

Project Blue Water Use Numbers Still Do Not Add Up to Net-Positive Water Supplies

21 July 2025

Dear Mayor and City Council,

As any scientist will do, I update my analyses and conclusions when new information becomes available. One of the challenges in assessing the impacts of Project Blue on the Santa Cruz River and our local water resources has been the lack of information. Prior to Monday, July 14, we had no information about the project other than its location and claims that it was a net-positive water project. Last Monday, when the city manager released some details, we had the first description of what the expected water demand of Project Blue would be: 1,910 acre-feet [622 million gallons] per year when phases 1 and 2 are complete. But we still didn't know where the reclaimed water was going to come from. The only source of reclaimed water that is currently 'free' and wouldn't cause a net deficit in our local groundwater supply, is that which is flowing from the Tres Rios Water Reclamation Facility (WRF) into the Santa Cruz River past Trico Road into Pinal County. This water in the river is lost to the City of Tucson and Pima County both on 'paper' as water rights and physically as 'wet' water (see my original document and the AZ Daily Star article from Sunday, July 20). So, logically, that seemed like the only source of water to tap for a net-positive water project.

In response to my original document and questions from reporter Tony Davis of the AZ Daily Star and reporter Sarah Lapidus of the Arizona Republic, City Manager Tim Thomure named three sources of water for Project Blue that were not from the water that Tres Rios WRF releases into the Santa Cruz River: (1) the Sweetwater Recharge Facility (adjacent to Sweetwater Wetlands), (2) the Southeast Houghton Area Recharge Facility (SHARP), and (3) the Tucson Airport Remediation Plant (TARP). Currently, Sweetwater and SHARP are both groundwater recharge facilities that put reclaimed water from the Agua Nueva WRF into the ground for future use. In contrast, TARP is withdrawing contaminated groundwater from downstream of the Tucson Airport and purifying it before discharging it into the reclaimed system and into the Santa Cruz River near Irvington Road. The important detail is that all three of these named sources for Project Blue would be taking water that was in the ground already (in the case of TARP) or could be put into the ground for storage and later use (in the case of SHARP and Sweetwater), and giving it to Project Blue for consumptive use (i.e., evaporation into the atmosphere during the data center cooling process). So this explanation given by the city manager would indeed not pull water from the Santa Cruz River, but it would cause net depletion of our groundwater resources to supply Project Blue.

Another issue that arose in the city manager's naming of these sources was that one of them was in direct contradiction to Beale Infrastructure's claims during the June meeting of the Pima County Board of Supervisors meeting (when the sale of the land for Project Blue was approved). In that meeting, Beale representatives explicitly stated that one of the benefits of Project Blue was that it would allow more reclaimed water to be brought **TO** the SHARP facility for recharge, instead of taking water **FROM** the SHARP facility to supply Project Blue. When I pointed out this contradiction to reporter Tony Davis on Friday, July 18, he said he would reach

back out to the city manager. In that follow-up call with Tony Davis, the city manager said that SHARP was no longer being considered as a source water for Project Blue, despite his claims to the contrary the day before. This change in explanation is actually visible in Tony Davis's article, which he clearly started drafting before the city manager changed the sources of Project Blue. In the article, you can see a mention of the 'first' source of water for Project Blue and a 'third' source of water for Project Blue, but no second source. Tony Davis deleted the mention of SHARP as a potential source for Project Blue after that Friday follow-up interview with the city manager.

So, the main issue with what the sources identified as providing water to Project Blue is that they are extractive -- either using groundwater directly (TARP) or diverting water that could go into the ground and sending it to Project Blue (Sweetwater). How is the city or Project Blue going to offset these consumptive uses of groundwater? The city manager cited one trade-off in the AZ Daily Star article on July 20: diversion of reclaimed water from the Tres Rios WRF to the Dove Mountain Resort and its 27-hole golf course. Currently, this long branch of the reclaimed system is served by the Agua Nueva WRF, the facility which supplied nearly the entire reclaimed system in Tucson until recently, but is now being supplemented by extracted and purified groundwater from TARP. So, if water that is currently being sent from Agua Nueva / Sweetwater to Dove Mountain Resort were instead to come from the Tres Rios WRF, that would free up a significant amount of reclaimed water to offset Project Blue's use from Agua Nueva / Sweetwater. If the city's descriptions are correct, the first phase of Project Blue would consume a little less water than two 18-hole golf courses, so fairly close to the amount of water that a 27-hole golf course uses. Essentially, switching Dove Mountain Resort's reclaimed use from Agua Nueva to Tres Rios WRF could provide nearly enough water for phase 1 of Project Blue, while also not negatively impacting Tucson's water portfolio on paper. This is because the water sent from Tres Rios to Dove Mountain could come out of the reclaimed water flowing in the river past Trico Road and into Pinal County -- where the city loses that water both on paper and physically. This is how Project Blue could in part depend on the Tres Rios WRF and take water out of the Santa Cruz River, but do so indirectly via swapping out which WRF supplies reclaimed water to Dove Mountain. And this would be done without any net loss of groundwater recharge credits, and hence be 'neutral' to our water portfolio, but reduce flow in the river.

Finally, and importantly, the only way it is likely for Project Blue to have no net impact on the Santa Cruz River is if the project is **not** net-positive with regard to 'wet' water. In the draft master agreement the city released last Monday, there is a clause (on page 10) stating that Project Blue can simply make payments of "Water Positivity Rates" without actually having to recharge groundwater to offset their use, thus truly making the project net-positive for our city's water supplies. So, Project Blue could be a completely extractive user of our local groundwater and reclaimed water supplies, and simply pay fees to offset the groundwater depletion they are causing. This seems to be a likely scenario given the enormous resources of Beale Infrastructure and the parent corporation behind them.

So, that leaves the City of Tucson with a bunch of paper water (i.e. payment for water) rather than water to drink or put in the river. And I agree with the city manager that Project Blue and

Beale Infrastructure could invest in water conservation efforts, such as leak detection, and contribute in small ways to offset their water use. But those efforts are not nearly enough to offset Project Blue's enormous water appetite. Additionally, the city manager talks about 'new water resources' that Project Blue could bring in, but the only 'new' sources of water likely to be available would be: (1) additional allocations of CAP (Colorado River) water, (2) tribally-owned water (e.g., water held in trust for the Tohono O'odham Nation as part of the Southern Arizona Water Rights Settlement Act, or CAP water owned by the Gila River Indian Community), or (3) some hypothetical future source of desalinated water. And none of those sources are likely to be viable, and if Project Blue has a plan to access them, they should state that publicly.

In conclusion, from the information we have to date, Project Blue would have a net negative impact on our local groundwater supplies and indirectly cause reduction in flow in the Santa Cruz River below the Tres Rios WRF in Marana. And to date, no quantitative information has been released about how Project Blue would offset its consumptive use of groundwater with 'wet' water recharge projects, leading many of us to assume that it would primarily do so financially rather than physically. And that is not in alignment with our city's OneWater vision -- we cannot drink paper water.

As a scientist, I will happily update my analyses if and when additional information is released by the City of Tucson, Pima County, or Beale Infrastructure. Thank you for your time.

Sincerely,

A handwritten signature in black ink, appearing to be 'MB', followed by a long horizontal line extending to the right.

Dr. Michael Bogan