

USEPA Proposed PFAS Drinking Water Regulations & Preliminary Estimate of OCWD Service Area Impacts



**OCWD-MWDOC Joint Planning
April 26, 2023**

Outline

- Current PFAS Impacts in OCWD Service Area
- EPA Proposed PFAS Drinking Water Regulation
- Preliminary Estimate of EPA PFAS Regulation in OCWD Area
- Next Steps

OCWD Laboratory PFAS Testing

- CA ELAP and USEPA certified for 29 individual PFAS for drinking water
- Instrumentation
 - Four automated extraction/sample prep units
 - Three LC-MS/MS instruments
- Monitoring programs supported
 - Retail Agency ('Producer') testing
 - GWRS recycled water compliance
 - Basinwide groundwater monitoring
 - Surface water monitoring
- 2300+ samples analyzed in 2022



California PFAS Drinking Water Advisories

PFAS Compound	Health Effect	Notification Level (ppt)	Response Level (ppt)
PFOA	Cancer (Pancreatic + Liver)	5.1	10
PFOS	Cancer (Liver)	6.5	40
PFBS	Thyroid Effects	500	5000
PFHxS	Thyroid Effects	3	20

*Additional NLs/RLs anticipated for PFHxA, PFHpA, PFNA, PFDA, ADONA

OCWD PFAS Policy Summary

(approved on November 20, 2019)

- OCWD to finance, design and construct PFAS treatment systems for large retail agencies' ("Producer") impacted wells
- O&M cost to be shared 50/50 between OCWD & retailer
- Producer owns, maintains and operates the well + treatment
- PFAS concentration must be greater than applicable Response Level or Maximum Contaminant Level (MCL)
- Have executed agreements with 11 out of 19 Producers – *Huntington Beach (12) being processed*

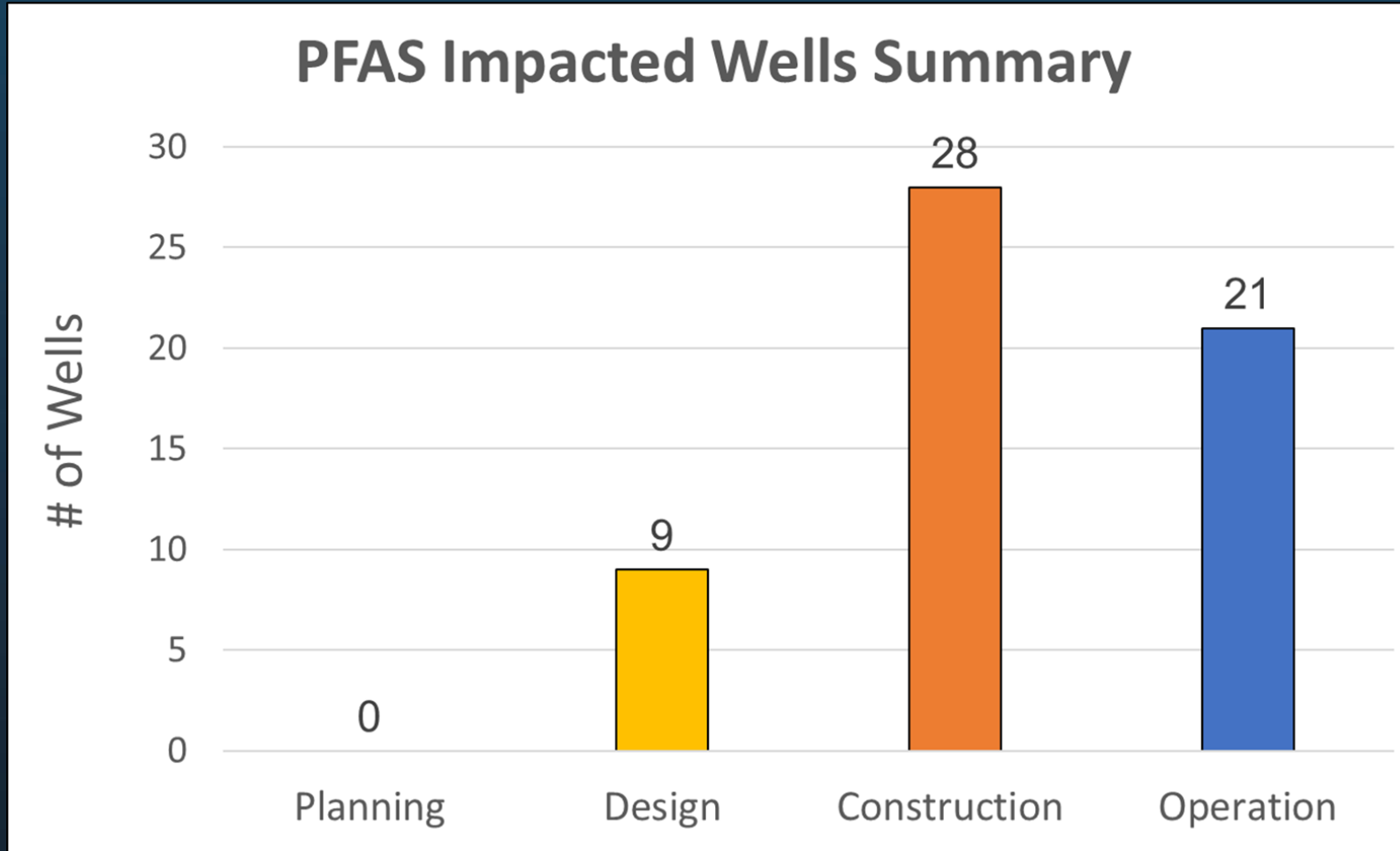
Groundwater Producers in PFAS Program

Producer	# of Wells
Anaheim	14
Buena Park	
EOCWD	2
Fullerton	3
Fountain Valley	
Garden Grove	6
GSWC	3
Huntington Beach	0
IRWD	1
La Palma	

Producer	# of Wells
Mesa Water	
Newport Beach	
Orange	9
Serrano Water	2
Seal Beach	
Santa Ana	4
Tustin	4
Westminster	
Yorba Linda WD	<u>10</u>
Total	58

Current PFAS Impacts in OCWD Service Area

58 wells taken out of service for exceeding CA Response Level(s)



- Current capital budget = \$288 million
- Groundwater pumping temporarily ▼ / imported water use temporarily ▲

EPA Proposed PFAS Drinking Water Regulation



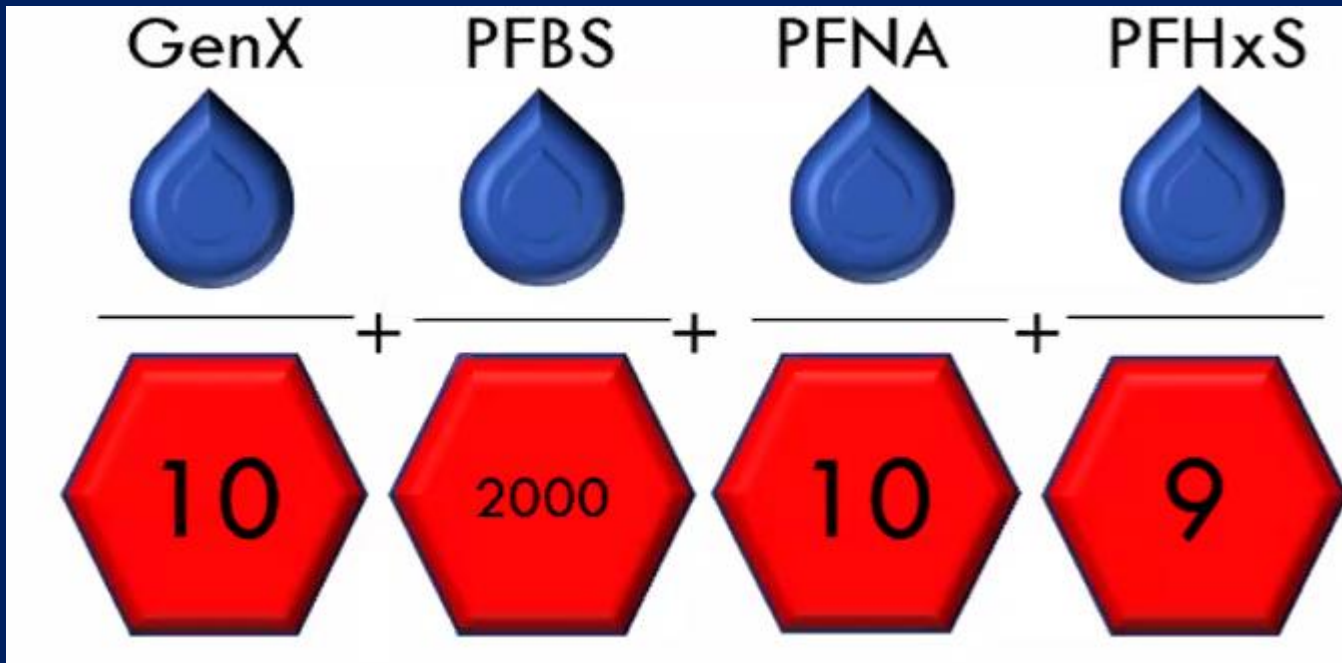
USEPA's Proposed PFAS National Primary Drinking Water Regulation

Compound	Health Effect	MCLG	MCL
PFOA	Cancer	0 ppt	4.0 ppt
PFOS	Cancer	0 ppt	4.0 ppt
PFHxS	Thyroid Effects	Hazard Index 1.0	
PFNA	Developmental Effects		
GenX	Liver Effects		
PFBS	Thyroid Effects		

- Officially published in Federal Register on March 29, 2023

- **MCL** = Maximum Contaminant Level (*enforceable*)
- **MCLG** = Maximum Contaminant Level Goal (*non-enforceable*)

Hazard Index (HI) considers combined toxicity of four PFAS together



> 1.0 (RAA) → MCL violation

Chemical-specific health thresholds at which no adverse health effects are expected w/ a margin of safety

USEPA- Identified Best Available Treatment Technologies

Granular Activated
Carbon

Ion Exchange

Membrane Filtration /
Reverse Osmosis



USEPA Timeline

Date	Activity
March 29, 2023	Official Publication of Proposed Rule to Federal Register
May 4, 2023	EPA Public Hearing on Proposed NPDWR
May 30, 2023	End of 60-Day Public Comment Period
December 2023	Target Publication of Final Rule
September 2024	Statutory Deadline to Publish Final Rule

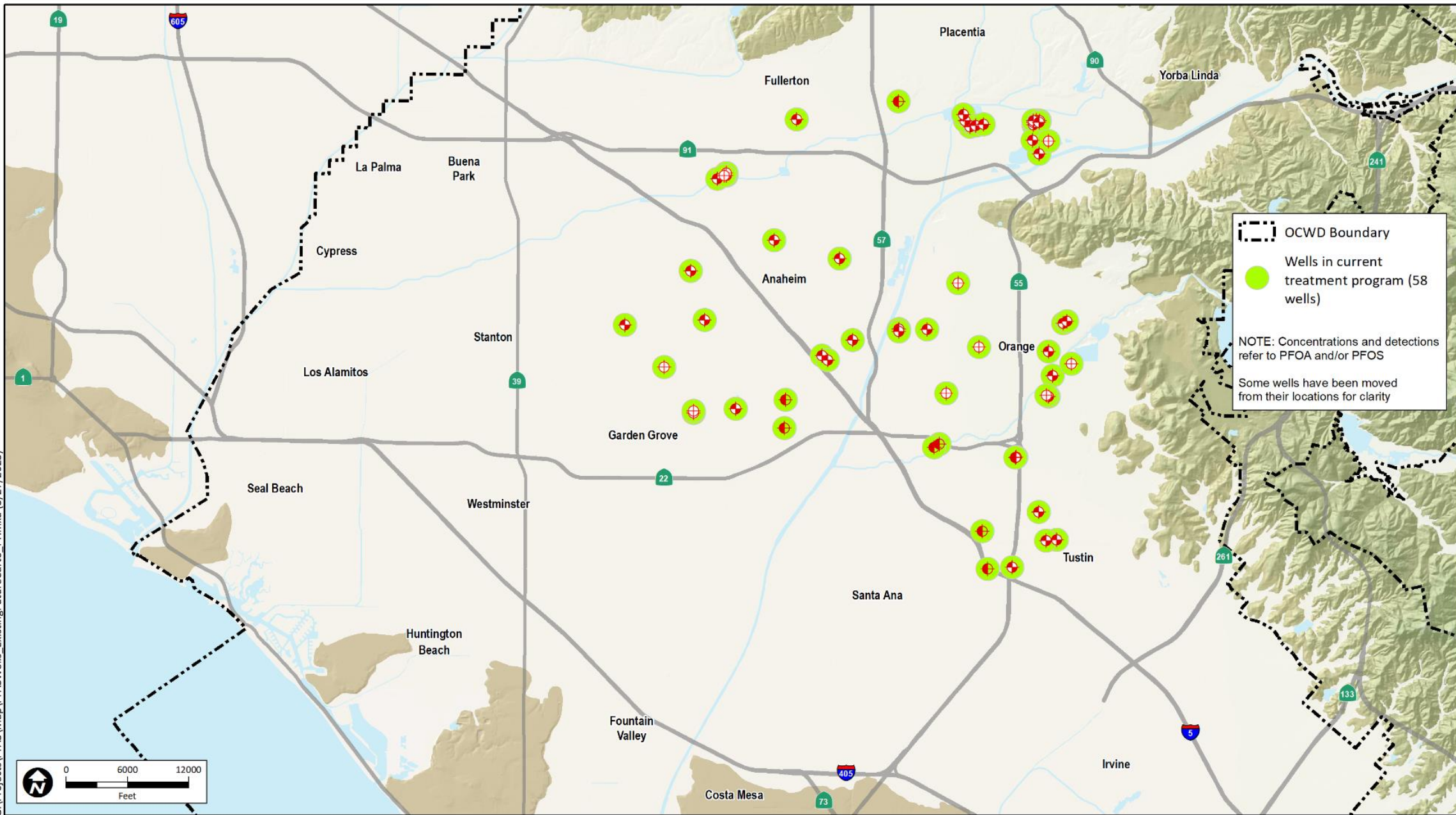
- **Three-year compliance period after Final Rule adoption**
 - One year of quarterly monitoring must be completed during (or before)
 - Enforcement of MCL begins after

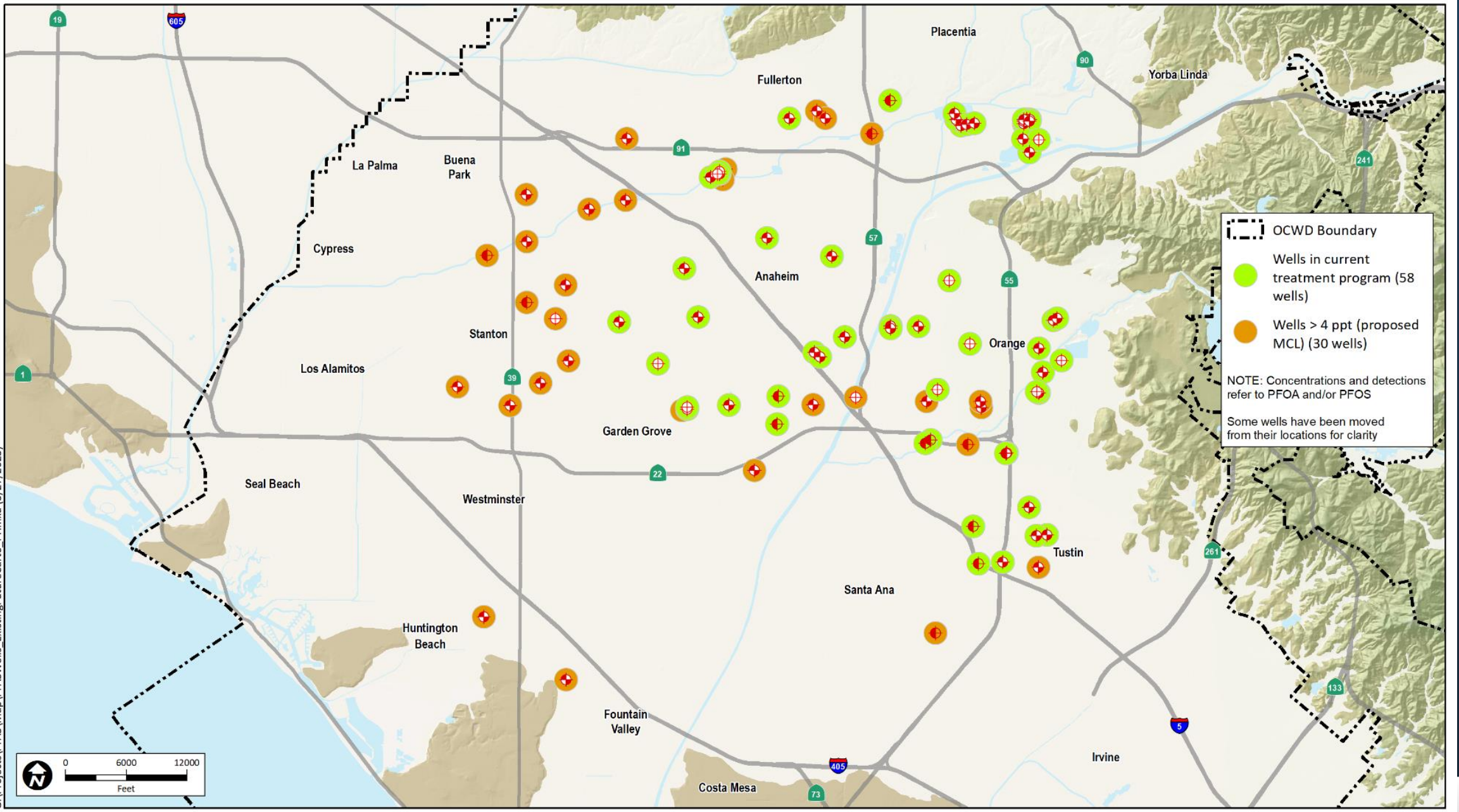
Projected Impacts under USEPA Proposed PFAS Regulation

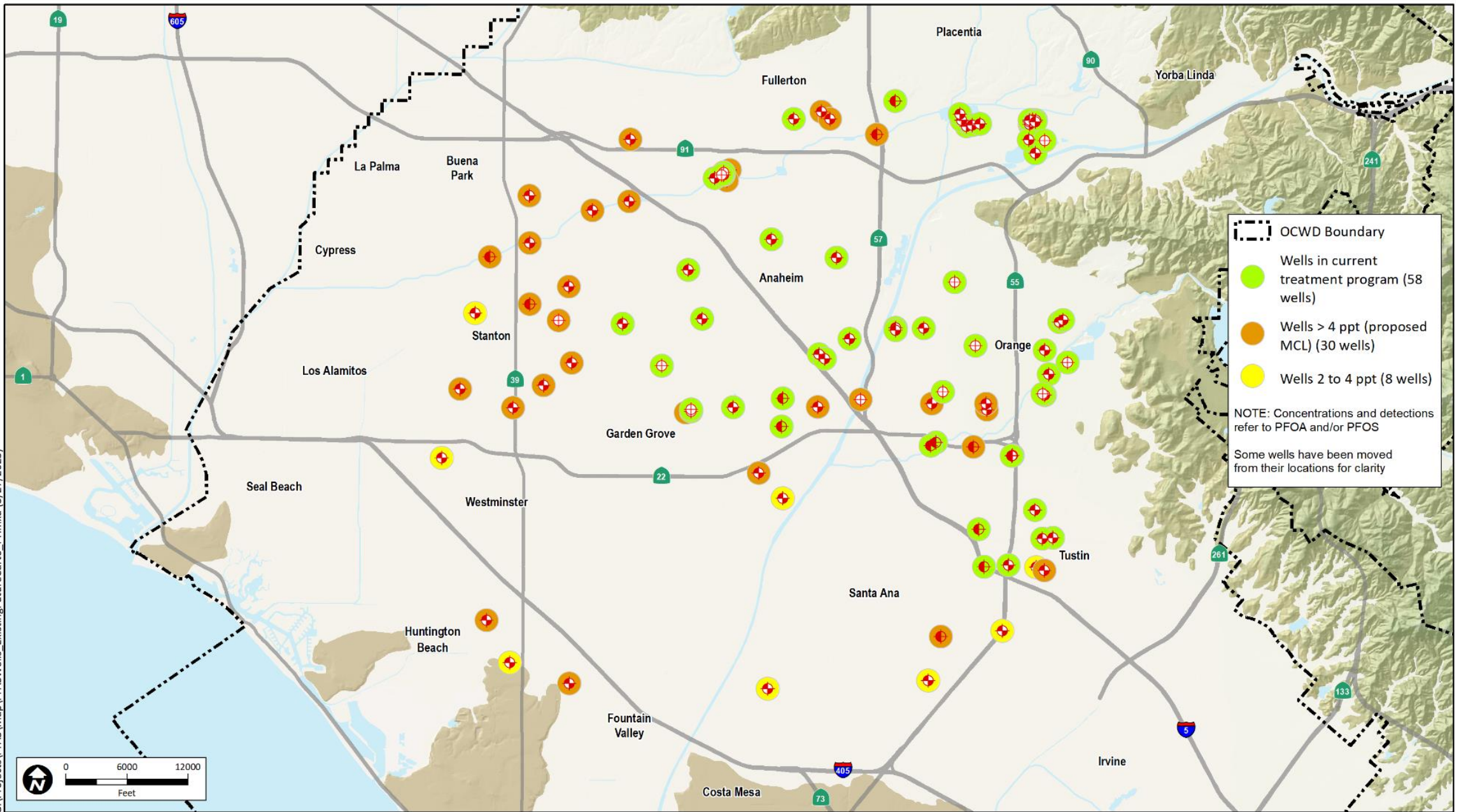


Projected Impacts under USEPA Proposed PFAS Regulation









OCWD Boundary

Wells in current treatment program (58 wells)

Wells > 4 ppt (proposed MCL) (30 wells)

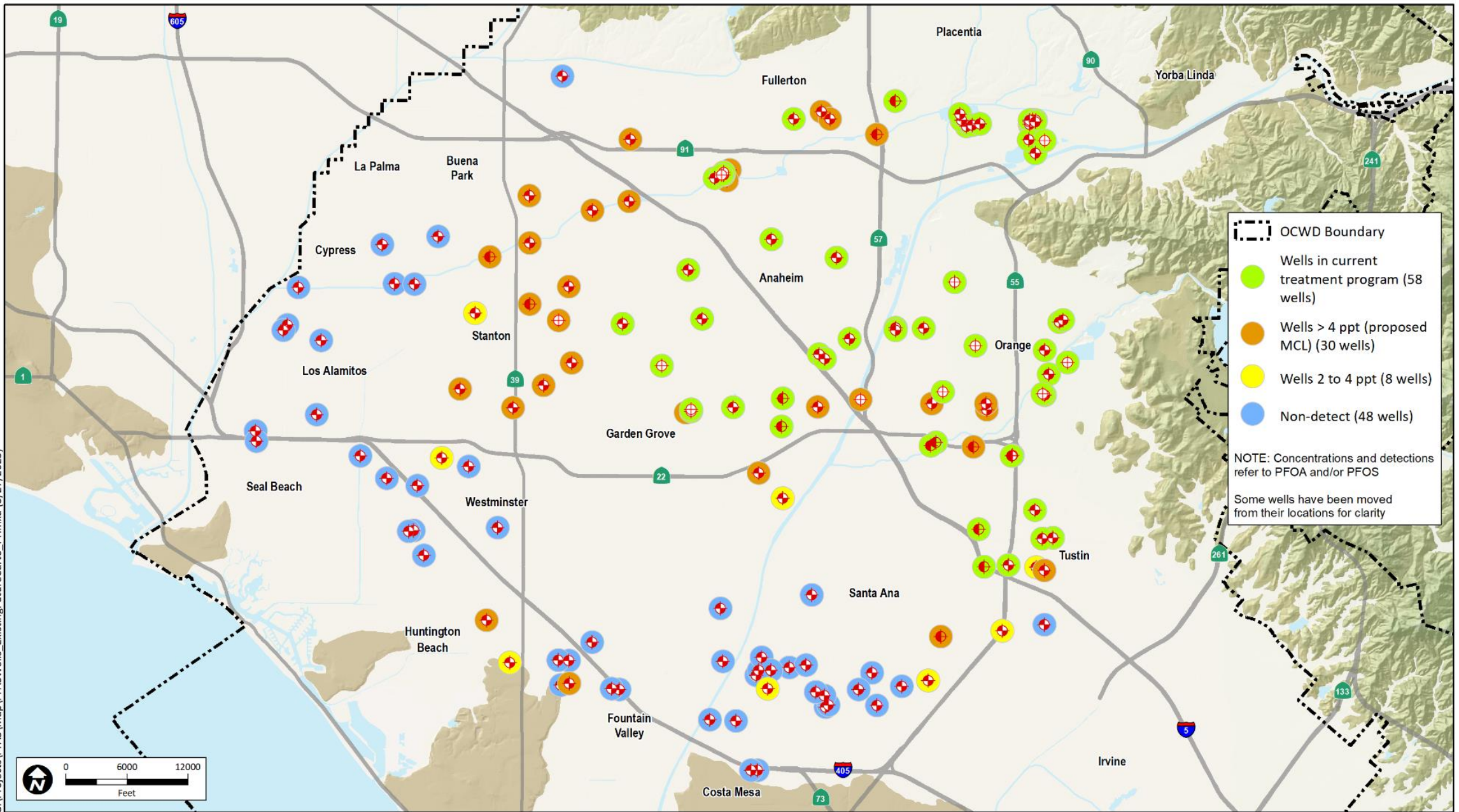
Wells 2 to 4 ppt (8 wells)

NOTE: Concentrations and detections refer to PFOA and/or PFOS

Some wells have been moved from their locations for clarity



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OCWD Boundary

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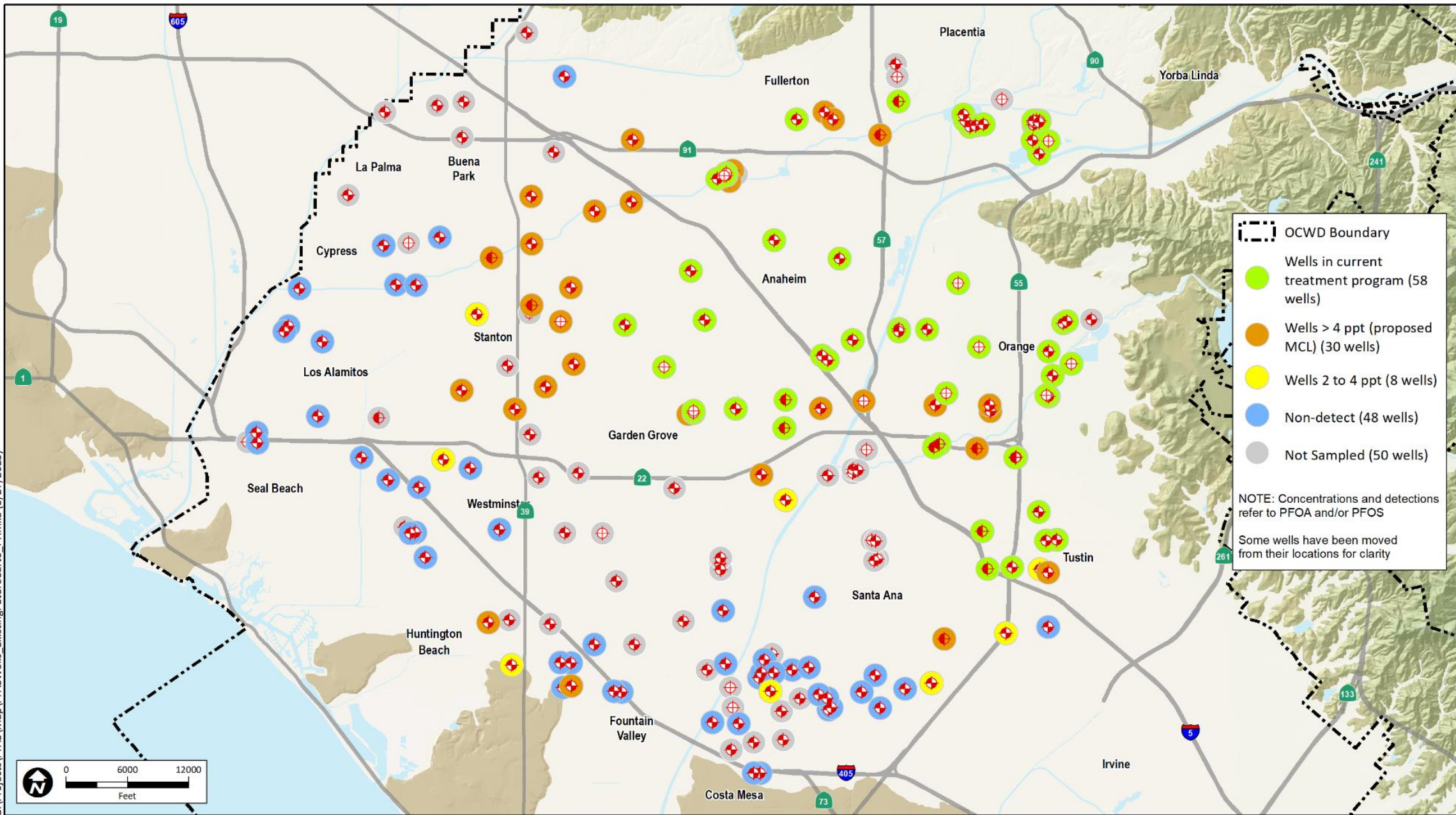
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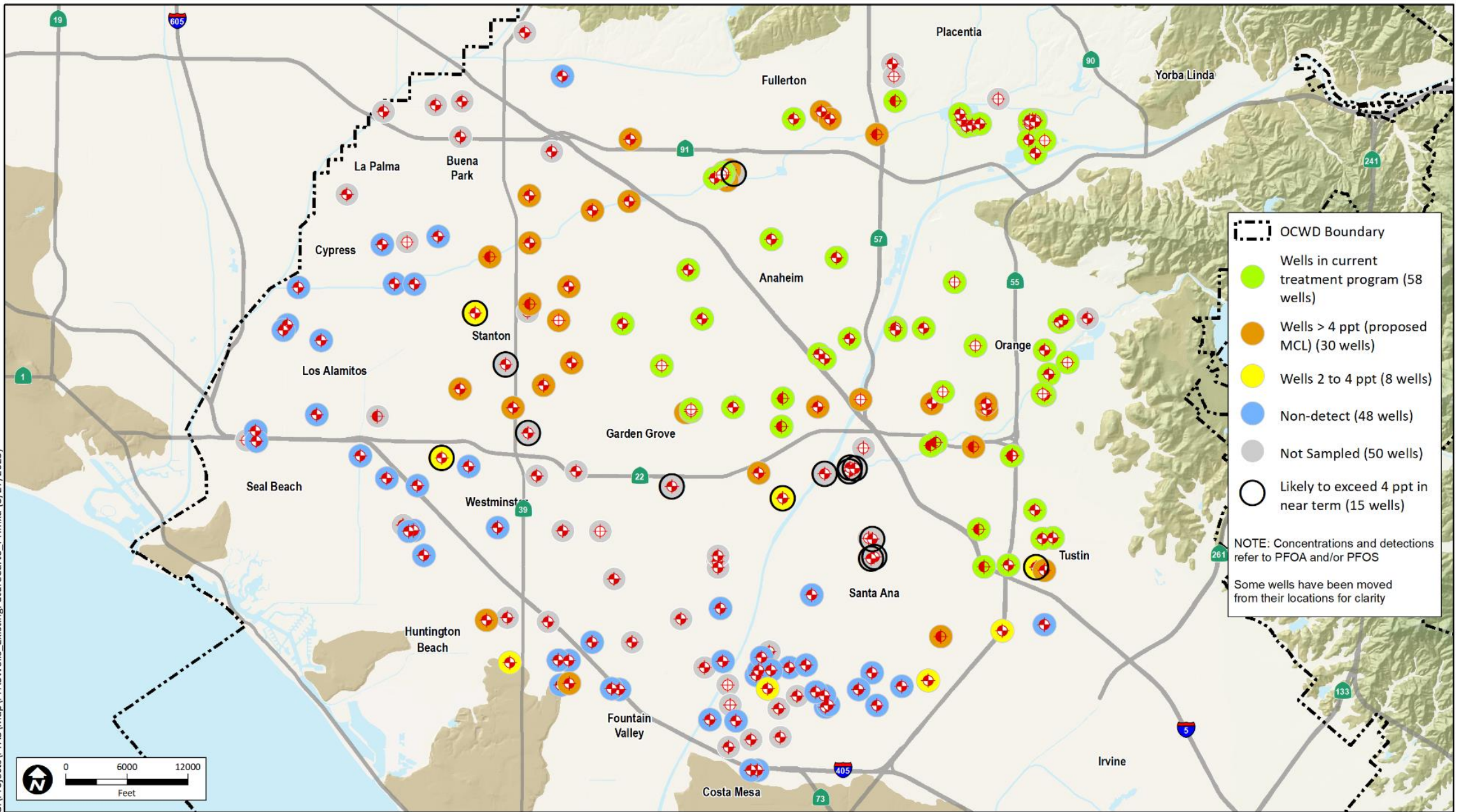
Wells 2 to 4 ppt (8 wells)

Non-detect (48 wells)

NOTE: Concentrations and detections refer to PFOA and/or PFOS

Some wells have been moved from their locations for clarity





OCWD Boundary

Wells in current treatment program (58 wells)

Wells > 4 ppt (proposed MCL) (30 wells)

Wells 2 to 4 ppt (8 wells)

Non-detect (48 wells)

Not Sampled (50 wells)

Likely to exceed 4 ppt in near term (15 wells)

NOTE: Concentrations and detections refer to PFOA and/or PFOS

Some wells have been moved from their locations for clarity



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Summary of Projected Impacts under EPA Proposed Regulations

- Based on testing results to date, 30 more wells would require treatment
- Estimate 15 additional wells likely to exceed proposed MCLs in near term
- Initial projection of 8-15% four-year annual OCWD RA rate increases to fund additional treatment under OCWD's current program with Retail/Producer agencies

Next Steps for OCWD

- **Public Comment on USEPA Proposed Regulation/MCLs through May 30th**
- **Testing**
 - Complete State Ordered Testing & Treatment System Monitoring
 - Complete USEPA UCMR5 testing (2023-2025)
- **Treatment Systems**
 - Complete existing phase of design & construction by 2024 (58 wells)
 - Planning for next phase for additional wells impacted by USEPA Proposed MCLs
- **Monitor State DDW future NL/RL and enforceable MCL development**
- **Continue pursuit of state and federal grants to offset treatment costs**
- **Continue cost-recovery litigation**

Thank you! Questions?

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<https://www.ocwd.com/what-we-do/water-quality/pfas/>

