

# Project Update: 2023 District Sampling and Analysis of Influent, Effluent, and Biosolids for PFAS Compounds

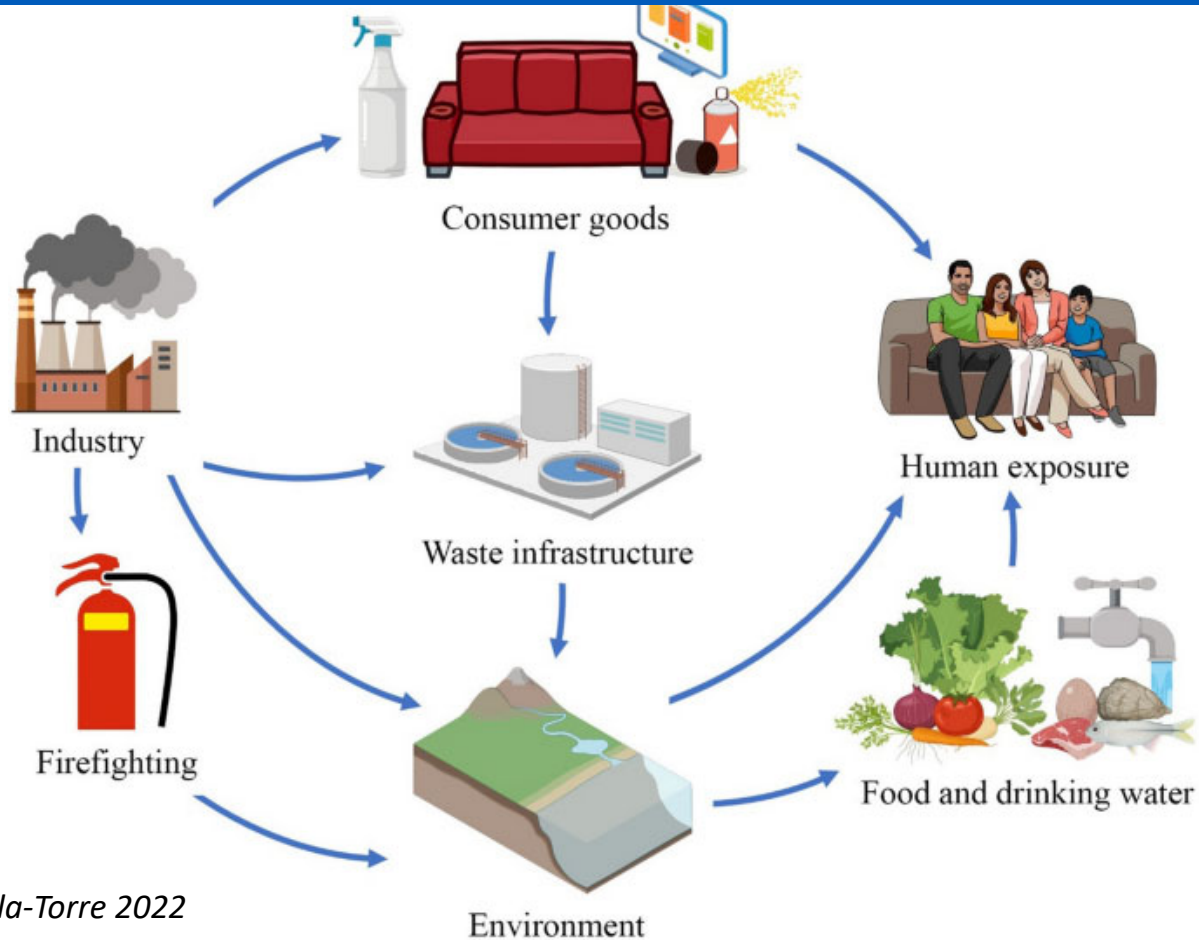
[MadsewerPFASinitiative.org](https://www.madsewerPFASinitiative.org)

Commission Meeting  
August 22<sup>nd</sup>, 2024

Madison Metropolitan Sewerage District



# We Reflect the Communities We Serve



Torres & De-la-Torre 2022

Madison Metropolitan Sewerage District



- Ordinance**
- Fate & Transport**
- Pre-Treatment**
- Website**  
[MadsewerPFASinitiative.org](http://MadsewerPFASinitiative.org)
- Sampling Plan**
- Pollution Prevention**

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Background and actions to  
address per- and polyfluoroalkyl  
substances (PFAS)

*Last revised June 4, 2019*

# Current Testing Timeline

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\*Permit reissuance 2025

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# 2023 – “Monitoring”

Influent, effluent, biosolids different over time?

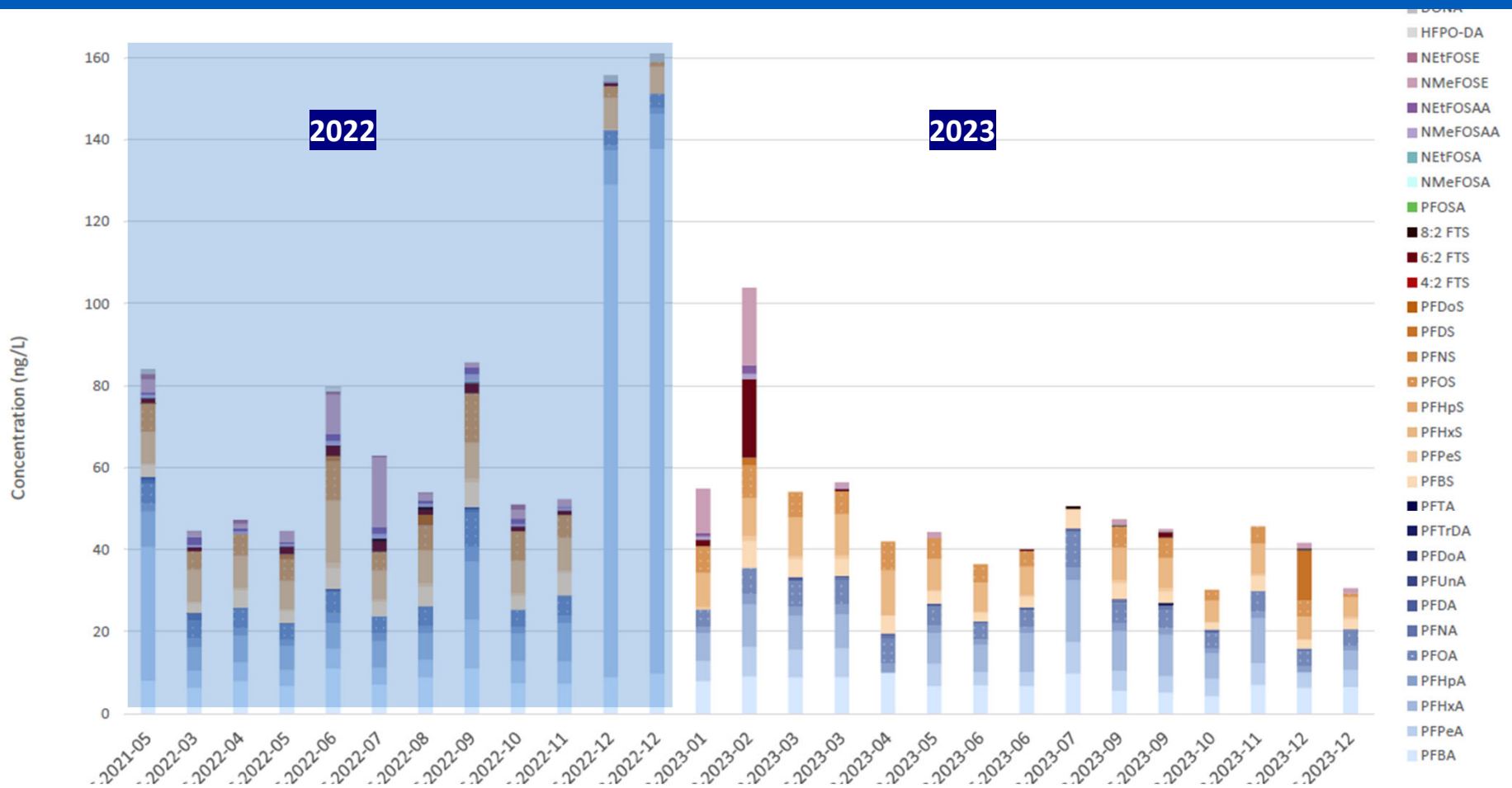
Align with WDNR monitoring protocols

Assessed sampling methodology for Biosolids

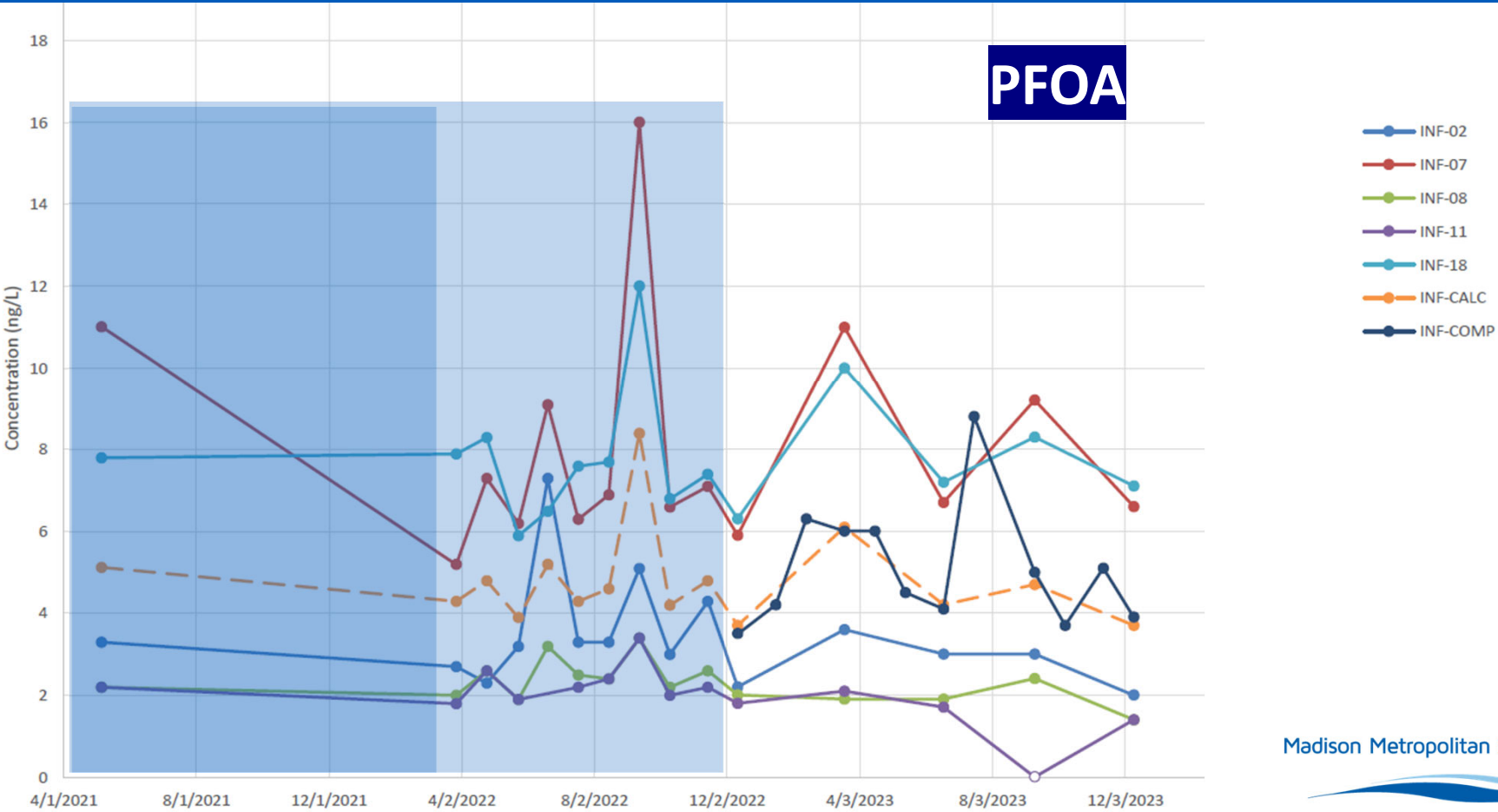
Waste Acceptance Tool



# 2023 Results – Influent

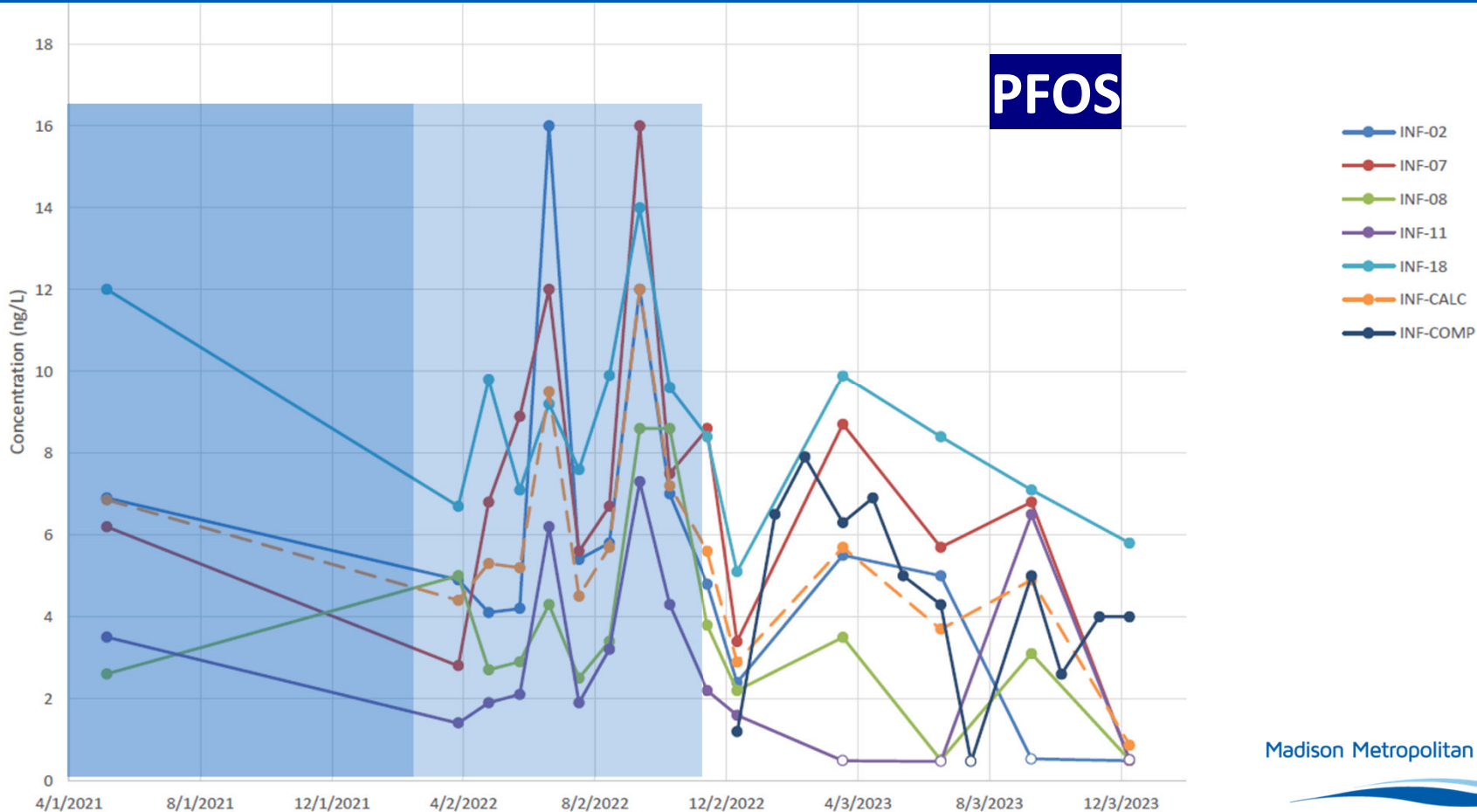


# 2023 Results - Influent





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# 2023 Results – Influent Summary

## **Individual force mains:**

No single continuous source

No indicators at high concentrations

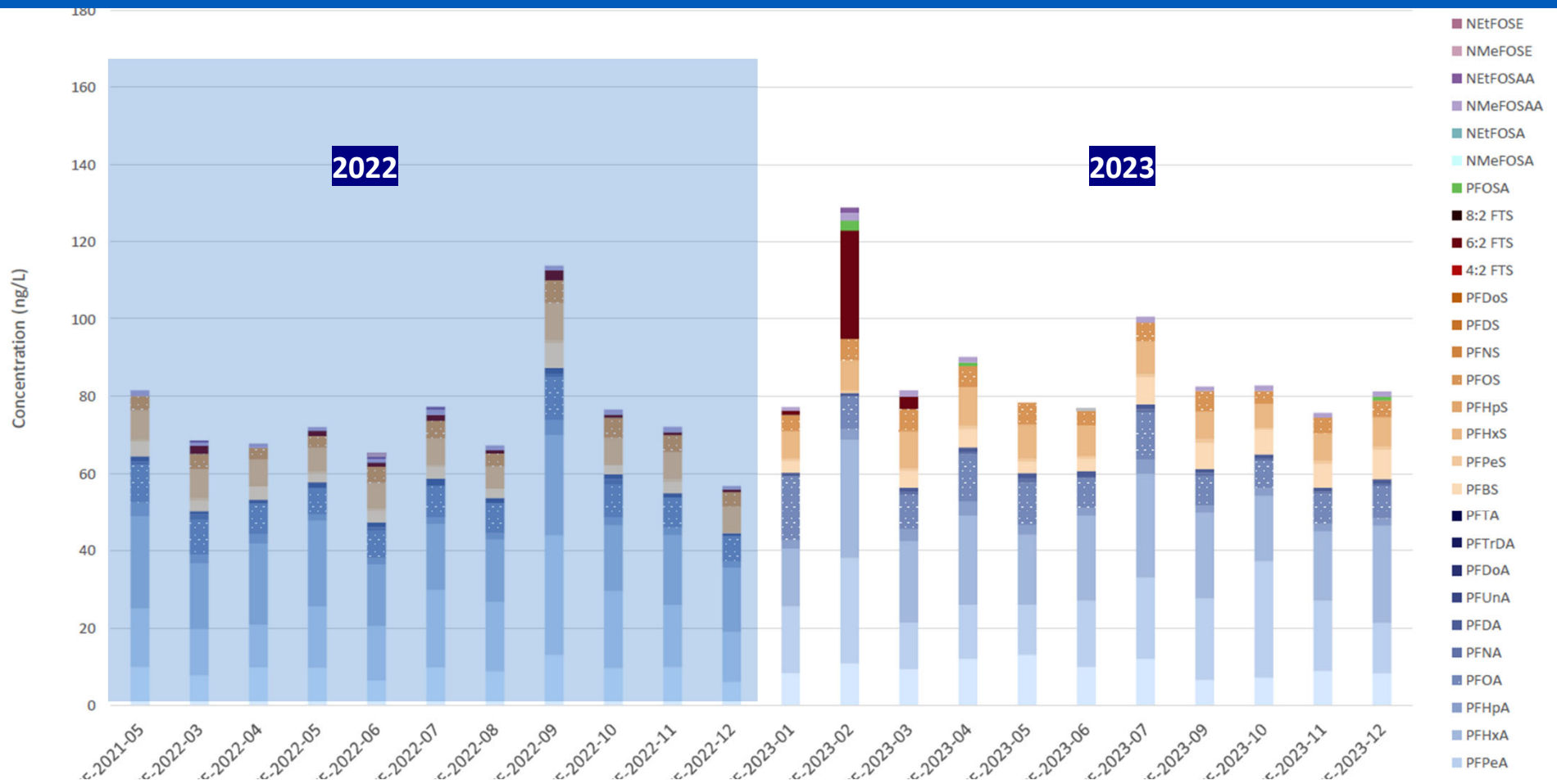
## **All force mains:**

PFOS consistent

PFOA lower than PFOS

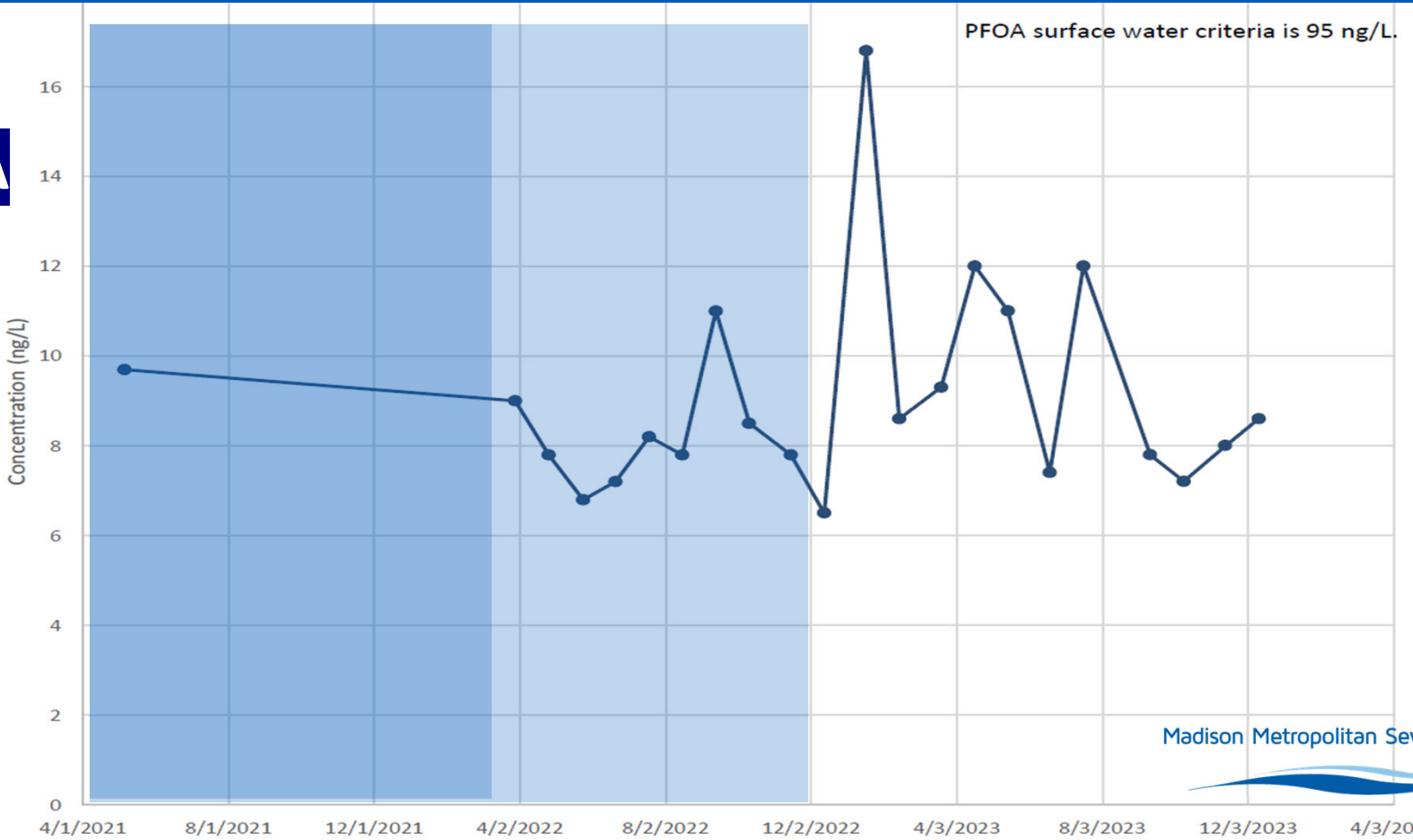


# 2023 Results – Effluent



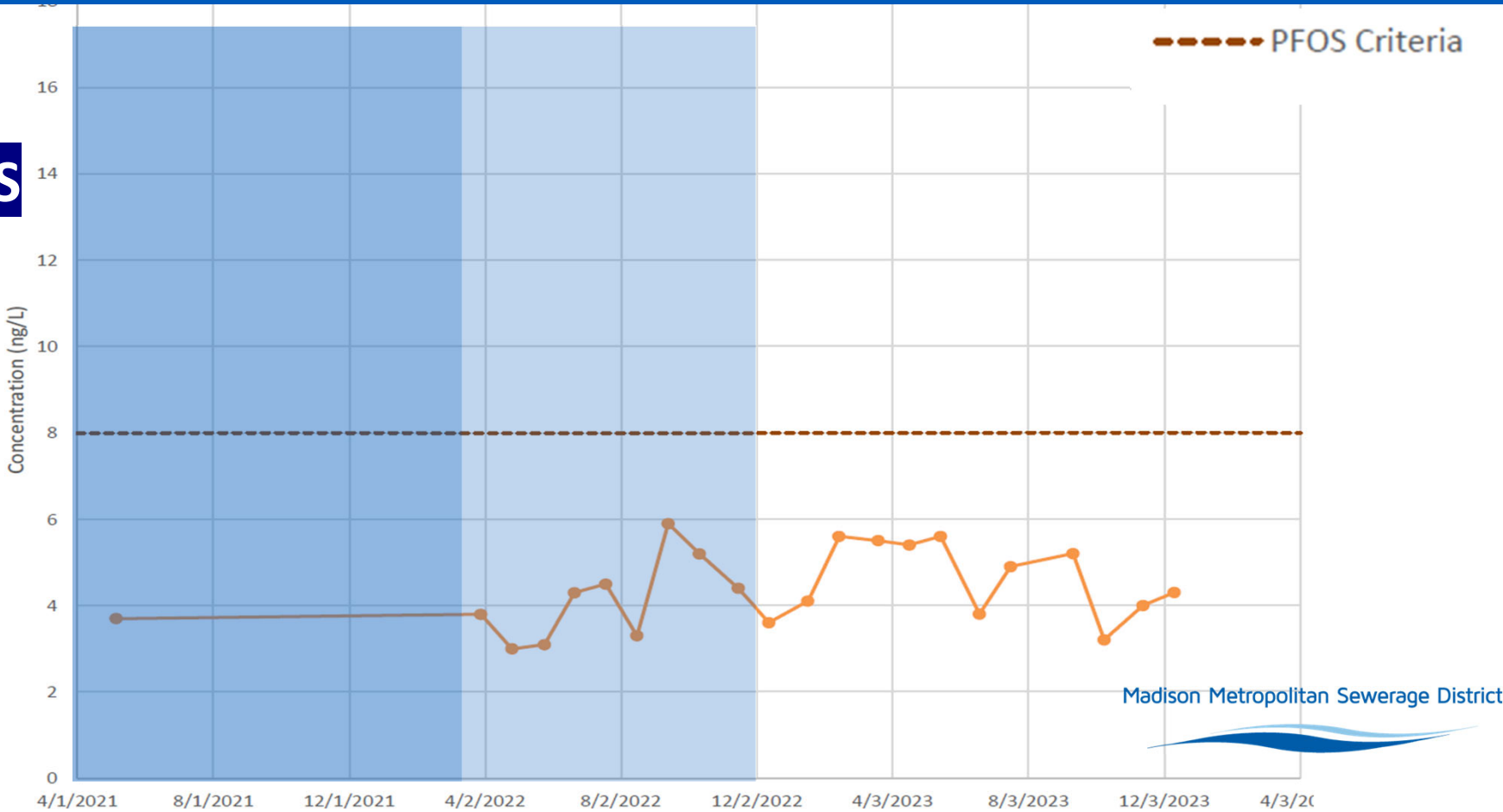
# 2023 Results - Effluent

**PFOA**



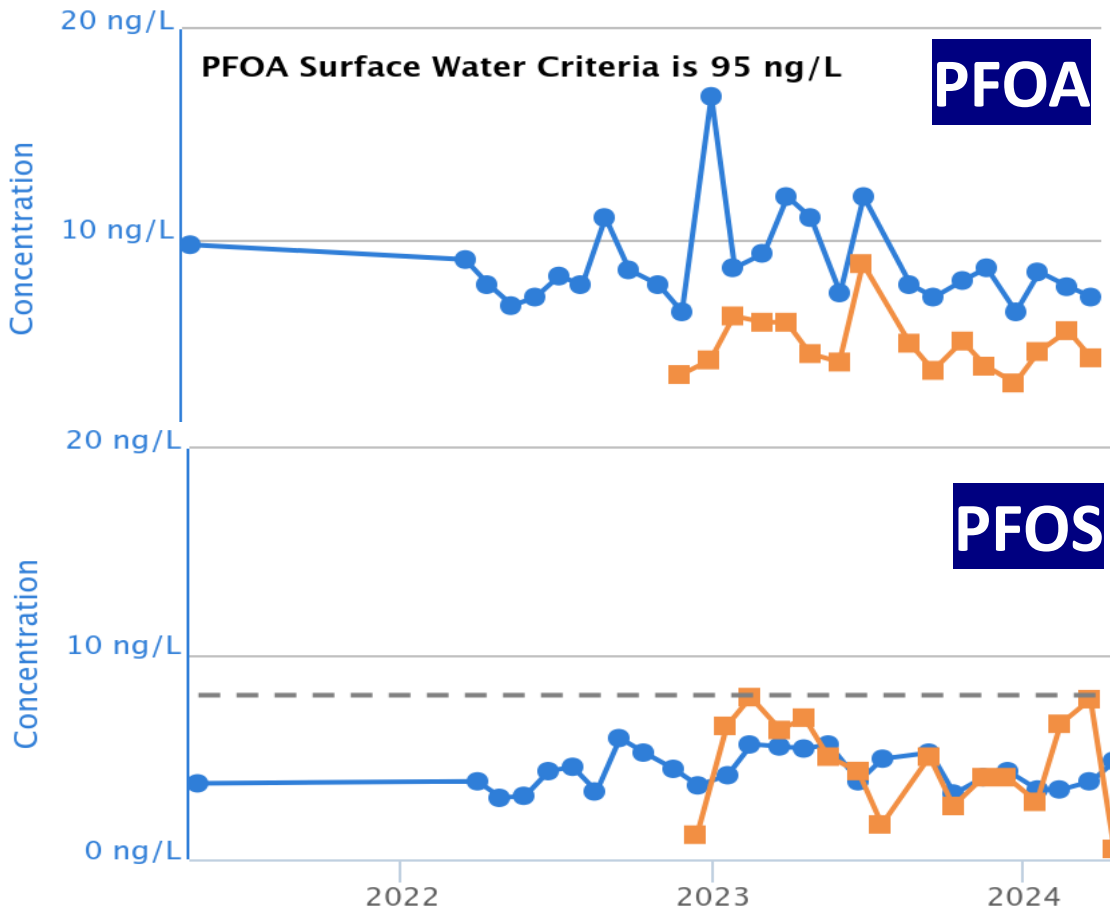
# 2023 Results - Effluent

**PFOS**



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# 2023 Results – Influent & Effluent



- Effluent
- Composite Influent

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# 2023 Results – Effluent Summary

Effluent levels differ from month to month

Effluent PFOS lower than PFOA

Effluent levels below state water quality standards





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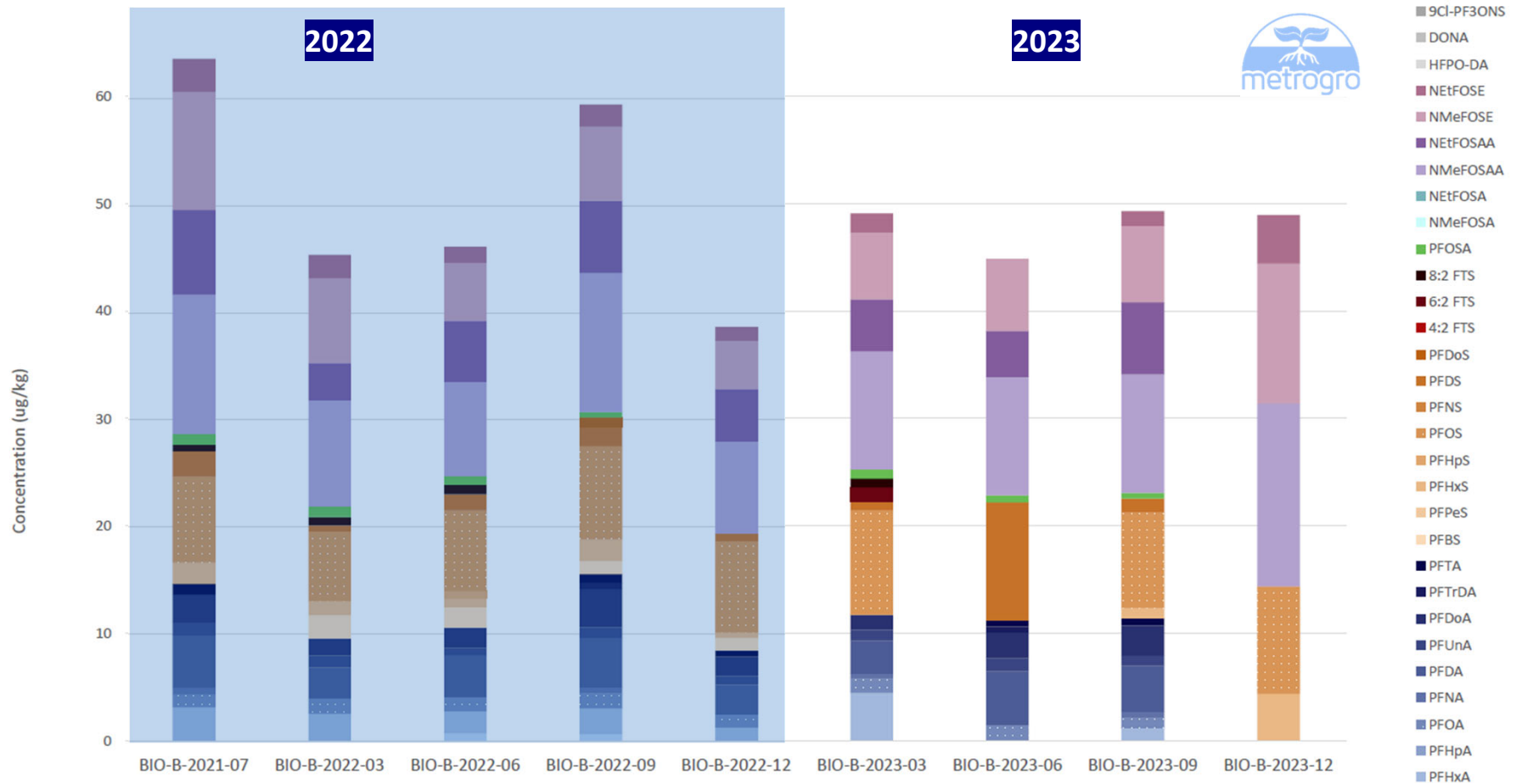


# Biosolids

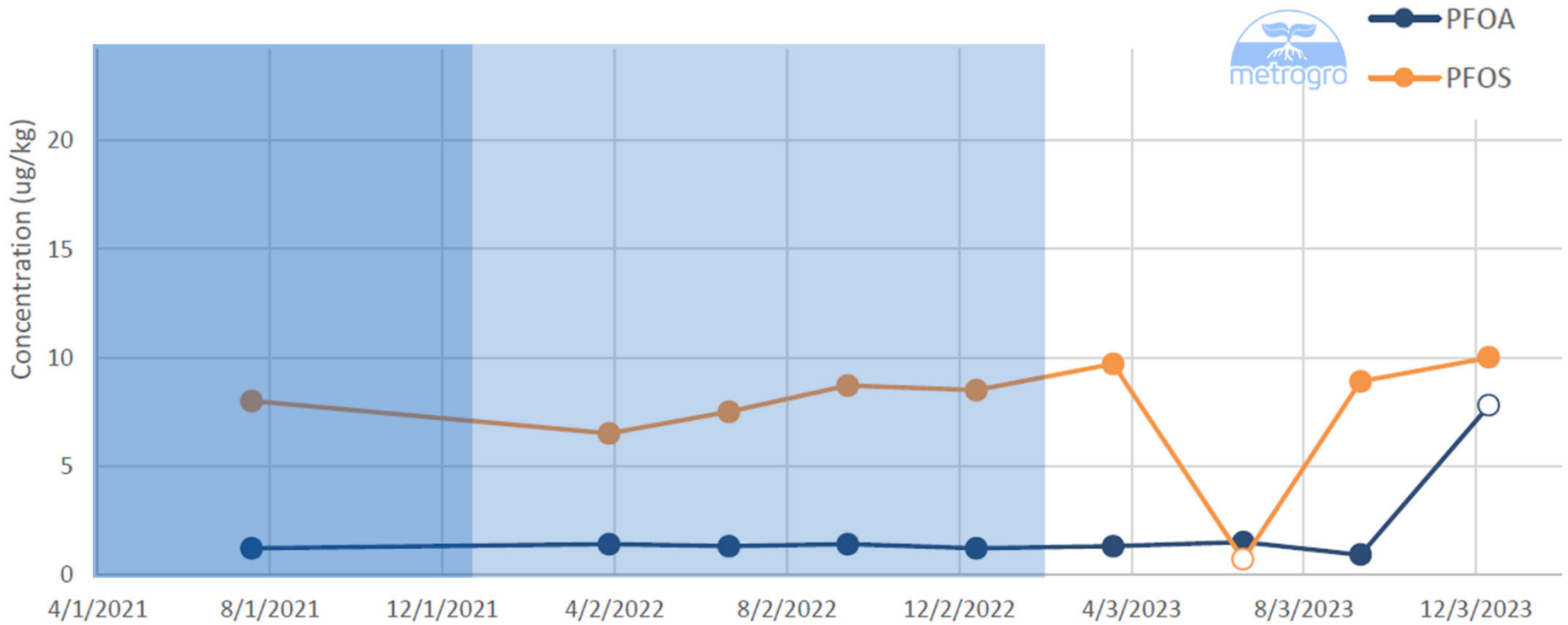




# 2023 Results – Biosolids Class B (Metrogro)



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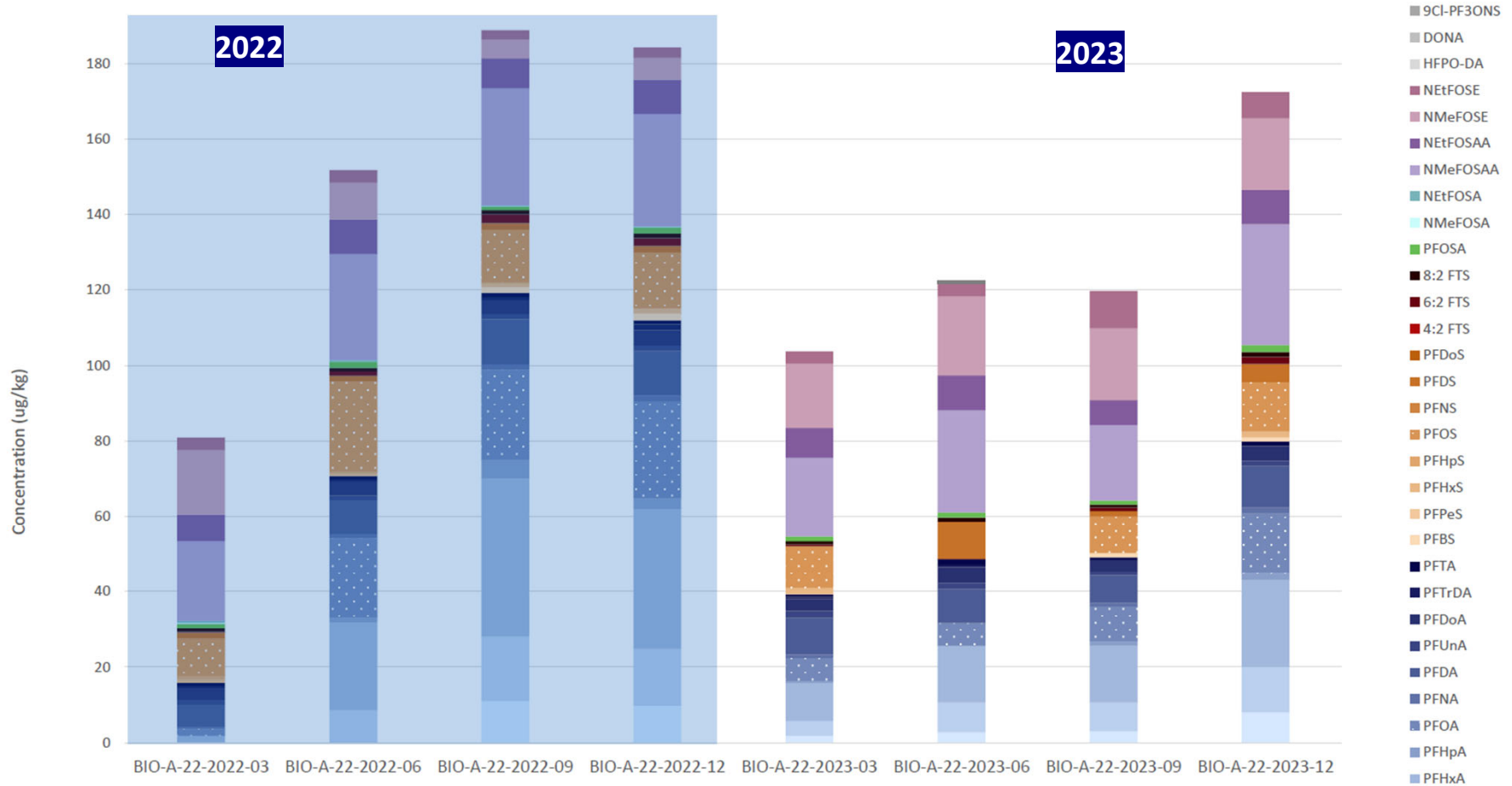


# 2023 Results – Biosolids Class B (Metrogro) Summary

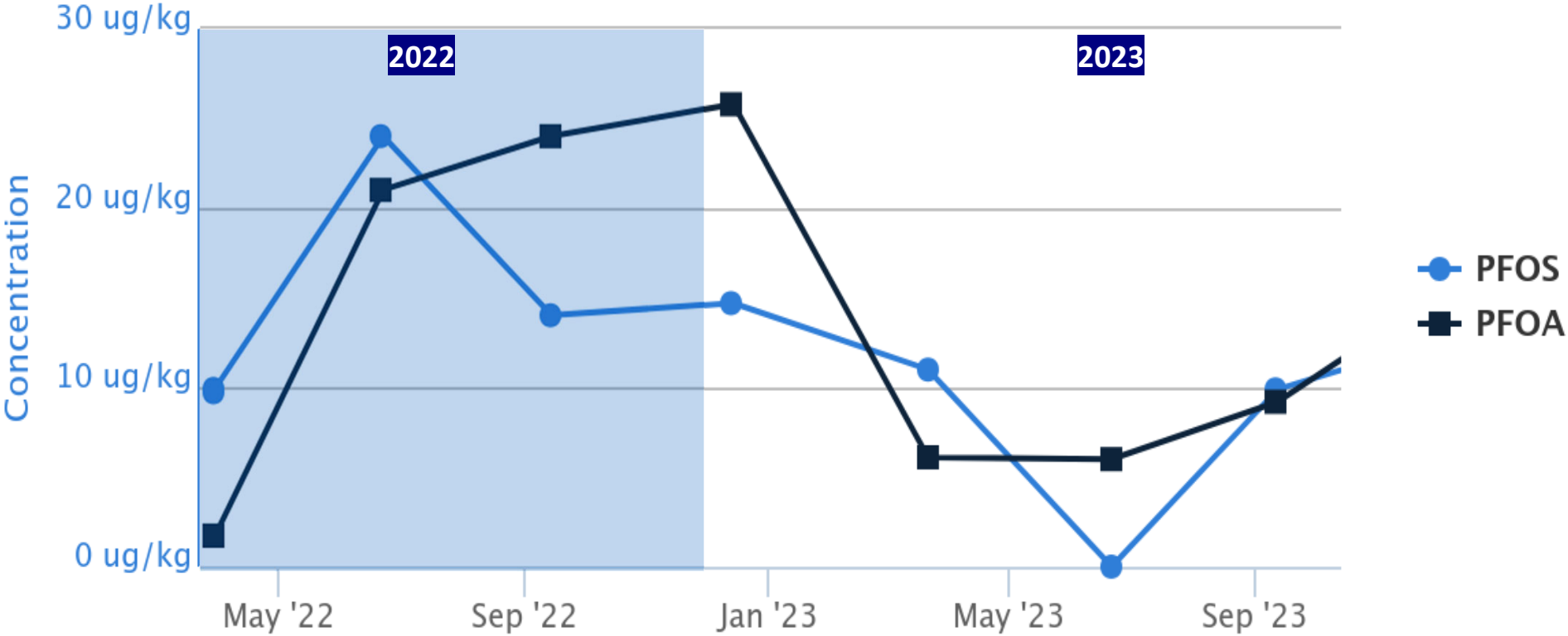
 metrogro	March 2023	June 2023	September 2023	December 2023	<b>Combined median PFOA+PFOS</b>
PFOA (ug/kg)	1.3	1.5	0.92	<7.8	
PFOS (ug/kg)	9.7	<0.70	8.9	10	
Sum (PFOA+PFOS)	11	1.5	9.82	10	9.91



# 2023 Results – Biosolids Class A (Cake)



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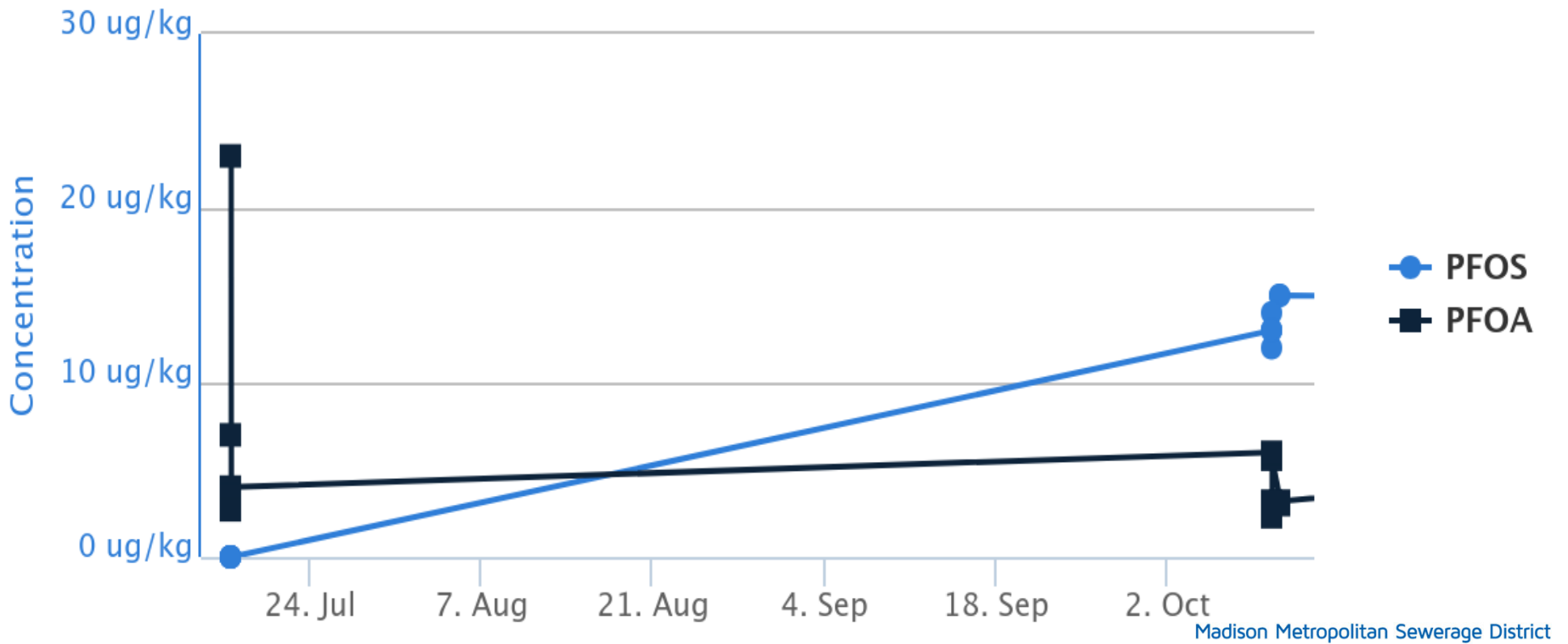


# 2023 Results – Biosolids Class A (Cake)

	March 2023	June 2023	September 2023	December 2023	Combined median PFOA+PFOS
PFOA (ug/kg)	6.1	6.0	9.2	16	
PFOS (ug/kg)	11	<0.95	9.9	13	
Sum (PFOA+PFOS)	17.1	6	19.1	29	18.1



# 2023 Results – Biosolids Class A (Cake)





# Summary

PFAS levels and types continue to be as expected

PFOA and PFOS levels in effluent below regulatory standards

PFOA and PFOS combined values in biosolids below threshold for reducing land application

Sampling methodology points toward composite sampling as being most representative



## Next Steps: 2024 – 2026

- *Continue monitoring* of influent, effluent & biosolids
- *Septage sampling plan*
- *Waste impact to biosolids evaluation tool*
- *Collection system sampling plan*
- *Land application model*
- *Lab capacity evaluation*



# Thank You!

DOING OUR PART FOR  
PFAS

[MadsewerPFASinitiative.org](https://www.MadsewerPFASinitiative.org)

Across the nation, communities and public entities are struggling with how to best address the issue PFAS, or per- and polyfluoroalkyl substances, in our environment.



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Learn more about what Madison Metropolitan Sewerage District is doing to address PFAS in wastewater and beneficial biosolids and the role