

# SAMPLING FOR PFAS AT DISADVANTAGED WATER SYSTEMS

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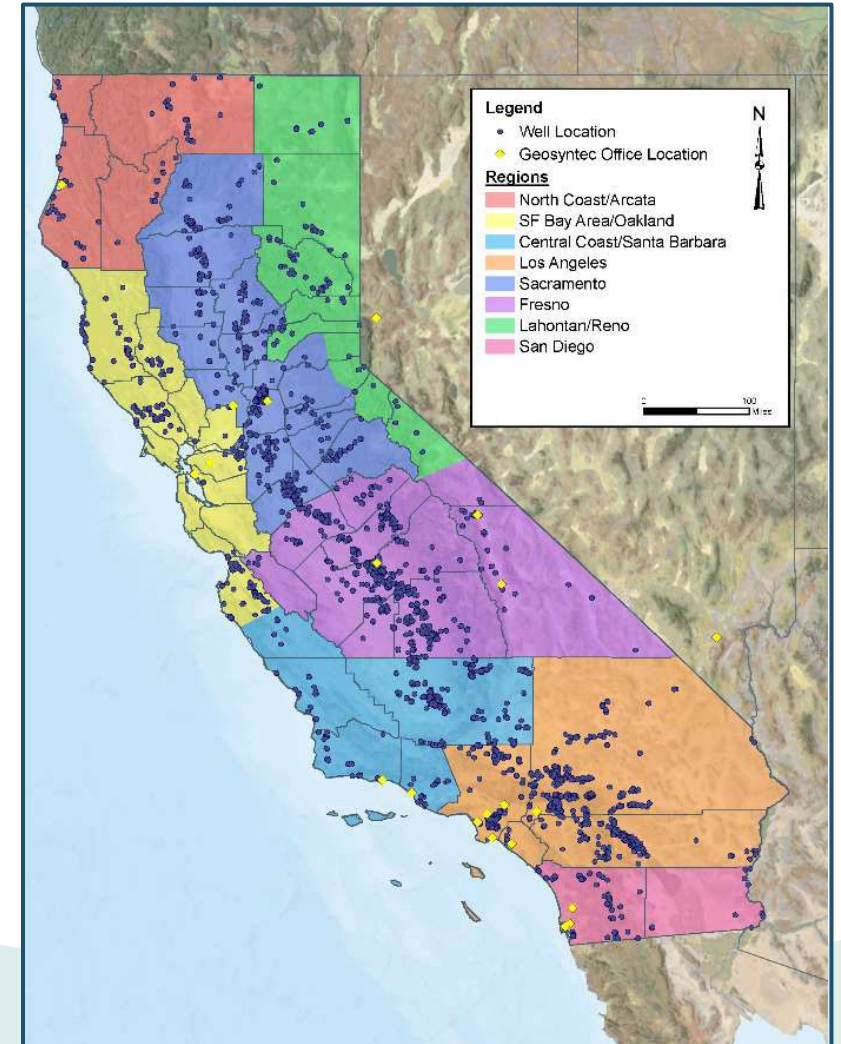
**PFAS**  
Assistance  
Team

The Office of Water Programs (OWP) at Sacramento State offers drinking water, wastewater, and stormwater services to disadvantaged communities statewide as well as other areas of the western United States



# PFAS SAMPLING PROGRAM

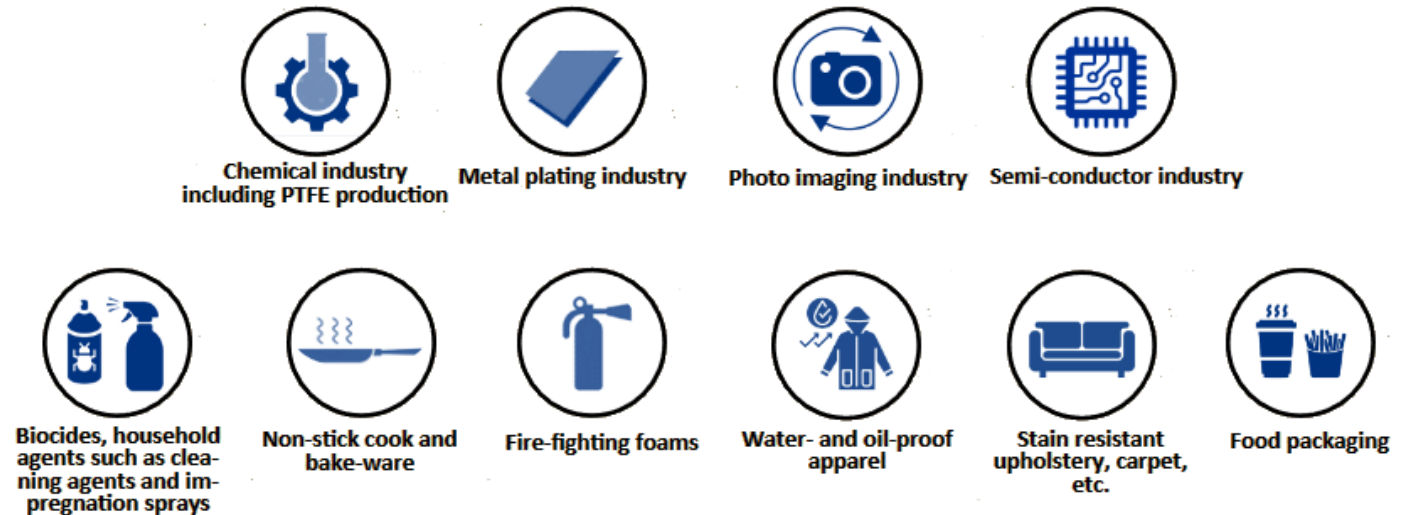
- PFAS General Order DW-2024-0002-DDW requires all PWS serving DAC and SDAC communities to sample designated water sources for PFAS by August 31<sup>st</sup>, 2026
- The purpose of this monitoring is to....
  - Understand PFAS impact at 3781 wells at 1220 DAC/SDAC water systems
  - Develop and validate a broad-spectrum test method for the class of PFAS
  - Develop a treatment-based regulatory approach for PFAS as a class



# OVERVIEW OF PFAS

- PFAS refers to per- or polyfluoroalkyl substances
- Commonly referred to as forever chemicals, PFAS are extremely stable in the environment

PFAS was widely used in the following applications for decades:



Despite recent efforts to reduce PFAS use, it can now be found in air, water, and soil...

# HEALTH EFFECTS

- Long term exposure to PFAS can potentially lead to the following:
  - Decrease fertility and birth weight
  - Weaken a body's ability to fight disease
  - Increased risk for some cancers, asthma, thyroid disease, and liver damage
  - Increase in cholesterol levels (which can increase the risk for heart attack or stroke)



# SAMPLING PROGRAM TEAM

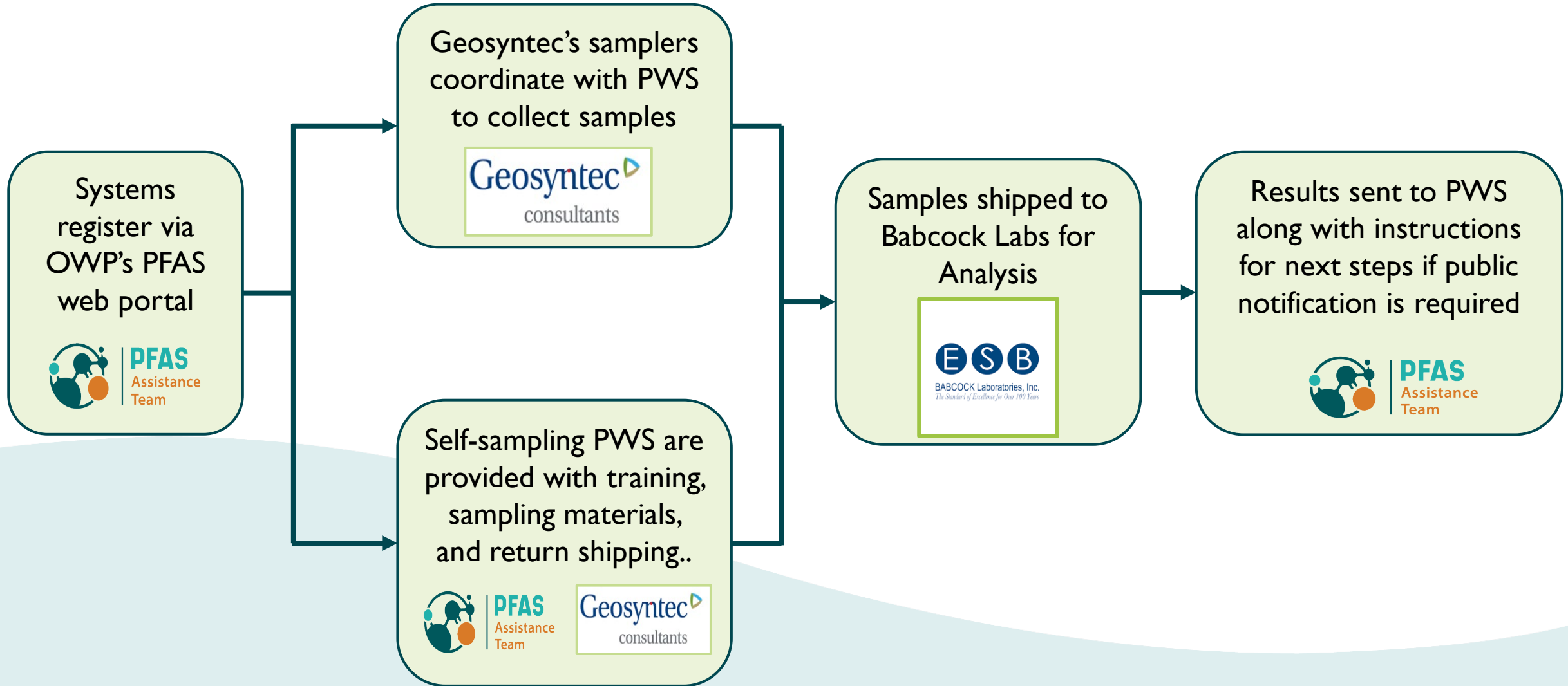


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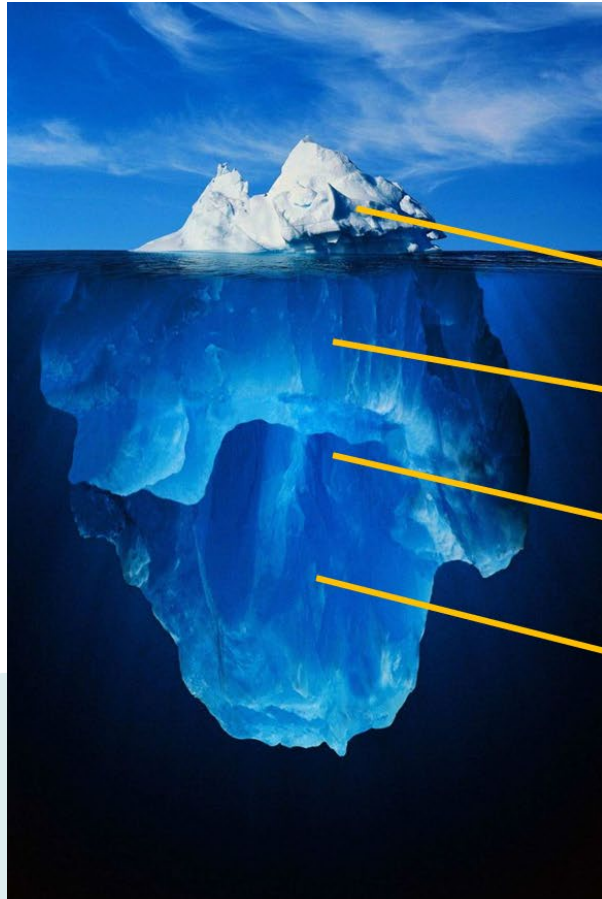
Geosyntec   
consultants



# SAMPLING APPROACH



# PFAS TESTING METHODS



US EPA Analytical Methods (25-80 analytes)

Non-Target Analysis (NTA) (~ 1,200)

OECD\* Global PFAS Database (~ 4,700)

US EPA PFAS Master Description  
(August 2022) ~14,000

\*Organization for Economic Cooperation and Development

- Over 14,000 different chemicals classified as PFAS
- Targeted methods typically only test for 20 – 30 different types of PFAS
- Non-targeted methods are used to classify the total amount of PFAS at a site



# PFAS TESTING METHODS

- Selected analysis methods
  - EPA 533 by LC-MSMS
  - Adsorbable Organoflourine (AOF) by Combustion Ion Chromatography (CIC)
  - DoD QSM Extract
    - LC-HRMS – Long chain amenable
    - IC-MSMS – Ultra-short chain PFAS



For more information on the program  
visit our website!

<https://pfas.owp.csus.edu/>

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