



## MEMORANDUM

**TO:** Kevin Ramberg, Chair and Commissioners  
Environmental Commission

**FROM:** Katie Coyne, Environmental Officer  
Watershed Protection

**DATE:** June 06, 2023

**SUBJECT:** SOS and Other Code Amendments for Little Bear Creek Recharge Enhancement Facility  
SP-2022-0462D

---

On the July 5th, 2023, Environmental Commission agenda is a proposed amendment to the City's Save Our Springs ordinance and related variances to Chapter 25-8 of the Land Development Code. The ordinance is being brought forward to enable the Watershed Protection Department (WPD) to construct, operate, and maintain the Little Bear Creek Recharge Enhancement Project, an aquifer recharge project at Stoneledge Quarry within the Barton Springs Segment of the Edwards Aquifer (the "Aquifer").

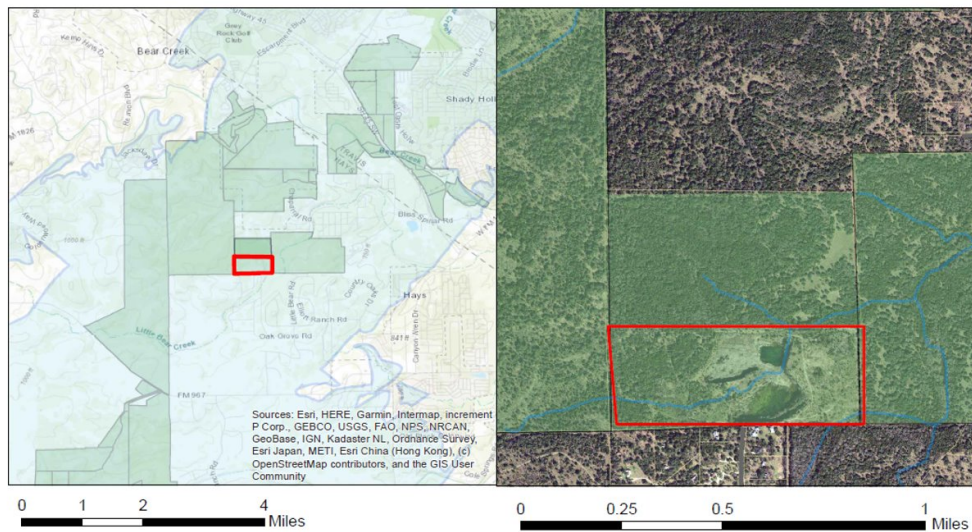
### **Project Description and Background**

The Aquifer is a federally-designated, sole-source aquifer, which serves as a primary source of drinking water for tens of thousands of people and is a vital resource to the general economy and welfare of the City of Austin and the State of Texas.

Through land purchases and conservation easements, the City of Austin now protects over 33,000 acres of land in the recharge and contributing zones of the Aquifer to benefit water quality and quantity. In 2002, the City of Austin used Open Space Bond Funds to purchase an 86.4 acre tract within the Edwards Aquifer Recharge Zone ("Wenzel Tract") in northern Hays County that includes the 18 acre Stoneledge Quarry; *Exhibit 1*.

The purchase of the abandoned Stoneledge Quarry was in partnership with the Hill Country Conservancy for the purpose of constructing the recharge enhancement facility.

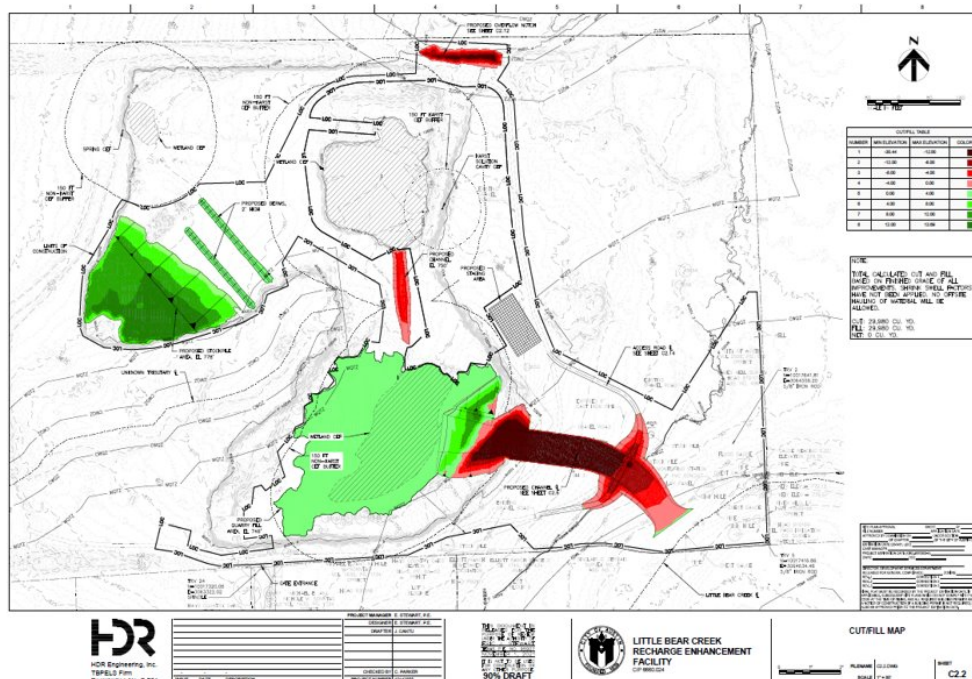
## Exhibit 2. Site Location



The Little Bear Creek Recharge Enhancement project proposes to divert a portion (30% to 50%) of the flood flows above 50 cubic feet per second from Little Bear Creek through a diversion channel into Stoneledge Quarry, where the water will slowly recharge the Aquifer thereby increasing Aquifer storage and enhancing flows at Barton Springs; *Exhibit 2*.

The upstream drainage area to the proposed diversion channel is approximately 7,000 acres of which 42% (approximately 2,900 ac) is protected from future development by fee simple and Conservation Easement purchases and includes the Ashmun, Nester, Hays County Ranch and Cypress Water Quality Protection Lands.

## Exhibit 2. Little Bear Creek Recharge Enhancement Facility



### **Code Amendment and Variance**

A portion of the proposed diversion channel described in SP-2022-0462D is within the Critical Water Quality Zone (CWQZ) of the site. The SOS Ordinance prohibits development in the CWQZ for areas within the Barton Springs Zone and would not permit the construction of this facility. Also, because 25-8-515 prohibits variances from the SOS Ordinance, a site-specific amendment to the SOS Ordinance approved by a supermajority of the City Council is necessary to allow construction of the Little Bear Creek Recharge Enhancement Facility.

Four variances are also necessary to complete the site development permit application process:

- 25-8-263 (*Floodplain Modification*) to allow floodplain modification within a CWQZ
- 25-8-341 (*Cut*) and 25-8-342 (*Fill*) to allow cut and fill in excess of 4 feet.
- 25-8-422 (*Water Quality Transition Zone*) to allow development in a water quality transition zone that lies over the South Edwards Aquifer recharge zone

Construction of the Little Bear Creek Recharge Enhancement Facility will require floodplain modification within the CWQZ and development in the WQTZ to construct and connect the diversion channel from Little Bear Creek to the quarry and allow for the diversion of flood waters as proposed. The grading associated with the channel construction also requires cut and fill in excess of 4 feet. Mitigation for impacts associated with the development will be provided in excess of minimum code requirements.

Stormwater modelling by WPD engineer staff will demonstrate SOS non-degradation water quality requirements will be met by allowing runoff to natural vegetated filter strips and infiltration areas in compliance with 25-8-151 (*Innovative Management Practices*). The project will also provide 3 acres of floodplain restoration, which is ~140% of the required mitigation for the proposed floodplain modification in a CWQZ, and an additional 5.23 acres of upland restoration.

The proposed site-specific ordinance will authorize the SOS amendment and the four variances minimally required to construct the project, which will improve the quality and quantity of recharge to the Aquifer, meet SOS non-degradation requirements for surface water treatment, and provide extensive onsite restoration.

### **Project Review**

WPD is the project sponsor and has developed the design in consultation with engineering staff. WPD is pursuing development of the Little Bear Creek Recharge Enhancement Facility Project under a site plan permit. Staff from Development Services and other City of Austin departments have completed at least one round of review of the site plan application.

### **Recommendation**

Staff recommends approval of the proposed amendment and associated variances for the following reasons:

- The project will provide SOS non-degradation water quality treatment for all new and reconstructed impervious cover, or equivalent area, with innovative management practices in accordance with LDC 25-8-151.
- The new impervious cover proposed by the project is limited to an unimproved road with gated and restricted access for use by City of Austin staff in maintenance, land management and educational activities.

- The project will provide 3 acres of floodplain restoration which is ~140% of the required mitigation for the proposed floodplain modification in a CWQZ.
- The project will provide 5.23 acres of upland restoration.
- The project will pay into the Tree Fund in lieu of providing mitigation for the Floodplain Modification associated with the new water quality ponds.