAA.

An entry point is in compliance if the RAA is less than or equal to the MCLs for all regulated PFAS.

- ▶ If the entry point has four consecutive quarterly sample results below the MCLs for all regulated PFAS contaminants, primacy agencies (states, territories, Tribal Nations, or the EPA Regions with oversight responsibilities for the National Primary Drinking Water Regulation) can determine the entry point to be reliably and consistently below the MCLs and allow the water system to reduce to annual monitoring at the sample location.

Annual Compliance Monitoring

For water systems that are eligible, annual monitoring requires one sample to be collected at the individual entry point every calendar year at a time designated by the primacy agency.

If sample results are reliably and consistently below the MCL (e.g., less than all PFAS MCLs), the entry point is in compliance.

If any sample results for any regulated PFAS are greater than or equal to the MCLs:

- ▶ Begin quarterly sampling for all regulated PFAS in the next quarter at the entry point.
- ▶ The triggering sample result is considered the first quarter of monitoring for the RAA calculation.

A primacy agency may direct a water system to resume quarterly monitoring for all PFAS if it finds the entry point is no longer reliably and consistently below the MCL.

If, after three consecutive years, all annual samples demonstrate PFAS concentrations are below the rule trigger levels (1/2 of the MCLs) for all regulated PFAS at the entry point, the primacy agency may allow a water system to begin triennial monitoring at that entry point.

Triennial Compliance Monitoring

For water systems that are eligible, triennial sampling requires one sample to be collected at the individual entry point every three calendar years at a time designated by the primacy agency.

If sample results are less than all PFAS MCLs, the entry point is in compliance.

- ▶ A water system can continue reduced triennial monitoring at an entry point if all sample results are below all trigger levels.
- ▶ If any sample result meets or exceeds a trigger level for a regulated PFAS, the water system must begin quarterly monitoring at the entry point, with the triggering sample used as the first quarter of monitoring for the RAA calculation.

PFAS Violations (40 CFR 141.905)

Monitoring Violations

If a water system fails to collect the required number of samples, this is a monitoring violation, and compliance calculations must be based on the total number of samples collected.

Monitoring and testing procedure violations require a Tier 3 public notification (PN) no later than one year after the water system learns of the violation.

For water systems with multiple entry points:

Compliance with the MCLs must be determined using an RAA calculated from the analytical results obtained at each entry point.

If one entry point's RAA exceeds an MCL, the water system is in violation of the MCL.

MCL Violation(s) (Individual PFAS & Hazard Index)

If the RAA exceeds the MCL:

- ▶ The water system will not be in violation of the MCL until one year of quarterly monitoring has occurred, except when a sample result in any quarter causes the RAA to exceed the MCL at an entry point regardless of the subsequent quarterly monitoring results required to complete a full year of monitoring (e.g., the result from a single sample is more than four times the MCL). If this occurs, the water system is out of compliance immediately.
- ▶ Hazard Index MCL Exception: in any quarter, for there to be a violation of the Hazard Index MCL, the water system must have two or more Hazard Index PFAS present at or above their PQLs. If only one of PFHxS, PFNA or HFPO-DA were present, it would only be an individual PFAS MCL exceedance. If only PFBS is reported at any concentration, without any cocurrence of PFHxS, PFNA, or HFPO-DA, it is not a violation of the Hazard Index MCL, nor an individual PFAS violation as PFBS does not have an individual MCL.

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PFAS Violations (40 CFR 141.905) Cont.

MCL Violation(s) (Individual PFAS & Hazard Index) Cont.

When there is an exceedance of the Hazard Index MCL, including having two or more of the Hazard Index analytes present at or above the PQL(s) in any of the quarterly samples, there may also be an exceedance of one or more individual MCLs, as such this can result in multiple MCL violations (e.g., PFHxS MCL violation and Hazard Index MCL violation).

Tier 2 PN is required for MCL violations. For more information see *Per- and Polyfluoroalkyl Substances Notifications to Consumers: A Quick Reference Guide* at <https://www.epa.gov/system/files/documents/2025-01/pfas-notifications-to-consumers-qrg-jan25.pdf>.

MCL Compliance and RAA Calculation (40 CFR 141.903)

If any sample result is less than the PQL, zero is used for that analyte to calculate the RAA to determine MCL compliance.

No rounding occurs until after the RAA is calculated.

For triennial or annual monitoring, an RAA is not calculated, so an individual sample, or the sample average with a confirmation sample, would be rounded to determine if the system has been triggered for quarterly monitoring.

The Hazard Index for each sampling event is calculated regardless of the sampling frequency.

Calculating the RAA for Individual MCLs (PFOA, PFOS, HFPO-DA, PFNA, and PFHxS):

For each analyte, divide the sum of the measured quarterly concentrations by the number of consecutive quarters that samples were collected. If the system is required to collect more than one compliance sample for that analyte in a quarter, water systems must average all the results in a quarter first, then average the quarterly averages.

If the RAA exceeds the MCL, the water system is not in compliance with the MCL.

For information on calculating the RAA for the Hazard Index MCL (mixtures of two or more of: HFPO-DA, PFBS, PFNA, and PFHxS) please see *Per- and Polyfluoroalkyl Substances Hazard Index: A Quick Reference Guide*: <https://www.epa.gov/system/files/documents/2024-12/hazard-index-qrg-dec24.pdf>.

For additional information on the PFAS Rule

Please visit the EPA PFAS
NPDWR Implementation
Web site at <https://www.epa.gov/dwreginfo/pfas-rule-implementation> or contact
your drinking water primacy
agency.

Note: The statutory
provisions and the EPA
regulations described
in this document
contain legally binding
requirements. This
document is not a
regulation itself, nor does
it change or substitute
for those provisions and
regulations.