# FACT SHEET – TARP Temporary Shutdown 6/8/2021



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#### WHAT:

- Tucson Water is preparing for a temporary, indefinite shutdown of the Tucson Airport Remediation Project water treatment facility (TARP) on June 21, 2021 because of the increasing levels of per- and polyfluoroalkyl substances (PFAS) in the groundwater wells serving the plant.
- Tucson Water has successfully been removing PFAS at TARP to below detection limits to date, however the rising levels create the risk of PFAS entering the drinking water system if operations were to codntinue as-is.
- The City of Tucson is calling on the parties responsible for the PFAS groundwater pollution to take immediate action to stop its spread in the aquifer and clean it up.
- TARP will remain offline until the PFAS is removed prior to reaching the plant by the responsible parties, and/or an alternative end-use of the treated water is approved and constructed.
- Tucson Water has requested approval for alternative end-uses for treated TARP water from the U.S. Environmental Protection Agency (EPA) and the Arizona Department of Environmental Quality (ADEQ), including discharge to the reclaimed water system, and/or the Santa Cruz River.
- Regardless of what end-use is ultimately approved by environmental regulators, Tucson Water will not deliver water from the TARP plant that puts human or environmental health at risk.
- While TARP is offline, the approximately 60,000 customers who have been receiving treated water from the plant will instead receive a combination of recharged and recovered Colorado River water and other local groundwater sources that are not impacted by PFAS, identical to that served to most Tucson Water customers. PFAS has not been detected in recovered Colorado River water.



#### WHY:

- Tucson Water's top priority is the delivery of safe drinking water. PFAS levels entering TARP have been increasing as a plume of contaminated groundwater emanating from Tucson International Airport enters that part of the aquifer. The levels are approaching a limit at which Tucson Water can no longer operate the plant safely for its original purpose, which is the removal of industrial contaminants TCE and 1,4-Dioxane.
- The utility is seeking the alternative end-uses to allow the TARP plant to resume operations without putting public health at risk. This is important to fulfill the plant's original and critical function, which is to clean up and prevent the spread of industrial contaminants TCE and 1,4-Dioxane from a separate but overlapping plume of contaminated groundwater emanating from the Tucson Airport area.
- Tucson Water is also seeking alternative end-uses to put a permanent end to sending treated TARP water into the drinking water system. The original end-use (drinking water) was mandated in a Federal Consent Decree from the beginning of TARP's operations.

#### WHO:

- The City of Tucson has made this decision in close consultation with and the support of the Arizona Department of Environmental Quality (ADEQ).
- The City of Tucson has requested approval for alternative end-uses for treated TARP water from EPA.

#### WHEN:

• The temporary shutdown will begin June 21, 2021 and continue until the PFAS is removed by the responsible parties from entering the TARP treatment process, and/or an alternative end-use of the treated water is approved and constructed.

#### **KEY POINTS:**

- The treated water that Tucson Water has been serving from TARP has been and continues to be safe. We are taking this measure because our ability to guarantee that going forward is at risk due to uncontrolled PFAS contamination in the groundwater.
- Tucson Water maintains operational limits for PFAS throughout the drinking water system that match or exceed the strictest limits for these compounds throughout the United States.
- Tucson Water has alternate drinking water supplies that can replace treated TARP water now and over the long-term.
- This is not simply about the cost of treatment; it is about protecting public health given increased risk from uncontrolled PFAS

- PFAS are ubiquitous in the environment. For instance, they are universally present in human blood, are found in rainwater, and are commonly found in packaged foods and drinks.
- Tucson Water did not cause this pollution. The pollution emanates from the vicinity of Tucson Airport, and the assumed source is aqueous film-forming foams (AFFF) used for decades on that property (and on airports/airbases throughout the world).
- Tucson Water supports resuming the safe operation of TARP to clean up TCE and 1,4-Dioxane once the risk to public health is addressed. This is not a permanent shutdown, but a temporary measure to protect public health.
- The long-term solution is full-scale, dedicated treatment for PFAS before water enters TARP, paid for by the parties responsible for the water pollution.

### BACKGROUND:

- The TARP Advanced Oxidation Process (AOP) remedy is optimal for treating TCE and 1,4-Dioxane, and is designed to perform for a lifetime of treatment for those compounds. The Granular Activated Carbon (GAC) process at the conclusion of the treatment train was designed to be a redundant "finishing" process to complete the entire system; it now functions as a non-redundant primary treatment process for per- and polyfluoroalkyl substances (PFAS), with vastly accelerated carbon "change-out" schedules. The treatment process removes PFAS, but it is not optimized to do so, and there's no backup system to protect against any failure in the GAC process. As the levels of PFAS in the influent rise, the GAC system's capacity becomes increasingly less predictable and correspondingly more difficult to manage.
- To mitigate this risk, Tucson Water established an influent concentration limit of 140 ppt (measured as PFOA + PFOS + PFHxS + PFHpA) in 2019, which we communicated to EPA, ADEQ, and publicly. Our ability to operate the TARP wells at or below this influent limit is being impacted by increasing PFAS concentrations in the incoming groundwater and a temporary shut-down of TARP is imminent. TARP will remain offline until the upgradient PFAS concentrations are remedied by the responsible parties and/or until we have an approved and constructed alternative end-use for the treated water. Our primary concern is the delivery of safe drinking water.





- Non-Detect (ND)
- ND < x  $\leq$  10ppt
- 10 ppt < x  $\le$  100 ppt
- 100 ppt < x  $\leq$  1000 ppt
- 1000 ppt <  $x \le 10,000$  ppt
- x > 10,000 ppt

#### ∆ TARP Extraction Well

x = concentration of PFOS+PFOA+PFHxS+ PFHpA Symbol sizes are proportional to PFAS concentrations Note: PFAS data displayed on the map represent results of the most recent sample collected at each well. Samples were collected between March 2018 and March 2021

#### **References:**

- AECOM, 2019. Final Site Inspection Report, Air National Guard Phase II Regional Site Inspections for Pre- and Polyfluoroalkyl Substances. March.
  APTIM, 2020. Final Summary of Sampling Activities for Per- and Polyfluoroalkyl Substances on Airport Property, Tucson International Airport Area Superfund Site, Tucson, AZ. April.
- Ayuda, 2020. Final Site Inspection Report of Aqueous Film-Forming Foam Areas at Air Force Plant 44, Tucson, Arizona. April.
- Clear Creek Associates, 2019. Addendum to: PFAS Sampling Near TARP, June 2019 Technical Memorandum. November.

Hargis, 2020. Results of Sampling Program for PFAS in Groundwater, Tucson International Airport Area Superfund Site Vicinity, Tucson, Arizona. January. Additional PFAS sampling data were provided directly to ADEQ by Tucson Water for wells in the vicinity of TARP.

## DRAFT

### Select PFAS in Groundwater

#### TUCSON INTERNATIONAL AIRPORT AREA Tucson, Arizona





6/2/2021