



# Water Boards

# PFAS Phased Investigation Approach

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# Background: Actions to Date

U.S. EPA	U.S. EPA	DDW	DDW	DDW	U.S. EPA
2013-2015	2016	2016	2018	2018	2019
Third Unregulated Contaminant Monitoring Rule	Health Advisory	Actions Based on Health Advisory	Notification Levels & Response Levels	Lab Capacity	Action Plan

# U.S. EPA Third Unregulated Contaminant Monitoring Rule (UCMR3) 2013-2015

- **One-time required testing:**
  - Systems >10,000 people & select small systems
  - High min. detection (PFOS 40 ppt, PFOA 20 ppt)
- **133 UCMR3 detections in California**
- **297 detections beyond UCMR3**



# U.S. EPA Drinking Water Health Advisories 2016

Established Health Advisory levels:  
70 parts per trillion (combined PFOA + PFOS)

# Division of Drinking Water Required Testing 2016

- **Follow-up on detections above 70 ppt**
- **Nine water systems**
  - Anaheim, CalAm-Sacramento Suburban, Corona, CWS-Chico, CWS-Visalia, Eastern Municipal, Lathrop, Orange, Pico Rivera
- **Water sources re-sampled to confirm results**
  - Taken offline, treated, or blended

# Division of Drinking Water

## Notification Levels and Response Level

### 2018

#### ➤ Notification Levels:

- 14 ppt for PFOA
- 13 ppt for PFOS

#### ➤ Response Level:

- 70 ppt combined PFOA and PFOS

#### ➤ Water sources currently over Notification Level:

- PFOA: 18, PFOS: 25

# Division of Drinking Water

## Notification Levels and Response Level

### 2018

#### ➤ Notification Levels:

- Non-regulatory, no mandatory testing
- If exceedance:
  - ✓ Notification required to authorities
  - ✓ Notification recommended to consumers

#### ➤ Response Level:

- Generally 10 to 100 times Notification Level
- DDW recommends removing drinking water source

# Laboratory Capacity

	EPA Method 537 Rev 1.1	EPA Method 537.1	Analysis Compliant w/ DoD QSM
Release Year:	2009	2018	2017
Matrices:	DW	DW	GW, EF, WW, S, SE, SL
Total PFAS Compounds Analyzed	14	18	~25-30
Number labs accredited by DOD ELAP			16
Number labs accredited by CA ELAP	13		

DW=Drinking Water GW=Groundwater EF=Effluent WW=Wastewater S=Soil SE=Sediment SL=Sludge



# Moving Forward

## Water Boards PFAS Phased Investigation Plan

# PFAS Phased Investigation Approach

## Airport Phase I Sampling

- **31 Airports with training/fire response sites**
  - California Water Code 13267 Investigative Orders
- **578 Drinking water wells (2 mile radius)**
  - California Health and Safety Code 116400 Orders

*numbers subject to change*

# PFAS Phased Investigation Approach

## Landfills Phase I Sampling

- **252 Municipal solid waste (MSW) landfills**
  - California Water Code 13267 Investigative Orders
- **353 Drinking water wells (1 mile radius)**
  - California Health and Safety Code 116400 Orders

*numbers subject to change*

# PFAS Phased Investigation Approach

## UCMR 3 Phase I Sampling

- **389 Impacted drinking water sources (1 mile radius)\***
- **Adjacent small systems\***

\*California Health and Safety Code 116400 Orders

*numbers subject to change*



# PFAS Phased Investigation: Timeline

- Each Investigation phase ~6 months
- Phases II and III investigation phases begin summer/fall 2019

Issue Orders

Questionnaires Due

Workplans Due

Workplans Accepted

Results Due

***Phase I***

30 days

60 days

30 days

90 days

March

July  
13

September

# PFAS Phased Investigation Approach

## Phase II Sampling

- **Source investigation & nearby drinking water well sampling at:**
  - Primary manufacturing facilities (verifying none in CA)
  - Refineries, bulk terminals, & non-airport fire training areas
  - 2017-2018 urban wildfire areas

# PFAS Phased Investigation Approach

## Phase III Sampling

- **Source investigation & nearby drinking water well sampling at:**
  - Secondary manufacturing sites
  - Wastewater treatment & pre-treatment plants
  - Domestic wells

# Public Outreach and Stakeholder Involvement

- **Website:** <http://waterboards.ca.gov/pfas> (coming soon)
- **Listserve:**  
[Water\\_boards\\_PFAS@swrcb18.waterboards.ca.gov](mailto:Water_boards_PFAS@swrcb18.waterboards.ca.gov)
- **GAMA: Upcoming data viewing tools:**  
[waterboards.ca.gov/GAMA](http://waterboards.ca.gov/GAMA)
- **GeoTracker: Sampling/Investigation Results:**  
[geotracker.waterboards.ca.gov](http://geotracker.waterboards.ca.gov)



# Looking Ahead 2020: Assessing Contaminant Levels

- Notification level adjustments or new contaminants?
- Regulation of PFAS by class?
- Public Health Goals (OEHAA)
  - Data gathered on occurrence is important
- Consideration of MCL, begin rule making
- Response strategy to PFAS detections

# Questions/Comments

Email: [PFAS@waterboards.ca.gov](mailto:PFAS@waterboards.ca.gov)