



## MEMORANDUM

**TO:** Mayor and Council

**FROM:** Jorge L. Morales, Director, Watershed Protection Department 

**DATE:** 09/29/2021

**SUBJECT:** FM 620 requested 25-acre full purpose annexation (C7A-2021-0004)

The purpose of this memorandum is to clarify the position of Watershed Protection Department staff related to the annexation and service extension request (SER) for the 25-acre property located at 11213 FM 620 and Anderson Mill Rd. Below are described potential scenarios for wastewater treatment.

### **If Council approves full-purpose annexation for the 25-acre site**

If annexation is approved, thus ensuring that the SER will subsequently be approved administratively, the development would require that an existing lift station be rebuilt, and a new second lift station also be constructed. Buried pipes carrying large amounts of wastewater and lift stations have the potential to leak over time, which could potentially cause a large wastewater spill that would affect the creek in the future. The site plan under review (SP-2020-0427C) shows the location of the new proposed lift station to be located adjacent to a swale leading directly to a storm drain that outfalls into the creek. If that lift station were to fail, the wastewater would spill directly into the headwater creeks, which is known to support the threatened Jollyville salamander, *Eurycea tonkawae*.

Should annexation be approved, the Watershed Protection Department will work with Austin Water to identify strategies to mitigate the additional risks. Furthermore, we will continue to work to minimize the impacts as the infrastructure final design is completed.

### **If Council declines full purpose annexation and rejects the Wastewater SER**

Watershed Protection Department staff determined that if the estimated 175 Living Unit Equivalent (LUE) are permitted, approximately 42,875 gal/day of wastewater would be produced. There are two options for this amount of effluent treatment, a Subsurface Area Drip Dispersal System (SADDS) or a Texas Land Application Permit (TLAP).

The deciding factor between a SADDS and a TLAP is the flow rate (or LUEs). Once the project exceeds 100,000 gal/day (or about 800 LUEs-multifamily; 400 LUEs single family), the flow will overwhelm the dripline emitters in a SADDS system requiring the need for a TLAP. Due to the low flow rate and the cost differential, the applicant would likely choose a SADDS system.

The SADDS system would need approximately 10 acres for a drainage field and an on-site treatment plant. The system would require that solids are hauled off, and the wastewater would need to be treated to a certain level prior to land application. This required treatment, combined with a low application rate (0.1 gal/day/sq ft), would minimize negative impacts on the groundwater and creek. There would be an increase in Nitrogen concentrations over time with the low level of land application required by such a system. Still, this scenario is preferable to a large wastewater leak.

**Additional Considerations:**

The rules for impervious cover and other water quality related environmental protections related to creek setbacks and Critical Environmental Feature protections are the same in the zoning jurisdiction as they are in the ETJ. This site is allowed 40% Net Site Area for Commercial or Multi-family. Annexation approval or denial will not affect these rules, but tree protections do not apply in the ETJ. Under the no annexation/no SER scenario the developer would need to redesign the site layout and reduce the number of units in order to construct the on-site wastewater treatment facility. Because of this redesign and the reduced amount of developable area due to the onsite wastewater facility and area needed for land application, there would be fewer than the estimate 175 LUEs currently planned on the tract.

Given the two scenarios and the potential for harmful discharges into the headwaters of Bull Creek, Watershed Protection staff recommend the least environmentally impactful scenario of denial of both the annexation and the SER.

As it relates to the single standard of review for the development, the application would be submitted as one site plan, all water quality related environmental codes would apply to both jurisdictions and the portion that is full-purpose jurisdiction would also be reviewed for tree preservation.

CC: Spencer Cronk, City Manager  
Rey Arellano, Assistant City Manager  
Liz Johnston, Deputy Environmental Officer