



## CITY OF TUCSON (ARIZONA) WATER DEPARTMENT RECLAIMED WATER EMERGING CONTAMINANTS PROJECT

The City of Tucson Water Department (Tucson Water) delivers 13 to 18 million gallons per day of Class A reclaimed water from treated and disinfected wastewater effluent to over 1,000 customers for irrigation and other non-potable reuse activities. Reclaimed water that is not sent directly into the reclaimed water distribution system is stored underground for aquifer recharge and later extracted for reuse. Monitoring results have shown the presence of emerging contaminants per- and polyfluoroalkyl substances (PFAS) and 1,4-dioxane above Tucson Water's operational targets in the effluent received and reclaimed water delivered to customers.

### Emerging Contaminants:

*PFAS and 1,4-dioxane*

### Project Type:

*Reclaimed Water*

Tucson Water is proposing to address PFAS and 1,4-dioxane to reduce or eliminate the possibility of contaminating areas where the reclaimed water is used. Treatment would be applied to extracted groundwater and treated effluent prior to being sent into the reclaimed water distribution system for reuse by customers. The proposed treatment process includes ultraviolet light/hydrogen peroxide advanced oxidation (UV/AOP) process for removal of 1,4-dioxane and granular activated carbon (GAC) for treatment of PFAS.

CWSRF emerging contaminants funds are being sought to support treatment design and construction, with a future project to advance the treatment sufficiently to allow for direct potable reuse.

### Eligibilities:

Per section 603(C)(9) of the Clean Water Act (CWA), projects that are reusing or recycling wastewater, stormwater, or subsurface drainage water are CWSRF eligible projects. Since Tucson Water is treating wastewater effluent for reuse as irrigation and non-potable uses, this project is eligible.

To be eligible for the CWSRF emerging contaminants funds:

1. The presence of an emerging contaminant(s) needs to be confirmed. Tucson Water already has baseline monitoring data showing the presence of both PFAS and 1,4-dioxane.
2. A capital project needs to be identified. Tucson Water has identified treatment to remove both PFAS and 1,4-dioxane.

All of the above make the proposed project eligible for CWSRF emerging contaminants funds.