

## Background

As a community, Tucson continues to move toward linking the environment, quality of life, and the value of water. To facilitate the changing needs of society, as well as maintaining our valuable water resources, the City of Tucson has proposed a program that could make better use of our effluent water resources, while enhancing quality of life, providing a nexus for riparian restoration, and driving economic development. That program is called The Santa Cruz River Heritage Project ('Heritage Project'). The Heritage Project includes moving reclaimed water through existing infrastructure (leverage existing infrastructure), providing for effluent discharges to the Santa Cruz River in the downtown area (a building block to allow riparian habitat creation), providing a resource that could create a public amenity that would enhance economic development, and support cultural and historical preservation, while ensuring the long term viability of our water resources.

## Overall Plan

The Heritage Project is expected to be rolled out in three Phases.

Phase 1: Discharge to the Santa Cruz River, at the east branch, adjacent to 29<sup>th</sup> street

- The existing reclaimed main running along 29<sup>th</sup> street is a 12 inch diameter PVC main
- Maximum Flow: 3.45 mgd (3,866 AF/yr), Minimum Flow: 0 mgd
- It is expected that Phase 1 of the project will operate virtually continuously, except during summer peak reclaimed use conditions and/or when rainfall generates natural flows.

Phase 2: Discharge to the Santa Cruz River south of Cushing Street

- The existing reclaimed main adjacent to Cushing Street is 36-inch diameter.
- Average Daily Flow Available 3.55 mgd (about 3,978 AF/yr), Minimum Flow Available 0 mgd, Maximum Design Flow 6.55 mgd

Phase 3: Off-Channel Public Amenity

- When the off-channel feature (Phase 3) is constructed, it is expected to be designed to utilize all, or a portion of the available flows being used for Phase 2. Those flows will continue to be discharged to the Santa Cruz River, after being used to support the public amenity. There is expected to be some minor evaporation related to this public amenity, but the discharge to the river will not be reduced appreciably by the implementation of Phase 3.

## Permitting & Water Quality

- AZPDES (Arizona Pollution Discharge Elimination System)
- USF (Underground Storage Facility)
- WSP (Water Storage Permit)
- APP (Aquifer Protection Permit)
- CEP (Conservation Effluent Pool)

## Channel Impacts

Tucson Water is working with the Pima County Flood Control District (FCD) to ensure that any discharges to the Santa Cruz River in the downtown area do not adversely impact existing channel characteristics. Some considerations include:

- Ensuring hydraulic capacity of the channel is not adversely impacted
- Ensuring that the water discharges to the river do not adversely impact the existing hard bank, or any other existing infrastructure in the river.

Other considerations in channel impacts include aesthetics and riparian restoration.

## Schedule

The goal is to have Phase 1 completed, and discharging to the river by the summer of 2019. General schedule is as follows:

Design Report Completion	September 2017
Preliminary Permit Application:	January 2018
Preliminary Design Completion	January 2018
Final Design Completion	September 2018
Construction Start	January 2019
River Water Dedication	Memorial Day 2019

At this time, there are no set goals for implementation of Phase 2 or the off-channel amenity. Implementation of these phases will likely be dependent on economic development in the area. Phase 1 implementation will be key to moving forward with subsequent phases. Phases 2 and 3 will be addressed in the future.

### Approximate Locations of Phases 1/2/3

