

Tucson Water Mayor and Council Study Session

Per- and polyfluoroalkyl Substances (PFAS)

Our Drinking Water is Safe

- Tucson Water has been testing for PFAS since 2009
- We have tested every individual drinking water production well
- We identified areas of the aquifer that contain PFAS and manage our pumping to reduce risk
- We set conservative operational targets for PFAS compounds found locally, not just PFOA and PFOS
- We turn off wells with detectable PFAS and we are managing PFAS within the TARP / AOP
- We coordinate with other agencies to assure the safety of our water

Tucson's PFAS Operational Targets

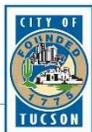
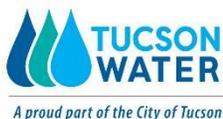
Summary of State-Level PFAS Drinking Water Standards and Guidance Compared to Tucson Water Operation Targets

Type of Guidance	State	Status	Year	Drinking Water Limit (ppt)						
				Combined PFAS	PFOS	PFOA	PFBS	PFHxS	PFHxA	PFHpA
Maximum Contaminant Level (MCL) ⁽²⁾	N. Hampshire ⁽¹⁾	Effective	2019		15	12		18		
	Vermont	Effective (interim)	2019	20	*	*		*		*
	New Jersey	Proposed	2019		13	14				
	Massachusetts	Pre-Proposal	2019	20	*	*		*		*
	Michigan	Proposed	2019		16	8	420	51	400,000	
	New York	Pre-Proposal	2018		10	10				
Health Based Guidance Level	Alaska	Effective	2019	70	*	*				
	California	Effective	2018	70	*	*				
		Effective	2018		6.5 ⁽³⁾	5.1 ⁽³⁾				
	Connecticut	Effective	2016	70	*	*		*		*
	Maine	Effective	2017	70	*	*				
	Massachusetts	Effective	2018	70	*	*		*		*
	Michigan ⁽³⁾	Effective	2019	70	8 ⁽⁴⁾	9 ⁽⁴⁾	1,000 ⁽⁴⁾	84 ⁽⁴⁾		
	Minnesota	Effective	2017		15	35	2,000	47		
	New Jersey	Effective	2007			40				
	Pennsylvania	Effective	2016	70	*	*				
	Rhode Island	Effective	2017	70	*	*				
	Vermont	Effective	2018	20	*	*		*		
Tucson Water Operational Targets		Effective	2018	18	*	*	420	*	200,000	*

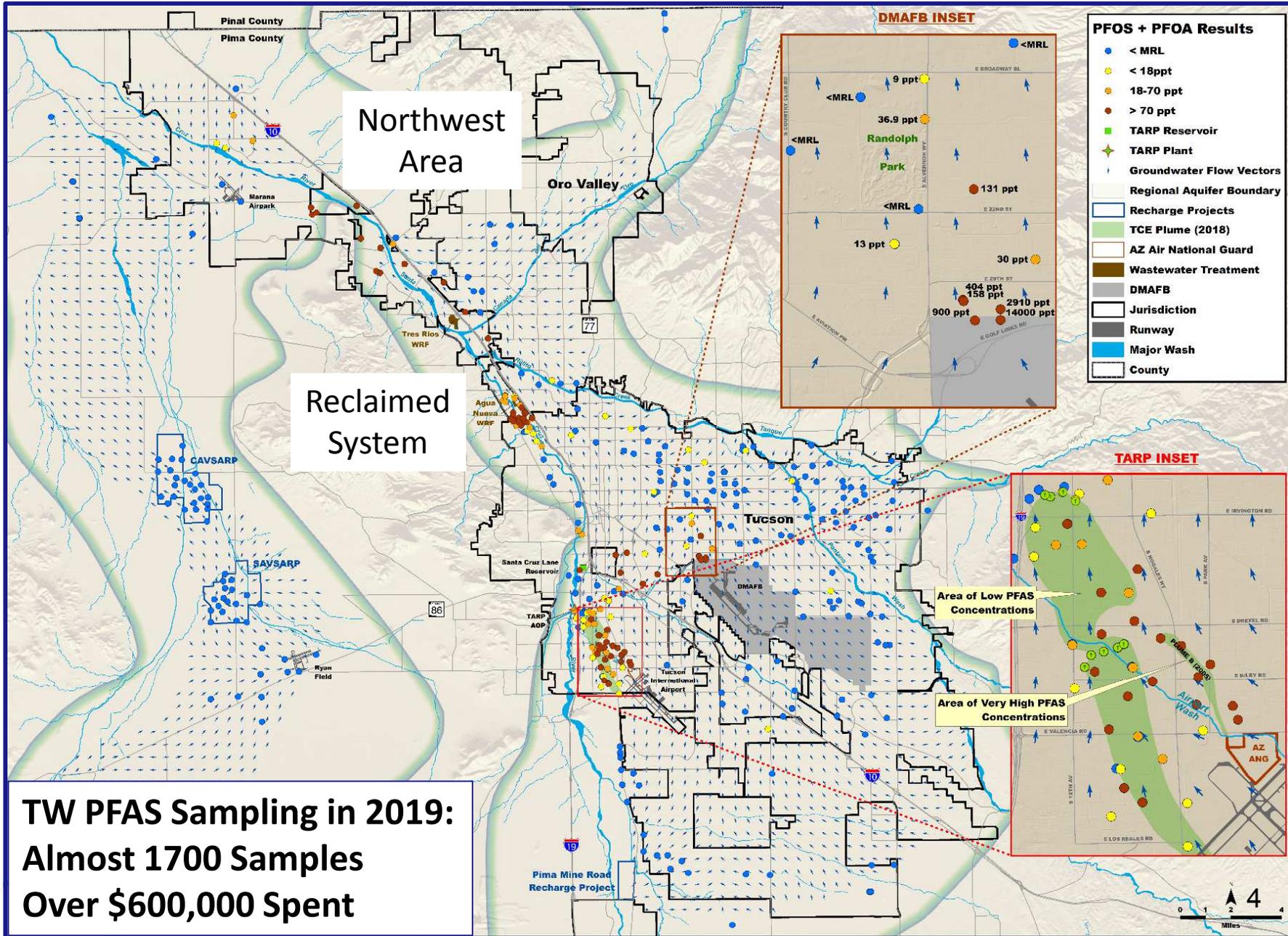
Notes:

- (1) New Hampshire MCLs on hold due to court order regarding deficiencies in process.
- (2) Pennsylvania and Washington announced in 2018 and 2019, respectively, that they were pursuing MCLs for PFAS chemicals, but specific PFAS and proposed limits have not yet been announced.
- (3) This is a notification level.
- (4) This is a screening level.
- * These compounds are part of a combined limit.

All of our drinking water is below these targets

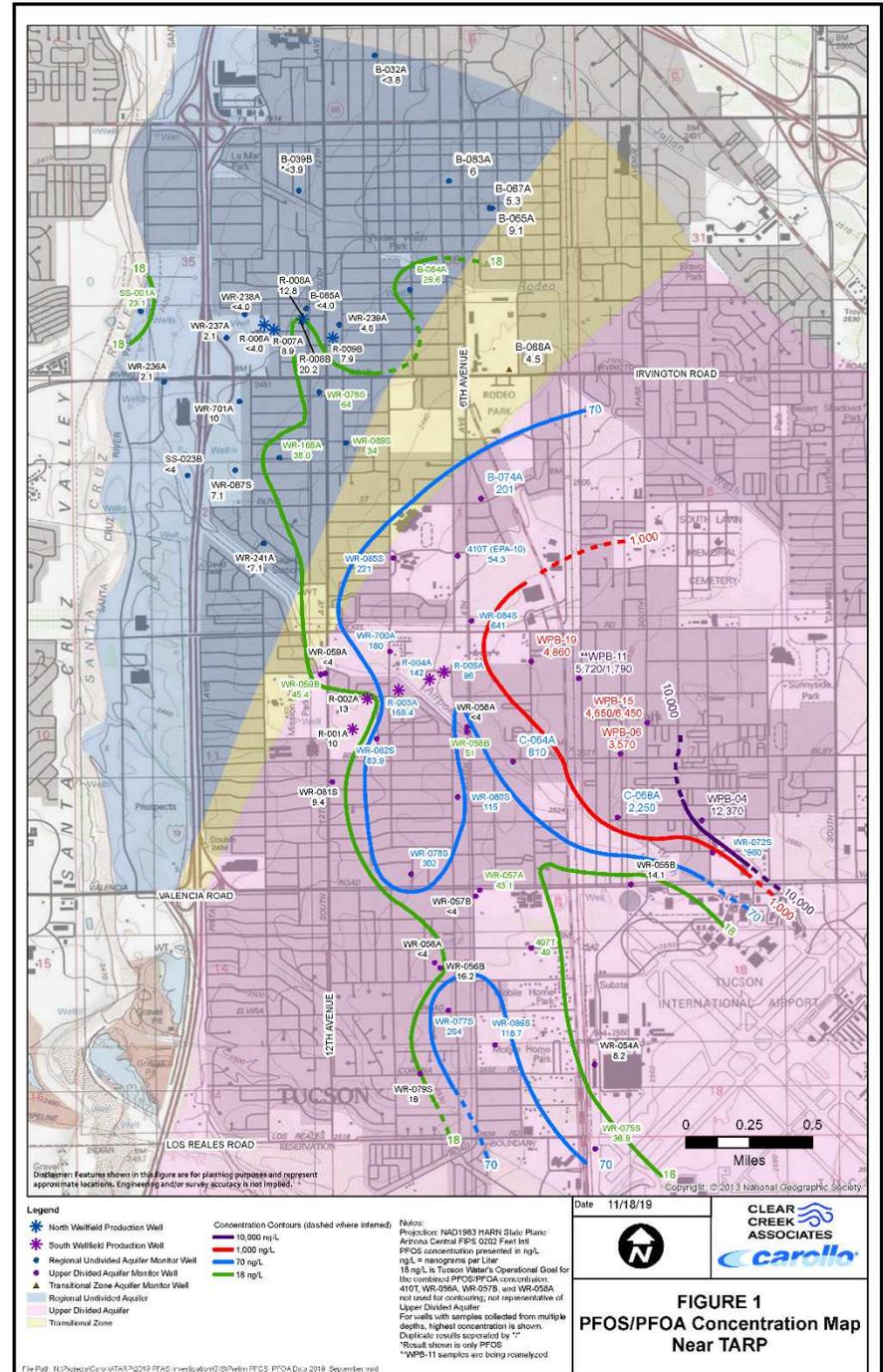


Tracking PFAS in Our Region



TARP / AOP TIA and AANG

- Low levels of PFAS in the TARP wells – managed through treatment and blending
- High levels of PFAS north of AANG need to be contained and remediated
- Working with EPA, State of Arizona, and Federal delegation



TARP AOP Carbon Change Out



- All Vessels between 12/18 and 02/19
- Vessels 5 & 6 on 09/24/19
- Vessels 1 & 2 on 12/04/19
- Vessels 3 & 4 scheduled for 12/2019
- Vessels 7 & 8 scheduled for 01/2020

Cost: ~\$60,000/vessel



Next Steps

Product Liability Lawsuit

1. Court has received Tucson Water's "Plaintiffs Fact Sheet".
2. Plaintiffs and Defendants Committees will evaluate the fact sheets and confer to select "bellwether" plaintiffs to proceed with additional steps in litigation.
3. Defense is expected to file motions concerning the procurement requirements for AFFF; claims are related to governmental contract immunity.

Next Steps

Davis-Monthan Air Force Base

1. Continued monitoring
2. Seeking Federal funding
3. Need containment and remediation
4. Meeting between City and Base

Next Steps TARP and AANG

1. Continued PFAS treatment
2. Continued monitoring
3. Frequent GAC change-outs
4. Seeking Federal funding
5. High-level PFAS needs containment and remediation

Next Steps Private Wells

1. ADEQ and PDEQ are the lead agencies
2. Offers to sample private wells ongoing
3. Bottled water being offered by ADEQ
4. City is sharing data and assisting with communications

Next Steps

Federal Delegation Visits and Asks

1. Frequent communications with our Federal delegation
2. Tracking actions at the Federal level
3. Most recent D.C. office visits were November 21 with:
 1. Senator McSally
 2. Senator Sinema
 3. Rep. Kirkpatrick
 4. Rep. Grijalva
 5. Rep. O'Halleran
 6. Rep. Stanton

Next Steps TARP / AOP

1. Continue to manage PFAS to be below our conservative Operational Targets
2. Continue to monitor drinking water quality in the south side neighborhoods
3. Seek options and flexibility to manage PFAS
4. Balance our commitments under the Consent Decree

PFAS Outreach 2018-2019

- Spanish Language
 - **11 TV segments** - Azteca TV/Arriba Tucson
 - **6 Radio segments** – Arizona Lotus/la Caliente
 - **2 public presentations**
 - **3 media contacts**
- English Language
 - **51 tours/presentations** – schools, neighborhoods, concerned citizen groups, professional organizations, civic organizations, nonprofits, college classes
 - **32 media contacts**
 - **PFAS web page**
 - **Facebook Live Q&A**
 - **Facebook & Twitter posts**