

# PFAS - Current and Future Regulatory Actions

*May 22, 2024*

*Central Valley Clean Water Association – 2024 Annual Meeting*

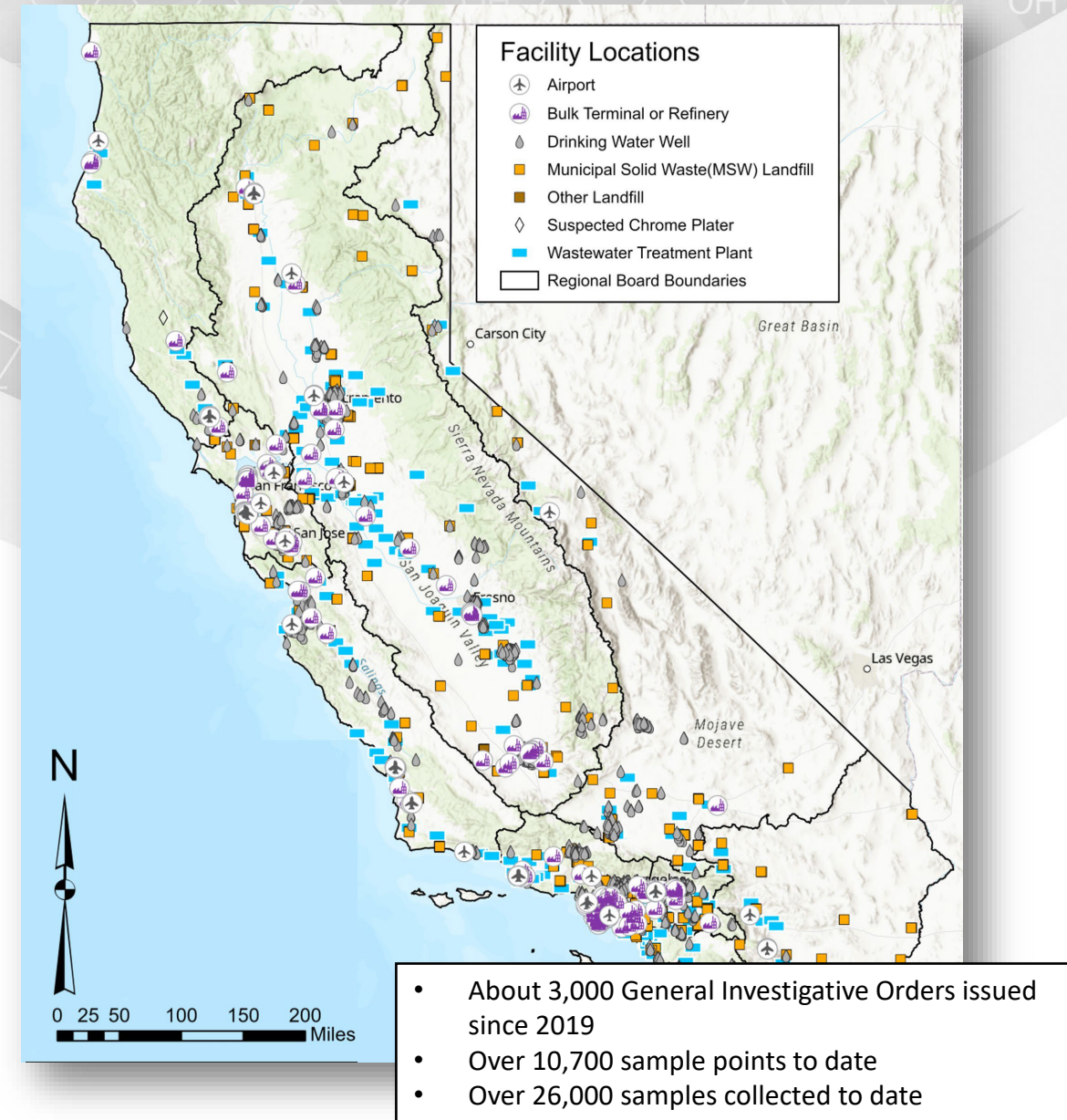
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Divisions of Drinking Water and Water Quality

# Outline

- Current Regulatory Actions (EPA and CalEPA/State Water Board)
- Overview of the Federal PFAS MCLs
- Future PFAS Actions by EPA and State Water Board
- Overview of Statewide PFAS POTW data, including separate investigation in Region 2



## RESTRICT

Prevent PFAS from entering the environment at levels adversely impacting human health and the environment

## REMEDiate

Cleanup of PFAS to protect human health and ecological systems

## RESEARCH

Increase understanding of PFAS methods, risks, and technologies

Source: Simplified from EPA's PFAS Strategic Road Map

# EPA - *Restricting PFAS Use & Sources*

- Significant new use rules ([SNURS](#)) TSCA.
- [172 new PFAS](#) added to TRI.
- [Removal of PFAS as inert ingredients in pesticides.](#)
- [National PFAS Testing Strategy Test Orders](#) requires manufacturers to provide PFAS data.
- [Program Plan 15](#), revised effluent and pretreatment standards. *In Progress.*
- [Addressing PFAS in NPDES Permitting.](#)
- Risk Assessment for PFAS in [biosolids.](#)
- National Primary Drinking Water Regulation ([NPDWR/MCL](#)) for six PFAS compounds.
- \$1B in funding, [Investing in America](#) for testing and treatment including [\\$82.9M allotted to CA](#) for Emerging Contaminants in Small/Disadvantaged Communities.
- EPA drinking water method for 29 PFAS ([537.1 and 533](#)).
- EPA [Drinking Water Treatability Database](#) with treatment options to remove 37 PFAS compounds.

# CA - Restricting PFAS Use & Sources



Amending the Airborne Toxic Control Measures to Reduce PFAS Exposures for Chrome Platers



Adding priority product categories for carpets, rugs, treated textiles with PFAS (as a class)



Determines Advisory Levels (4 PFAS) and Public Health Goals for Drinking Water (PFOA, PFOS); Updates CA's Proposition 65 list (PFOA, PFOS)



Regulates food service facilities on state properties to use food packaging that is reusable, recyclable or compostable and no intentionally added PFAS.



Reviews pesticide formulations registered in CA for PFAS as intentionally added ingredient



[SB – 1044](#): PFAS containing AFFF Ban (2020)

[AB – 2771](#): CA Free Cosmetics Act (2022)

[AB -1200](#): PFAS ban in Food Packaging and Cookware (2021)

[AB-652](#): PFAS ban in Juvenile Products (2021)

[AB-1817](#): PFAS ban in textile articles (2022)

# EPA - *Remediate*

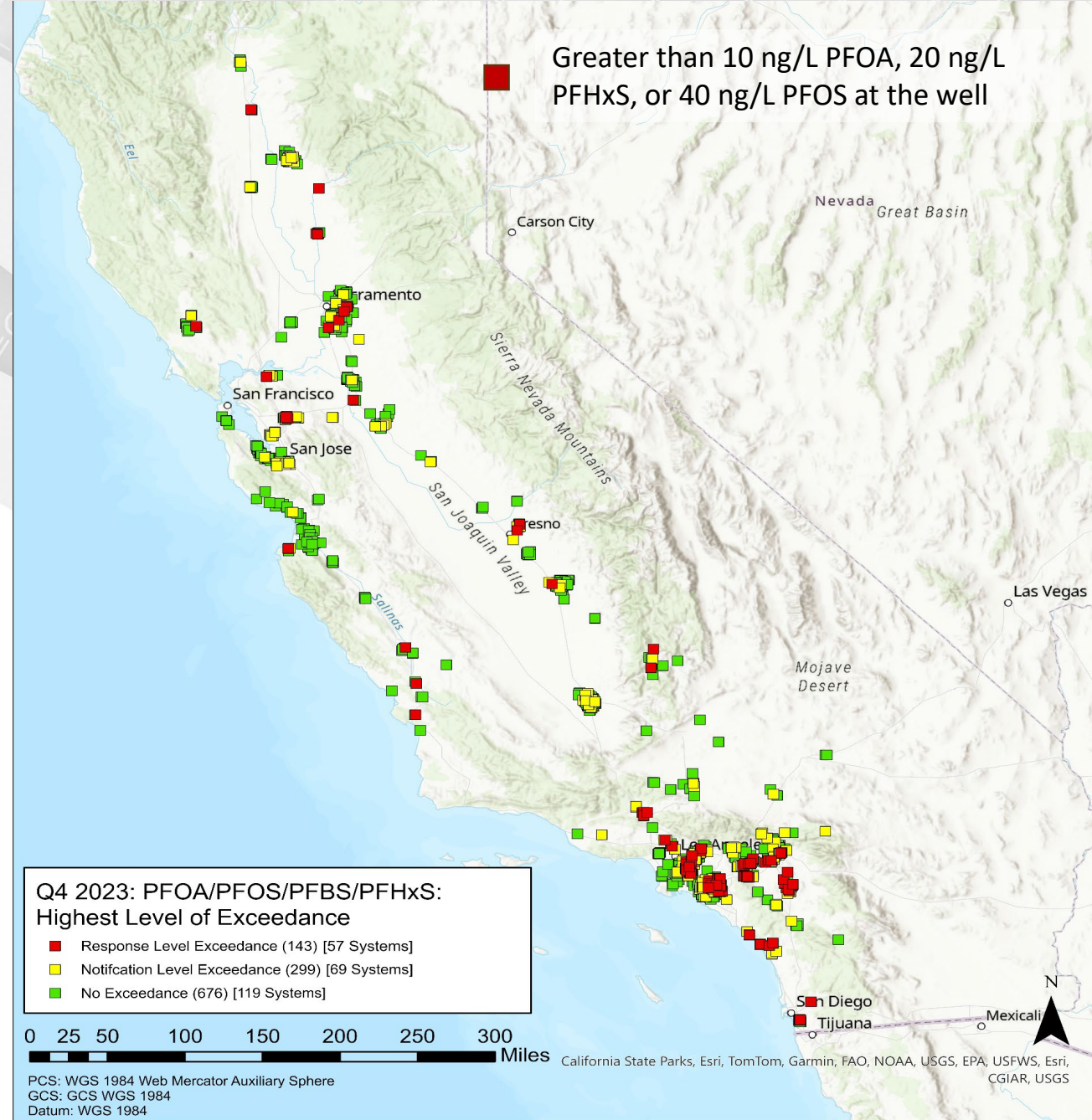
- [CERCLA Hazardous Substance designation](#) for PFOA & PFOS
- Two additional proposed rules under RCRA:
  - [Proposal to List 9 PFAS](#) as RCRA Hazardous Constituents.
  - [Authority to address Releases](#) of PFAS and emerging contaminants at TSDs.
- [Revised Regional Screening Levels](#) to help guide cleanup decisions (ongoing).
- [Draft Aquatic Life Criteria for PFOA and PFOS](#).
- [Analytical Methods](#):
  - EPA Method [1633](#) for 40 PFAS.
  - Method [1621](#) for Adsorbable Organic Fluorine (AOF).
- [Interim Guidance on Destroying and Disposing of Certain PFAS and PFAS-Containing Materials](#)

## **CERCLA Enforcement discretion**

- Focus on "holding responsible those who significantly contributed to the release of PFAS into the environment ...."
- "EPA does not intend to pursue entities where equitable factors do not support actions or costs under CERCLA, including farmers, water utilities, airports, or local fire departments."

# CA - Remediate

- Site Cleanup Programs (Water Boards & DTSC)
  - Risk-Based Screening Levels for PFOA and PFOS – Region 2 Water Board
- Drinking Water Treatment for PFAS and other co-contaminants
  - Current: 59 permitted, 11 under construction, 31 in planning/design
  - Granular activated carbon, Ion exchange resins



# EPA - *Research*

- **CA Research collaboration on Non-Targeted PFAS Analysis.**
- [Methods to Detect and Quantify PFAS](#)
- [Assessing PFAS Human Toxicity](#)
- [Assessing PFAS Ecological Toxicity](#)
- [Researching PFAS Exposure](#)
- [Drinking Water Treatment Options](#)
- [Cleaning Up and PFAS Contamination](#)
- [Extramurally Funded Projects](#)
- [PFAS Innovative Treatment Technology \(PITT\) Destruction/Disposal Options](#)
- [Small Business Innovative Research](#)

## Dept. of Defense, EPA, Dept. of Energy (DoD-EPA-DOE) PFAS Research

- [Research and Demonstrations](#)
- Treatment Technologies
- Sampling and Analysis
- Occurrence, Fate and Transport
- Ecotoxicity and Ecological Risk





# CA - Research



PFAS measurement in people;  
assessing trends in prenatal  
samples for PFAS  
(Biomonitoring CA Program)



Supports agencies in testing of  
blood, water, and products;  
product category testing



- EPA Fifth Unregulated Contaminant Monitoring Rule (UCMR5) (2023-2025)
- DWQ and DDW Orders – Industrial source sites and nearby public water supply wells (2019 to present)
- 2024 DDW Order – Nearly 3,800 wells at 1,200 public water systems located in DAC communities (2024-2026)
- EPA MCL – Initial Monitoring (2024 - 2027)
- Regional Ambient Monitoring Programs (2019 to present)
- EPA ORD Research Project – Non-Target Analysis



Initial sampling surveillance  
of fertilizer and compost  
products; PFAS analytical  
method development

# GEOTRACKER PFAS MAP

## PFAS SAMPLING LOCATIONS

- Locations with PFAS Investigative Orders
  - Airport
  - Bulk Fuel Terminal/Refinery
  - Chrome Plating
  - Landfill
  - Wastewater Facilities
- Other Locations with PFAS Data
  - Cleanup Program Site
  - Land Disposal Site
  - Military Cleanup Site
  - Military Privatized Site
  - Non-Case Information
  - Project
  - Sampling Point - Private
  - WDR Site
  - NPDES
  - GAMA - Priority Basin Project (USGS)
  - GAMA - Water Replenishment District
- Water System Wells - GAMA DATA
  - Drinking Water Wells

## PFAS Chemical Filter

Chemical:

Wells to Show:

GROUNDWATER - NG/L:

ND  LOW  HIGH

DRINKING WATER WELLS - NG/L:

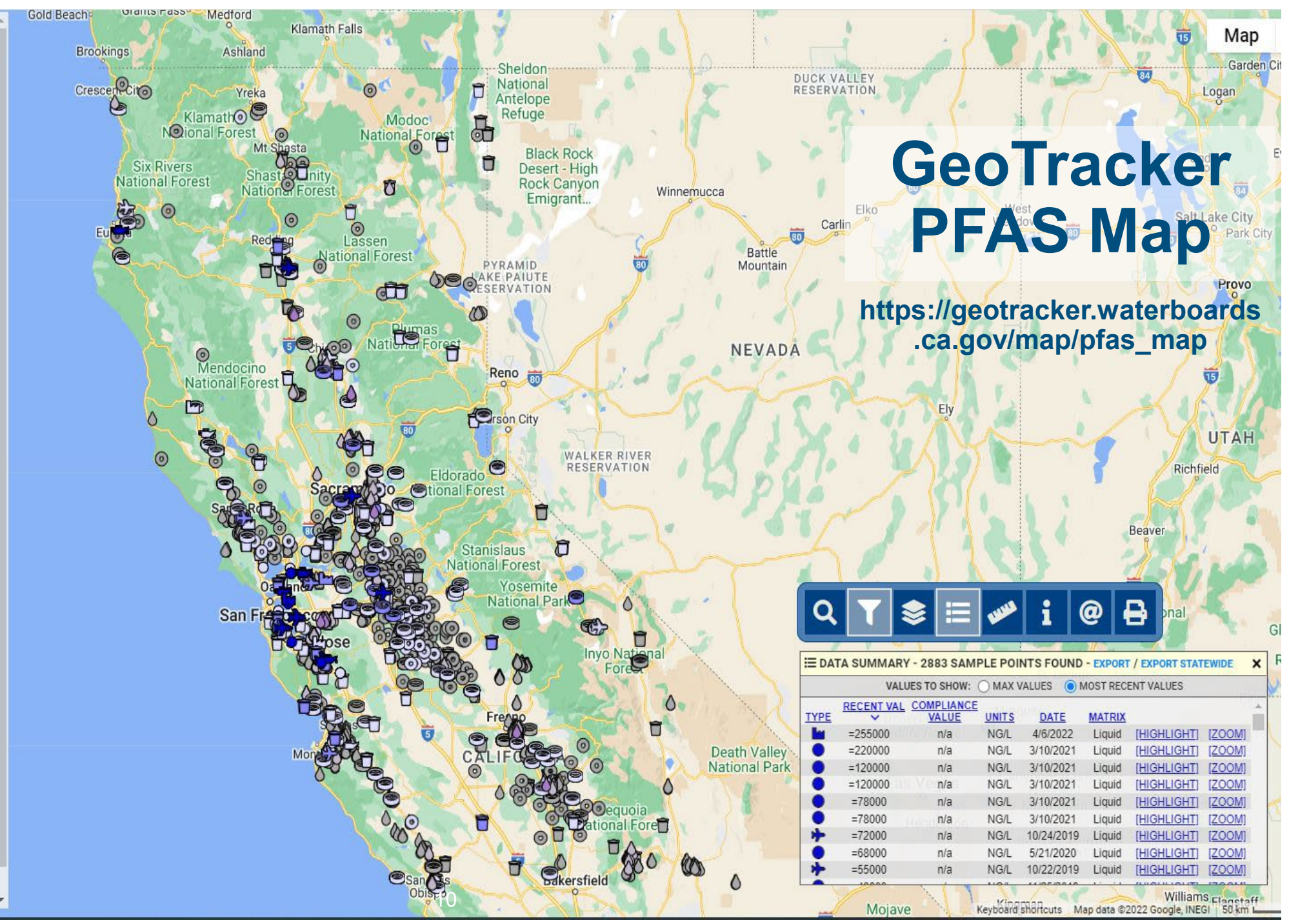
ND  LOW  HIGH

SOIL - UG/KG:

ND  LOW  HIGH

Matrix

Gas  Liquid  Solid



# GeoTracker PFAS Map

[https://geotracker.waterboards.ca.gov/map/pfas\\_map](https://geotracker.waterboards.ca.gov/map/pfas_map)

Map navigation controls: Search, Filter, Layers, Full Screen, Info, Print, Share.

Map

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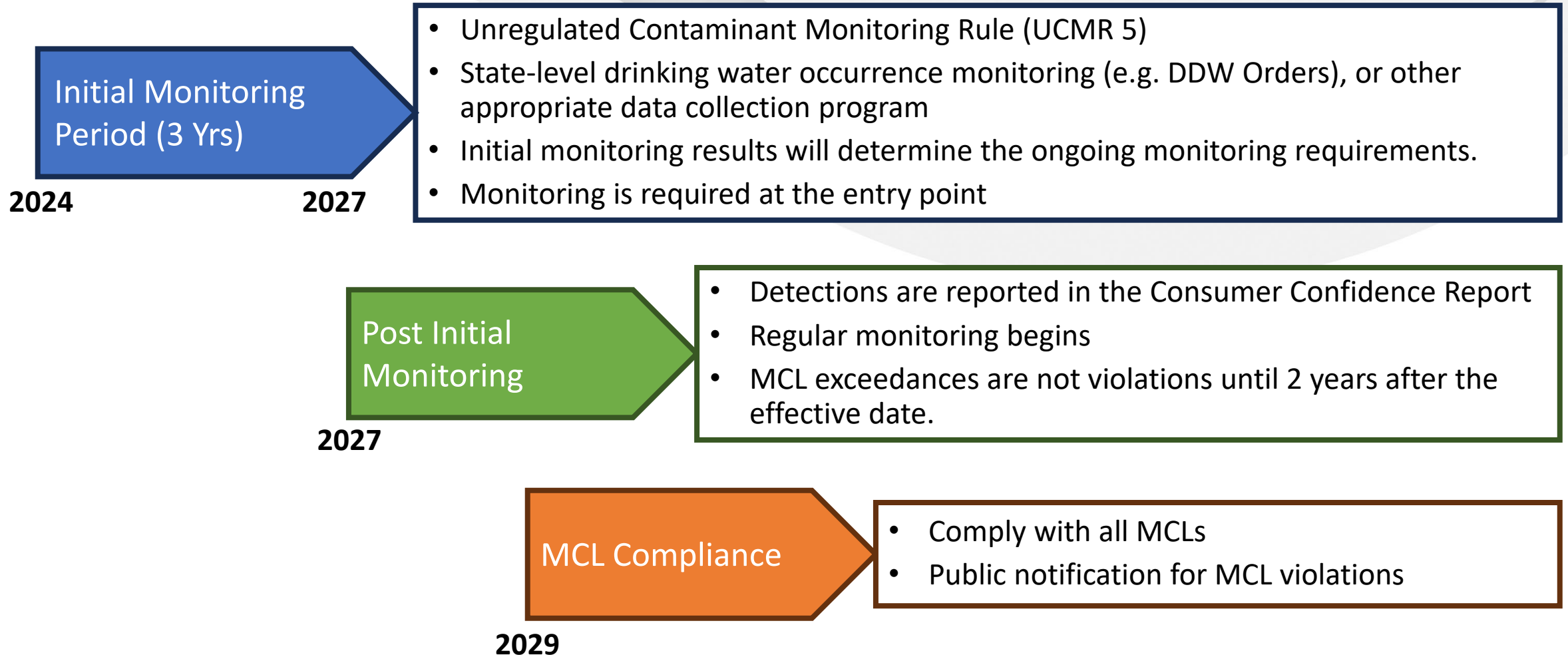
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# Regulatory Alignment: EPA & State Water Board

PFAS IN DRINKING WATER (ppt)								
	US EPA				CA State Water Board			
	Health Advisory Level	Maximum Contaminant Level Goal	Maximum Contaminant Level		Public Health Goal	CCRDL	Notification Level	Response Level
<b>PFOA</b>	0.004	Zero	4.0		0.007	4	5.1	10
<b>PFOS</b>	0.02	Zero	4.0		1.0	4	6.5	40
<b>PFBS</b>	2,000	-	-	1.0 Hazard Index*	-	3	500	5,000
<b>PFHxS</b>	-	10	10		-	3	3	20
<b>GEN-X</b>	10	10	10		-	5	-	-
<b>PFNA</b>	-	10	10		-	4	-	-

\*Mixtures containing two or more of PFHxS, PFNA, HFPO-DA (Gen-X), and PFBS  
 CCRDL = Consumer Confidence Report Detection Levels

# US EPA PFAS Monitoring Requirements



# Future EPA PFAS Regulations

- Adding 6 PFAS to the TRI Reporting Year 2024 (Final Rule: June, 2024)
- MCL for 6 PFAS (Federal Register by July 1, 2024)
- Proposed Rulemaking for Incorporating PFAS Reporting Requirements to NPDES Permit Applications (Fall 2024)
  - New and Existing POTWs (design flow rates > 1MGD; pretreatment program; PFAS-related industrial inflow categorical user; accepting indirect PFAS-related discharges)
  - New and Existing Industrial Facilities
  - Industrial Facilities Which Discharge Only Non process Wastewater
  - Stormwater Discharges Associated with Industrial Activity
- Proposed Rulemaking for Effluent Limitation Guidelines (ELG) for Landfills
- Assessment whether current regulations remain appropriate and/or develop new regulations associated with Metal Finishing and Electroplating point source categories

# Future CA Water Boards PFAS Regulations

- MCL for 6 PFAS (CCR Title 22)
  - Automatic adoption into Basin Plans as Water Quality Objective
- Drinking Water Notification/Response Level for PFHxA
- Incorporate PFAS monitoring requirements in New NPDES and WDR permits
- Update existing Monitoring and Reporting Programs in NPDES and WDR permits

# POTW Data (excluding Region 2)

Influent*	PFOA	PFOS	PFAS Sums
Average	9	8	449
Median	8	5	216
Max	590	418	2,772
Min	0.4	0.3	16

\*194 POTWs (as of 2/9/2022); Units in ng/L

Effluent*	PFOA	PFOS	PFAS Sums
Average	12.5	9.2	277
Median	10.6	4.4	193
Max	152	2,420	3,304
Min	0.3	0.3	9

\*194 POTWs (as of 2/9/2022); Units in ng/L

Groundwater*	PFOA	PFOS	PFAS Sums
Average	26	20	315
Median	6	5	160
Max	1,000	750	3,359
Min	0.26	0.25	3

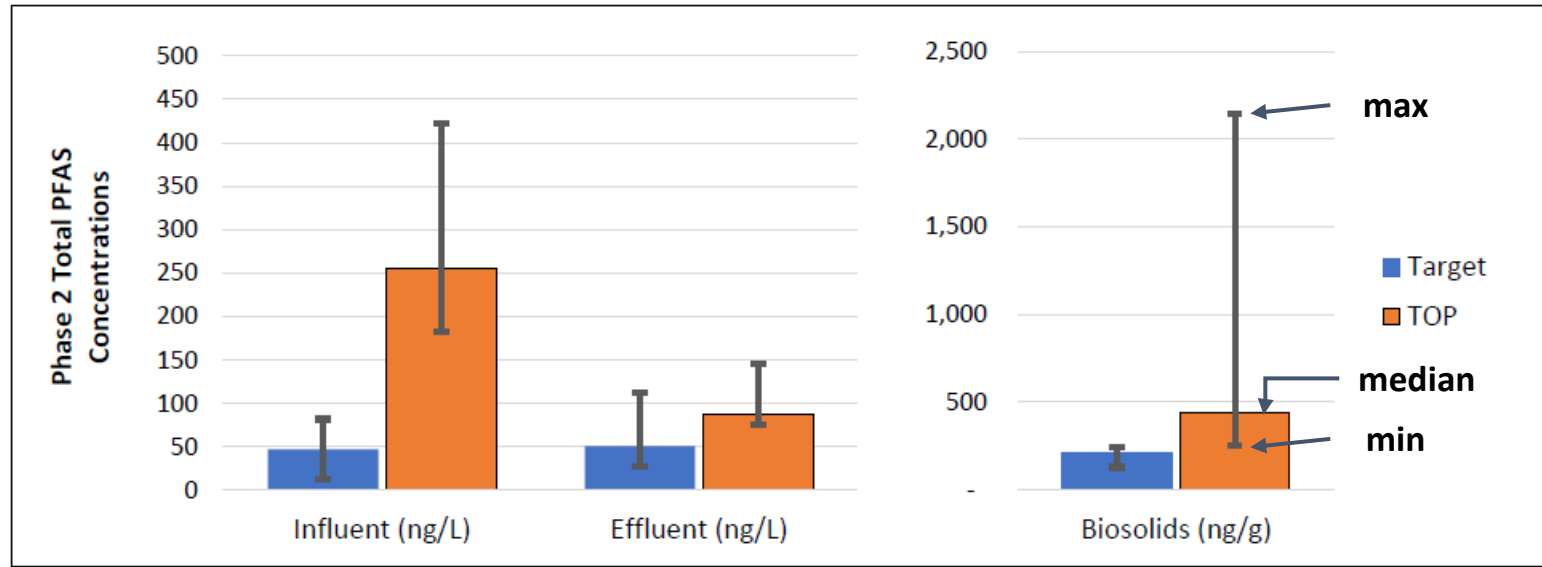
\*85 POTWs (as of 2/9/2022); Units in ng/L

Biosolids*	Ave	Median	Max	Min
PFOA	7	3	120	0.1
PFOS	21	11	1,300	0.1
PFHxS	6	3	81	0.029
PFNA	3	2	35	0.086
HFPO-DA	12	4	270	0.042
PFAS Sums	367	226	3,611	4.7

\*156 POTWs (as of 3/10/2023); Units in ng/g

# SF Bay Region - POTW Results

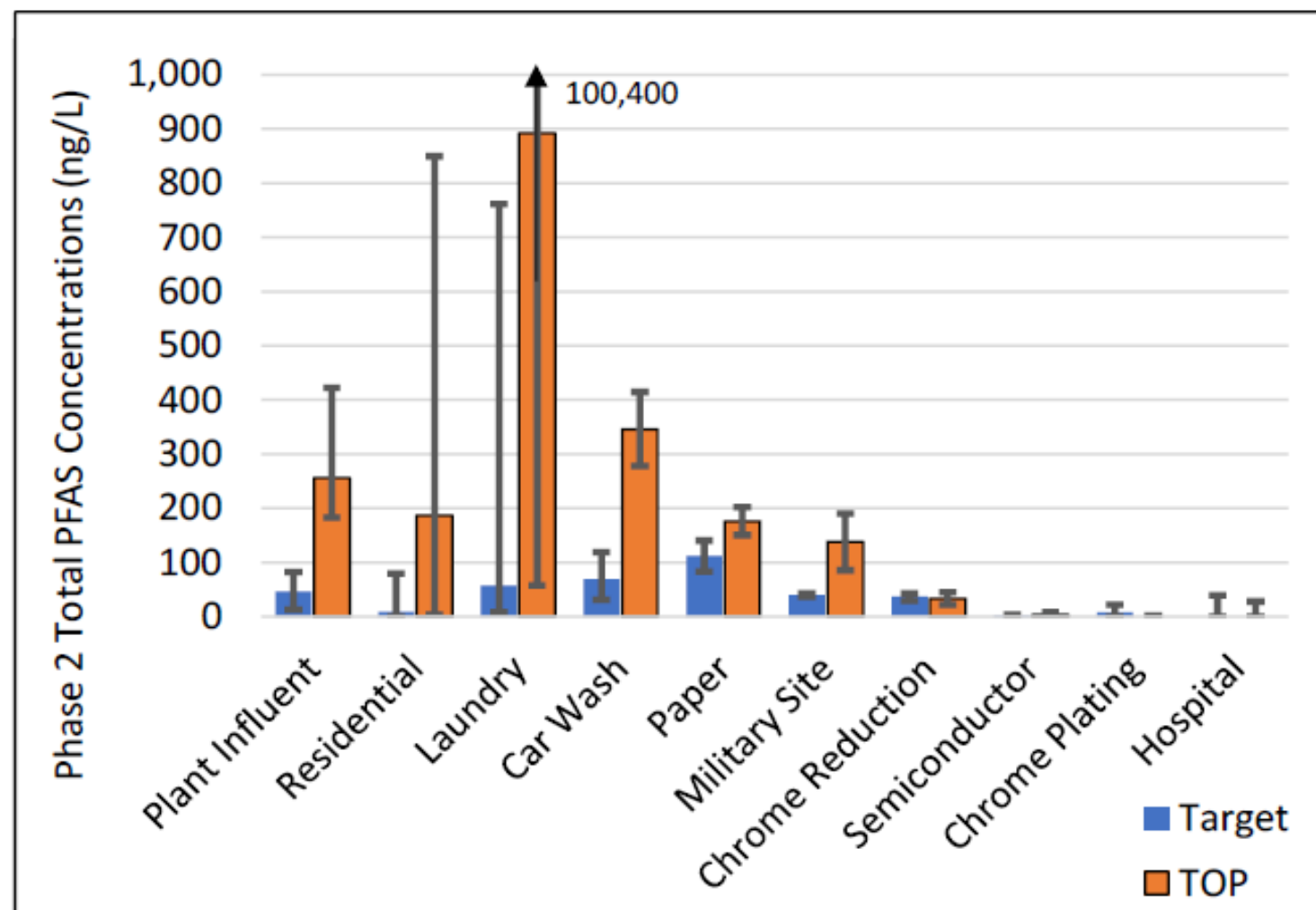
SF Bay Region – Phase 2 POTW Results



Source: Figure 1 - February 2024 PFAS Study Summary - <https://bacwa.org/pfas-links/>



# SF Bay Region - Upstream Wastewater Results



Source: Figure 4 - February 2024 PFAS Study Summary - <https://bacwa.org/pfas-links/>

# THANK YOU!

## Division of Water Quality

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Water Board's PFAS website: <https://www.waterboards.ca.gov/pfas/>

DDW's PFAS website: [https://www.waterboards.ca.gov/drinking\\_water/certlic/drinkingwater/pfas.html](https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/pfas.html)

Water Board's PFAS Mapping Tool: [https://geotracker.waterboards.ca.gov/map/pfas\\_map](https://geotracker.waterboards.ca.gov/map/pfas_map)