

## ORDINANCE AMENDMENT REVIEW SHEET

**Amendment:** C20-2023-009 Site Specific SOS amendment and related variances

**Description:** Amends Land Development Code (LDC) 25-8 Article 13 Save Our Springs Initiative and related variances to Chapter 25-8 Subchapters A (Water Quality) of the Land Development Code as necessary to construct the Little Bear Creek Recharge Enhancement Facility, SP-2022-0462D.

**Proposed Language:** Consider an ordinance granting a site-specific amendment to LDC 25-8-514 (Pollution Prevention Required) of the Save Our Springs Initiative as it relates to development in the Critical Water Quality Zone, granting variances to LDC 25-8-263 (Floodplain Modification), LDC 25-8-341 (Cut), LDC 25-8-342 (Fill), and LDC 25-8-482 (Water Quality Transition Zone) to allow construction of the Little Bear Recharge Enhancement Project (C20-2023-0009). This project is located within the Barton Springs Zone.

**Summary of proposed code amendment**

The amendment under consideration is related to an enhancement project for the Edwards Aquifer currently under review that is located within the Edwards Aquifer portion of the Barton Springs Zone. 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.

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 permitting 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.
- 25-8-482 (*Water Quality Transition Zone*) to allow development in a water quality transition zone that lies over the Edwards Aquifer recharge zone in the Barton Springs 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.

**Background:** Initiated by City Council Resolution 20230420-026

On April 20, 2023, City Council approved Resolution No.20230420-026 to initiate variances and amendments to the Land Development Code, including site-specific amendments to Chapter 25-8, Subchapter A, Article 13 (Save Our Springs Initiative), as necessary to allow for the completion of the Little Bear Aquifer Recharge Enhancement Project, an aquifer recharge project at Stoneledge Quarry within the Barton Springs Segment of the Edwards Aquifer.

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

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 acres) 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.

**Staff 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 tree removals.

**Board and Commission Actions**

**June 21<sup>st</sup>, 2023:** Approved by the Codes and Ordinances Joint Committee, 6-0.

**July 5<sup>th</sup>, 2023:** Approved by the Environmental Commission, 10-0.

**July 25<sup>th</sup>, 2023:** Approved by the Planning Commission, 11-0

**Council Action**

**August 31<sup>st</sup>, 2023:** A public hearing will be scheduled.

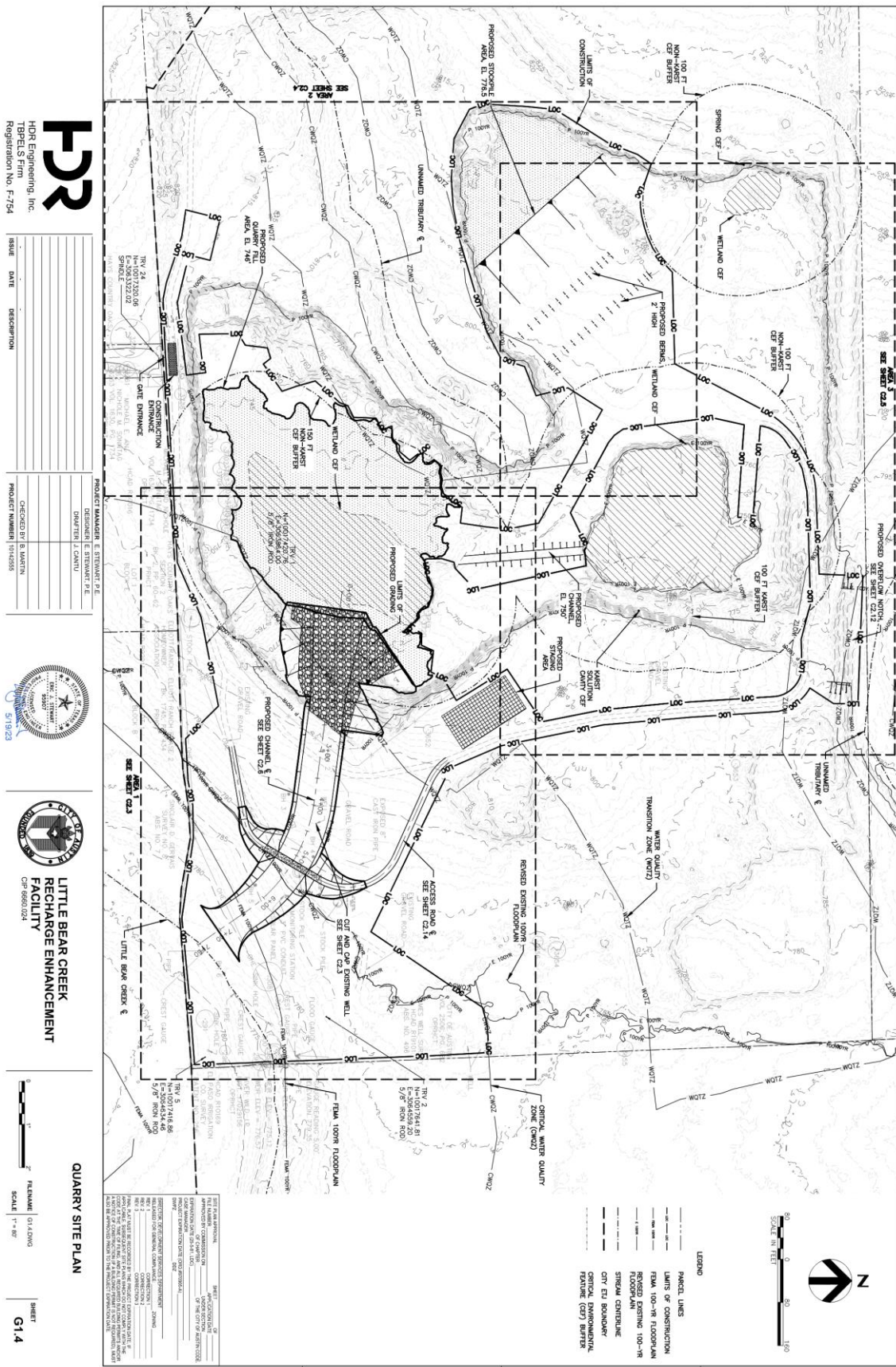
**Ordinance Number:** TBD

**City Staff:** Scott Heirs    **Phone:** (512) 974-1916    **Email:** scott.heirs@austintexas.gov

**City Staff:** Leslie Lilly    **Phone:** (512) 535-8914    **Email:** Leslie.lilly@austintexas.gov







Overall Site Plan for Little Bear Creek Aquifer Recharge Enhancement Project



## 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

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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**

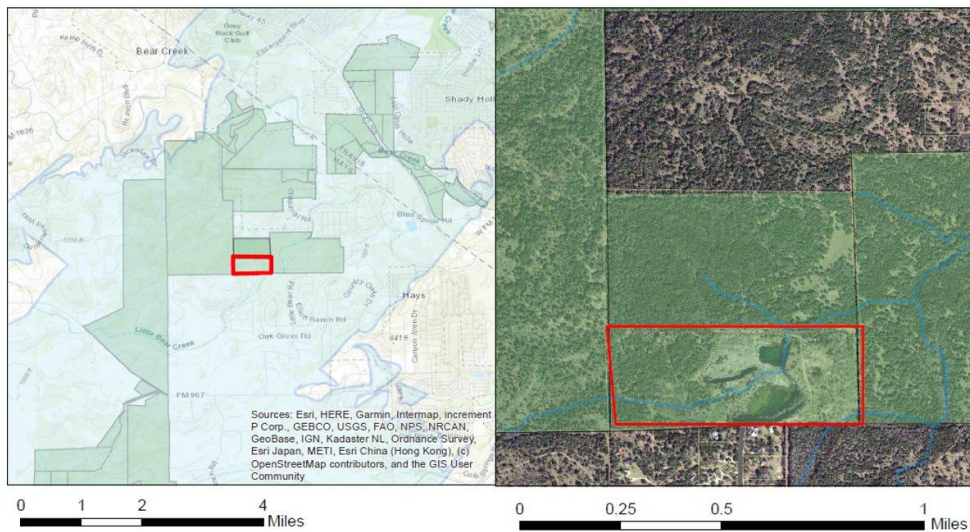
The Aquifer is a federally-designated, sole-source aquifer, which serves as a primary source of drinking water for tens of thousands of people and is a vital resource to the general economy and welfare of the City of Austin and the State of Texas.

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.



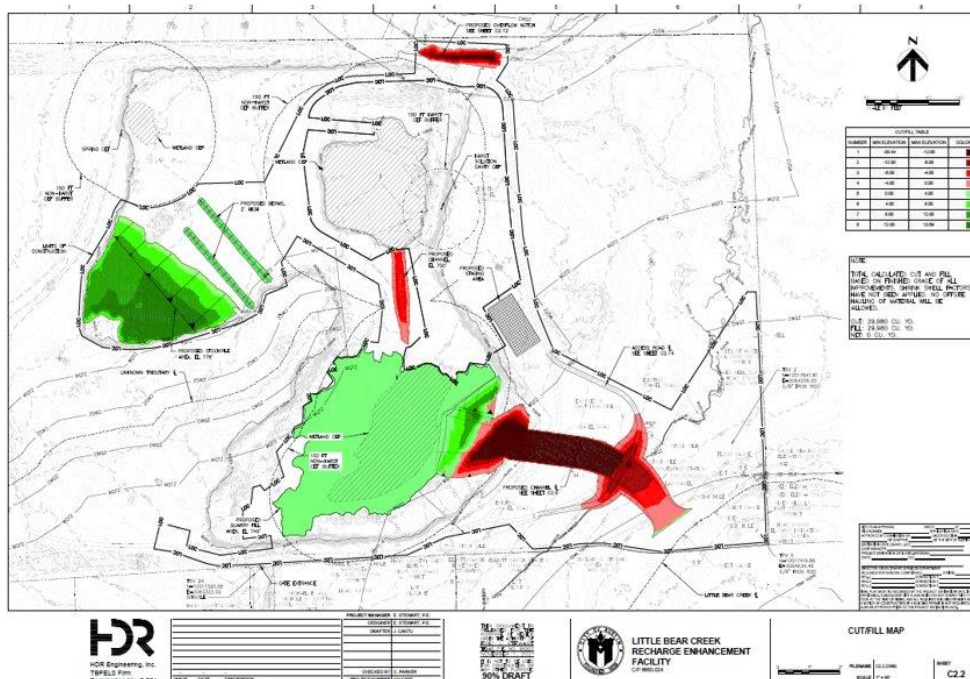
## Exhibit 2. Site Location



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.
- 25-8-482 (*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 tree removals.



## ENVIRONMENTAL COMMISSION RECOMMENDATION 20230705-007

**Date:** July 5, 2023

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

**Motion by:** Jennifer L. Bristol

**Seconded by:** Perry Bedford

**WHEREAS**, the Watershed Protection Department (WPD) will construct, operate, and maintain the Little Bear Creek Recharge Enhancement Project within the recharge project at Stoneledge Quarry within the Barton Springs Segment of the Edwards Aquifer; and

**WHEREAS**, four variances are 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*)
- 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

**WHEREAS**, staff recommends approval of the proposed amendment and associated variances for the following reasons:

1. 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.
2. 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.
3. The project will provide 3 acres of floodplain restoration which is 140% of the required mitigation for the proposed floodplain modification in a CWQZ.
4. The project will provide 5.23 acres of upland restoration.
5. The project will pay into the Tree Fund in lieu of providing mitigation for tree removals.

**THEREFORE**, the Environmental Commission recommends approval of the amendments.

**VOTE: 10-0**

For: Kevin Ramberg, Perry Bedford, Jennifer Bristol, Richard Brimer, Hanna Cofer, Mariana Krueger, Colin Nickells, Haris Qureshi, Melinda Schiera, David Sullivan

Against: none  
Abstain: none  
Recuse: none  
Absent: Peter Einhorn

Attest:

A handwritten signature in black ink that reads "KEVIN RAMBERG". The letters are slightly slanted and connected in a cursive-like fashion.

Kevin Ramberg, Environmental Commission Chair



# Little Bear Creek Recharge Enhancement Project

C20-2023-0009

**Capital Improvement Project 6660.024**

SP-2022-0462D

*Scott E. Hiers, P.G.  
Watershed Protection Manager  
Project Coordinator*





C20-2023-0009

Site

- Austin ETJ
- Austin City Limits
- Edwards Aquifer Recharge Zone
- Edwards Aquifer Contributing Zone
- Watershed Areas Full Extent



0 5 10 Miles



# Project SOS Amendments

## **LDC 25-8-263: Floodplain modification within the Critical Water Quality Zone.**

- Diversion channel

## **LDC 25-8-514: Development in the Critical Water Quality Zone**

- Diversion channel



# Project SOS Amendments

## LDC 25-8-342: Fill in excess of 4-ft

- Spoils disposal in quarry
- Diversion channel transition

## LDC 25-8-341: Cut in excess of 4-ft

- Diversion channel
- Pilot channel
- Spillway



# Project SOS Amendments



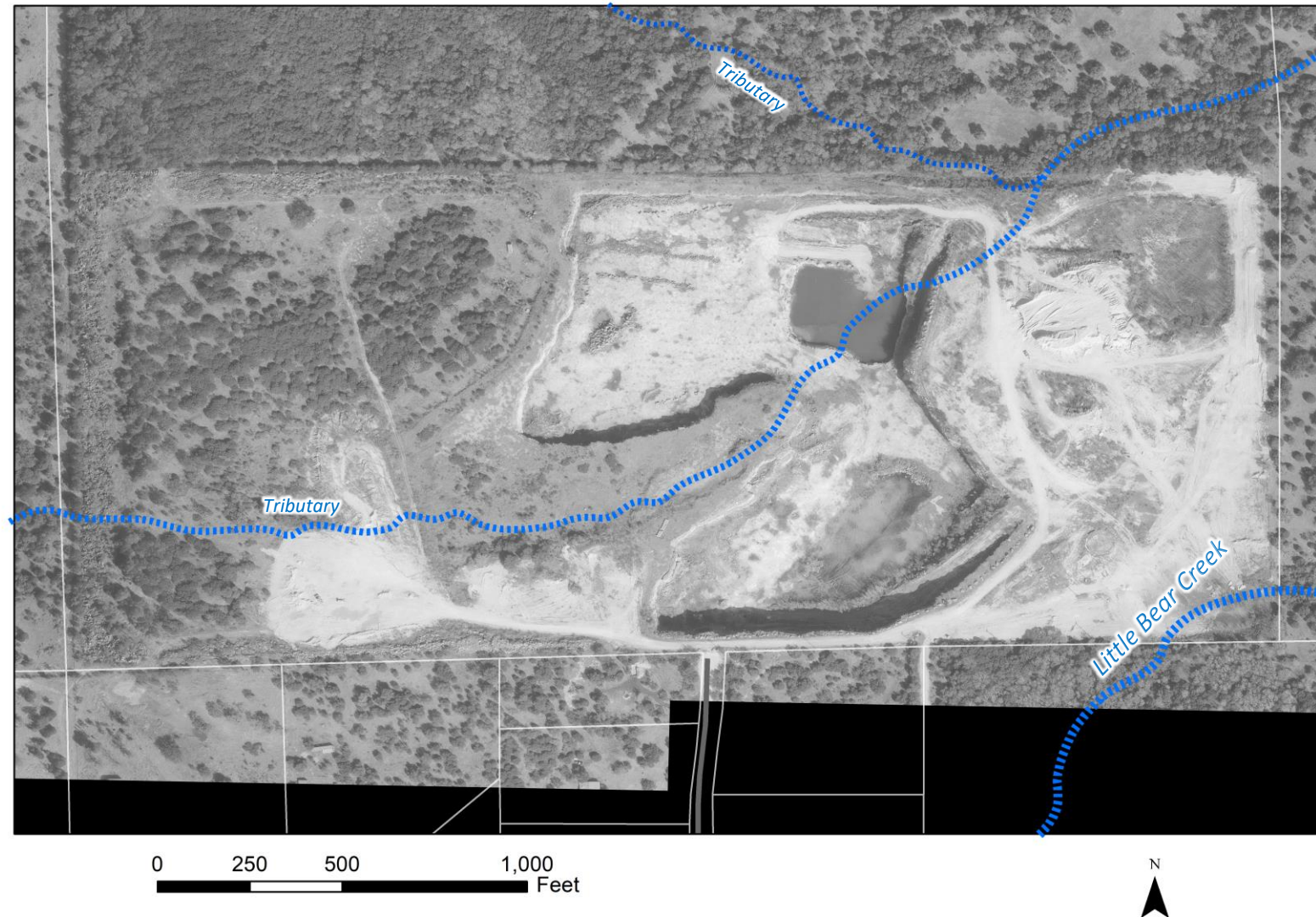
## LDC 25-8-482: Construction in the Water Quality Transition Zone

- Diversion channel
- Realignment of unimproved maintenance road





1997

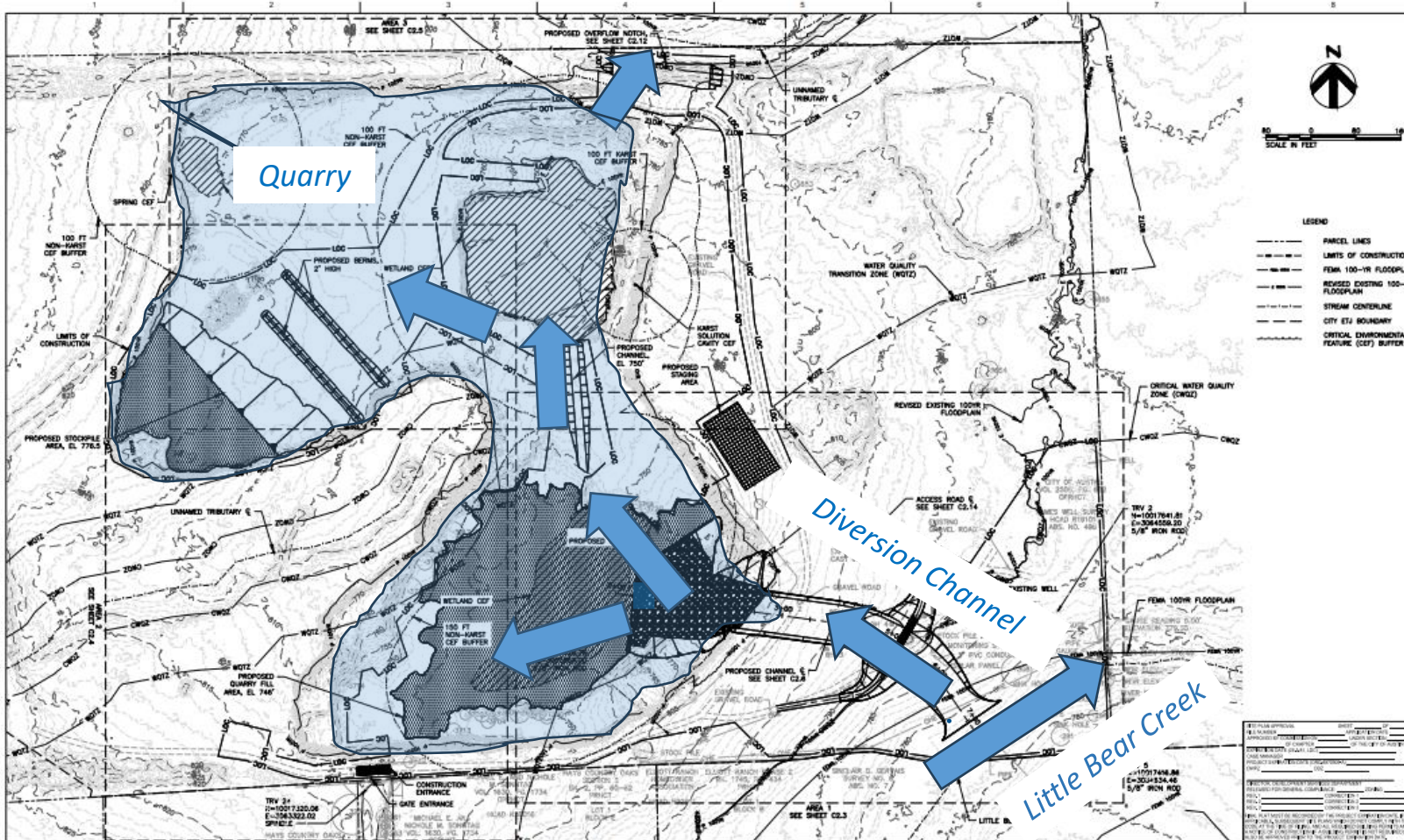


Limestone quarry  
operations have  
altered the site



# What is the Project?

## 100% Design Recharge Enhancement Project



|                                   |                            |
|-----------------------------------|----------------------------|
| PROJECT MANAGER: S. STOWART, P.E. | DESIGNER: S. STOWART, P.E. |
| DRAWN: J. GANTY                   | CHECKED BY: S. MARTIN      |
| PROJECT NUMBER: 1014030           |                            |
| DATE: 10/14/2022                  |                            |
| DESCRIPTION: QUARRY SITE PLAN     |                            |



LITTLE BEAR CREEK  
RECHARGE ENHANCEMENT  
FACILITY  
CIP 0000.024

SP-2022-0462D

QUARRY SITE PLAN

FILENAME: G1.4.DWG  
SCALE: 1" = 80'

SHEET  
G1.4  
4 of 39





# Floodplain Modification and Construction in the WQTZ

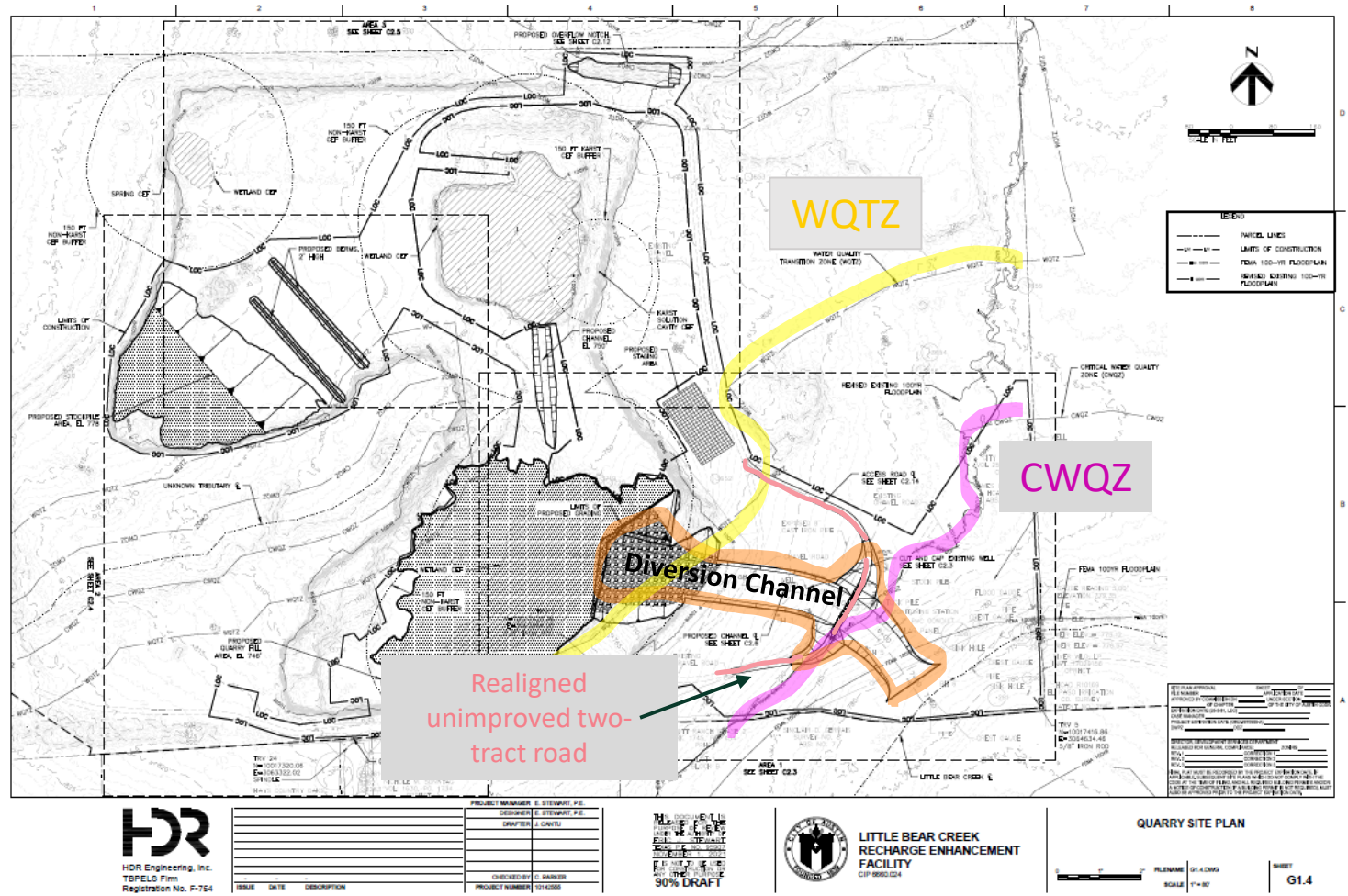


## LDC 25-8-263

To allow floodplain modification within a Critical Water Quality Zone (CWQZ).

## LDC 25-8-482

To allow development in a water quality transition zone (WQTZ) that lies over the Edwards Aquifer Recharge Zone in the Barton Springs Zone.

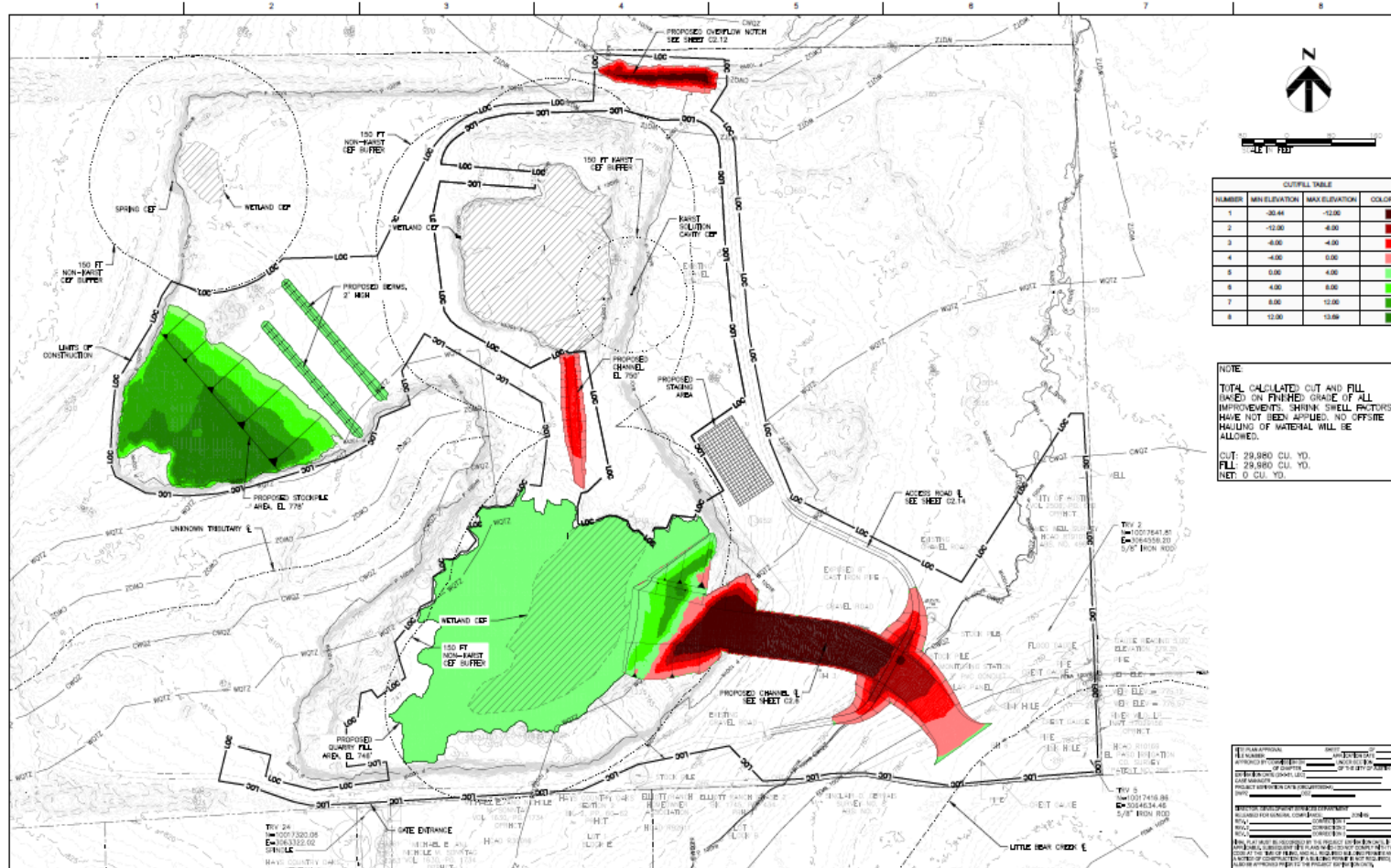




# Cut and Fill



## LDC 25-8-341 LDC 25-8-342



| CUT/FILL TABLE |               |               |             |
|----------------|---------------|---------------|-------------|
| NUMBER         | MIN ELEVATION | MAX ELEVATION | COLOR       |
| 1              | -30.44        | -12.00        | Dark Red    |
| 2              | -12.00        | -8.00         | Red         |
| 3              | -8.00         | -4.00         | Light Red   |
| 4              | -4.00         | 0.00          | Pink        |
| 5              | 0.00          | 4.00          | Light Green |
| 6              | 4.00          | 8.00          | Green       |
| 7              | 8.00          | 12.00         | Dark Green  |
| 8              | 12.00         | 13.69         | Dark Green  |

- To allow cut in excess of 4 feet.
- To allow fill in excess of 4 feet.



|                                   |                            |
|-----------------------------------|----------------------------|
| PROJECT MANAGER: E. STEWART, P.E. | DESIGNER: E. STEWART, P.E. |
| DRAWN: J. DANTU                   | CHECKED BY: C. PARKER      |
| PROJECT NUMBER: 104355            |                            |



LITTLE BEAR CREEK  
RECHARGE ENHANCEMENT  
FACILITY  
CIP 9955.024

### CUT/FILL MAP

|                     |             |
|---------------------|-------------|
| FILE NAME: C2.2.DWG | SHEET: C2.2 |
| SCALE: 1" = 50'     |             |





# Staff Recommendation

- **Staff recommends approval of the proposed amendment and associated variances with the following conditions:**
- The project will provide compliant SOS non-degradation water quality treatment or what is technically feasible for all new and reconstructed impervious cover for all new impervious.
- 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 tree mitigation on site.



# Questions?

## Contact Information:

Scott E. Hiers (WPD)

[scott.hiers@austintexas.gov](mailto:scott.hiers@austintexas.gov)

Leslie Lilly (WPD)

[leslie.lilly@austintexas.gov](mailto:leslie.lilly@austintexas.gov)

**INTERLOCAL AGREEMENT BETWEEN THE CITY OF AUSTIN, LOWER  
COLORADO RIVER AUTHORITY AND BARTON SPRINGS/EDWARDS  
AQUIFER CONSERVATION DISTRICT REGARDING  
THE STONELEDGE QUARRY RECHARGE ENHANCEMENT PROJECT**

The **CITY OF AUSTIN** (the “City”), the **LOWER COLORADO RIVER AUTHORITY** (“LCRA”) and the **BARTON SPRINGS/EDWARDS AQUIFER CONSERVATION DISTRICT** (the “District”) (hereafter referred to as the “Parties”) enter into this Interlocal Agreement (“Agreement”) pursuant to Texas Government Code Chapter 791 (“Interlocal Cooperation Act”) to work together and commit various resources to develop the Stoneledge Quarry Edwards Aquifer Recharge Enhancement Project.

**I.  
RECITALS**

**WHEREAS**, the Barton Springs Segment of the Edwards Aquifer (the “Aquifer”) is a unique underground system of water bearing formations in Central Texas, wherein water enters the Aquifer through the ground as surface stream inflow and rainfall infiltration, which is rapidly transported in the subsurface by solution conduits and the intrinsic permeability of the rock, and leaves the Aquifer through well withdrawals and spring flows;

**WHEREAS**, the complex springs known as Barton Springs is located inside the municipal boundaries of the City and is the primary, direct natural outlet for water flowing through the Aquifer and the only known habitat for the endangered Barton Springs Salamander *Eurycea sosorum*, and the Austin Blind Salamander, *Eurycea waterlooensis*, which is a candidate for endangered species listing under the federal Endangered Species Act;

**WHEREAS**, Barton Springs is an important recreational, cultural, historical, and water resource for Austin and Central Texas;

**WHEREAS**, the Aquifer is a federally-designated sole-source of drinking water, 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;

**WHEREAS**, increasing the amount of clean water entering the Aquifer will benefit the Aquifer, the springs, the Colorado River, and aquatic and terrestrial species dependent on this water;

**WHEREAS**, the City has purchased an 85 acre tract in northern Hays County that includes an 18 acre quarry (“Stoneledge Quarry”);

**WHEREAS**, the City proposes to construct, operate and maintain an Aquifer recharge project at Stoneledge Quarry that will divert flood flows above 50 cubic feet per second from Little Bear Creek into Stoneledge Quarry, which is expected to seep into the Aquifer over a period of time thereby increasing Aquifer storage and enhancing flows at Barton Springs;

**WHEREAS**, the City through land purchases and conservation easements now protects over 23,000 acres of land to benefit water quality and quantity that contributes to Barton Springs, including over 40 percent of the watershed upstream of Stoneledge Quarry;

**WHEREAS**, the City has substantial investment in preserving water quality and quantity in the Barton Springs Zone;

**WHEREAS**, the Project is a cooperative effort by the City, LCRA, and the District;

**WHEREAS**, the Hill Country Conservancy has assisted in purchase and plan development of the project;

**WHEREAS**, the Barton Springs/Edwards Aquifer Conservation District is a Groundwater Conservation District created by an act of the 70<sup>th</sup> Legislature for the purpose of providing for conservation, preservation, protection, recharging, and prevention of waste of groundwater and of groundwater reservoirs in the Barton Springs segment of the Edwards Aquifer;

**WHEREAS**, the District has analyzed the estimated downgradient area of the Aquifer that will be provided enhanced flow by the Project and has determined that downgradient areas are predominately built out, are away from major pumping centers, and expect no significant new well permits for this area;

**WHEREAS**, the Lower Colorado River Authority (LCRA) is a conservation and reclamation district and political subdivision for the state created under Article XVI, Section 59 of the Texas Constitution;

**WHEREAS**, LCRA holds downstream senior water rights in the lower Colorado River and has obligations to maintain certain instream flows in the lower Colorado River;

**WHEREAS**, LCRA has pending before the Texas Commission on Environmental Quality ("TCEQ") an application for all remaining unappropriated flows in the lower Colorado River (Application No. 5731);

**WHEREAS**, flow from Barton Springs enters Lady Bird Lake and typically flows downstream through Longhorn Dam, thereby contributing to the instream flow needs of the lower Colorado river at the Austin gage immediately downstream of Longhorn Dam and the needs of downstream senior water rights;





**WHEREAS**, the LCRA and the District entered into a Memorandum of Understanding, dated March 7, 1988, with the stated purpose of “establish[ing] a cooperative framework within which they both may work toward their common goal of conservation and protection of the Barton Springs segment of the Edwards Aquifer” and whereby LCRA expressed its willingness to cosponsor projects and provide in-kind services and support for projects that conserve and develop the aquifer in a cost-effective and beneficial manner, specifically recognizing that excess flood flows may be an appropriate source of water for such projects;

**WHEREAS**, the LCRA and the City entered into a Settlement Agreement dated June 18, 2007, whereby LCRA and the City created a formal water resource management partnership for the purposes of “evaluat[ing] and implementing strategies that will optimize water supplies to meet water needs of the [City’s and LCRA’s] customers and the environment”;

**WHEREAS**, the Stoneledge Quarry Edwards Aquifer Recharge Enhancement Project meets the stated purpose of the 1988 MOU between LCRA and the District and which is consistent with the purposes of the 2007 Settlement Agreement between LCRA and Austin;

**NOW THEREFORE**, in consideration of these premises, the mutual covenants of each party, and other good and valuable consideration, the receipt and sufficiency of which are acknowledged, the Parties agree as follows:

## **II. DEFINITIONS**

**2.01. Project.** Stoneledge Quarry Edwards Aquifer Recharge Enhancement Project, consists of the construction, operation and maintenance of the Facilities described in Section 2.02, and is located adjacent to Little Bear Creek in Hays County, (approximately 2.6 miles NW of the intersection of FM 1626 and FM 967) on 85 acres of property purchased by the City. (See Map attached as **Exhibit A.**) This 85 acre tract contains the 18 acre quarry adjacent to Little Bear Creek and all the area on which the Facilities will be constructed, operated and maintained.

**2.02. Facilities.** Flood diversion structures necessary to divert, monitor, and recharge flood waters from Little Bear Creek into Stoneledge Quarry.

**2.03. Drought Trigger Levels.** As defined in the District’s Rules, the level of water in the Aquifer and flow amounts at Barton Springs that determine whether the District puts into effect certain Aquifer pumping restrictions.





### **III. CITY OF AUSTIN RESPONSIBILITIES**

**3.01.** The City will fund construction, operation, and maintenance of all of the Facilities associated with the Project. The Facilities will be designed to divert into Stoneledge Quarry flows in Little Bear Creek above 50 cubic feet per second, which occurs during flood events.

**3.02.** The City will apply for and pay all necessary application costs and notice fees associated with obtaining State water rights permits from the Texas Commission on Environmental Quality and any other necessary permits from local, state or federal agencies.

**3.03.** The City will monitor and keep records of inflows into Stoneledge Quarry for the first 10 years of operation and will report to the other Parties on an annual basis.

**3.05.** The City will fund separate research related to Aquifer water as it deems appropriate.

**3.06.** The City will work with the other Parties on the development and implementation of a monitoring plan for the Project.

### **IV. LOWER COLORADO RIVER AUTHORITY RESPONSIBILITIES**

**4.01.** LCRA will reserve 40.2 acre-feet of firm water per year for use by the Project, as presented in surface water modeling technical memorandum attached as **Exhibit B**. The reservation shall be effective upon execution of this Agreement and shall continue for a period of fifty (50) years from the date the issuance of the applicable State water rights permit for this project.

**4.02.** LCRA will provide in-kind staff services, as determined by LCRA as necessary, to support acquisition of applicable State water rights permits for this project and will participate in review and evaluation of project implementation and monitoring.

**4.03.** LCRA will support issuance of the applicable State water rights permit for the Project.



**V.  
BARTON SPRINGS/EDWARDS AQUIFER CONSERVATION DISTRICT  
RESPONSIBILITIES**

**5.01.** The District will examine the feasibility of adjusting Drought Trigger Levels to account for additional water in the Aquifer due to recharge from the Stoneledge Quarry.

**5.02.** Any future withdrawals by current or new exempt users notwithstanding, the District will not consider water entering the Aquifer resulting from the Project as new water supply to be permitted by the District as available during severe drought and, to the extent such new supplies are quantified by scientific consensus as sustainable additional net recharge during severe drought, the District will designate them as Ecological Flows, as allowed under current rules.

**5.03.** The District will provide in-kind staff services, as determined by the District as necessary, to support acquisition of water rights and applicable State permits.

**5.04.** The District will contribute data collected under previous studies, including tracing, water quality sampling, monitoring wells, and water level measurements.

**VI.  
WATER RIGHTS**

**6.01.** The Parties agree that water entering the Colorado River via Barton Springs and Barton Creek is state water subject to the prior appropriation system and a call by senior downstream water rights in the Colorado River Basin.

**6.02.** The Parties agree that water discharging from the Aquifer into Barton Springs is subject to use authorized under the City's water rights and LCRA's downstream senior water rights and LCRA's Water Management Plan.

**6.03** The Parties recognize that the owner of the property overlying the groundwater within the boundaries of the District may have a legal claim to the groundwater, subject to restrictions and regulations imposed by the District.

**VII.  
INTERGOVERNMENTAL COMMUNICATIONS**

**7.01** To provide for consistent and effective communication between BSEACD, Austin, and the LCRA, each Party shall appoint a Principal Representative to serve as its central point of contact on matters relating to this Agreement. The BSEACD has



designated W. F. "Kirk" Holland as its Principal Representative, Austin has designated David A. Johns as its Principal Representative, and LCRA has designated Suzanne Zarling, Executive Manager, Water Services as its Principal Representative.

## VIII. GENERAL PROVISIONS

**8.01. Interpretation.** Except where the context otherwise clearly requires, in this Agreement:

- (a) words imparting the singular will include the plural and vice versa;
- (b) all exhibits attached to this Agreement are incorporated by reference for all purposes as if fully copied and set forth at length; and
- (c) references to any document mean that document as amended or as supplemented from time to time; and references to any party mean that party, its successors, and assigns.

**8.02. Entire Agreement.** This Agreement, including any attached exhibits, constitutes the entire agreement between the parties regarding recharge of Stoneledge Quarry and supersedes all prior or contemporaneous understandings or representations, whether oral or written, respecting recharge of Stoneledge Quarry.

**8.03. Amendment.** No amendment of this Agreement will be effective until the amendment has been reduced to writing, each party has duly approved it, and is signed by the authorized representatives of the parties. Any amendment will incorporate this Agreement in every particular not otherwise changed by the amendment.

**8.04 Termination of 1988 MOU Between LCRA and District.** The Memorandum of Understanding between Lower Colorado River Authority and Barton Springs-Edwards Aquifer Conservation District, dated March 7, 1988, is hereby terminated.

**8.05. No Amendment of Other Agreements.** Unless otherwise expressly stipulated, this Agreement is separate from and will not constitute an amendment or modification of any other agreement between the parties.

**8.06. Other Instruments, Actions.** The parties agree that they will take such further actions and execute and deliver any other consents, authorizations, instruments, or documents that are necessary or incidental to achieve the purposes of this Agreement.

**8.07. No Third Party Beneficiaries.** Except as expressly provided in this Agreement, nothing will be construed to confer upon any person other than the parties any rights, benefits or remedies under or because of this Agreement.





**8.08. No Joint Venture, Partnership, Agency.** This Agreement will not be construed in any form or manner to establish a partnership, joint venture or agency, express or implied, nor any employer-employee or borrowed servant relationship by and among the parties.

**8.09. Applicable Law.** This Agreement will be construed under and according to the laws of the State of Texas.

**8.10. Severability.** The provisions of this Agreement are severable. If any court of competent jurisdiction will ever holds any word, phrase, clause, sentence, paragraph, section, or other part of this Agreement or the application of it to any person or circumstance to be invalid or unconstitutional for any reason, it will not affect the remainder of this Agreement and, in such event, this Agreement will be construed as if it had never contained such invalid or unconstitutional portion in it.

**8.11. Venue.** Venue for any suit arising under this Agreement will be in Travis County, Texas.

**8.12. Duplicate Originals.** The parties may execute this Agreement in one or more duplicate originals each of equal dignity.


**8.13. Expiration of Agreement.** This Agreement terminates upon the earlier of the expiration of the LCRA's reservation of water for this project or upon the termination or denial of the required State water rights permit, unless otherwise extended by separate written agreement.

**8.14. Effective Date.** This Agreement will be effective upon due execution by all parties.

**APPROVED AS TO FORM:**

**CITY OF AUSTIN:**

  
Assistant City Attorney

By:   
Sue Edwards  
Assistant City Manager

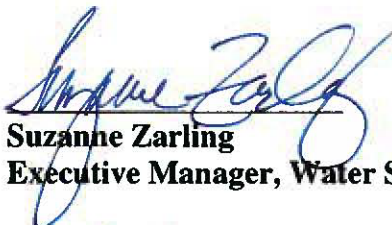
Date: 4/2/11



**APPROVED AS TO FORM:**

  
Attorney

**LOWER COLORADO RIVER  
AUTHORITY:**

By:   
Suzanne Zarling  
Executive Manager, Water Services

Date: 4/14/2011

**APPROVED AS TO FORM:**

  
Bill Dugat  
General Counsel

**BARTON SPRINGS/EDWARDS  
AQUIFER CONSERVATION  
DISTRICT:**

By:   
Mary Stone  
President, Board of Directors

Date: May 19, 2011

**ATTEST:**

By:   
C. Craig Smith  
Secretary, Board of Directors

Date: 5/19/11



**EXHIBIT A**  
**LOCATION MAP FOR STONELEDGE QUARRY**









**EXHIBIT B**

**EVALUATION OF THE IMPACTS OF PROPOSED DIVERSIONS FROM  
LITTLE BEAR CREEK INTO STONELEDGE QUARRY**





## MEMORANDUM

TO: Austin-Lower Colorado River Authority Water Partnership Technical Committee

FROM: Richard Hoffpauir  
Consultant

Kris Martinez, P.E.  
Lower Colorado River Authority

DATE: April 21, 2009

RE: Evaluating the Impacts of Proposed Diversions from Little Bear Creek into  
Stoneledge Quarry

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### **1. Summary**

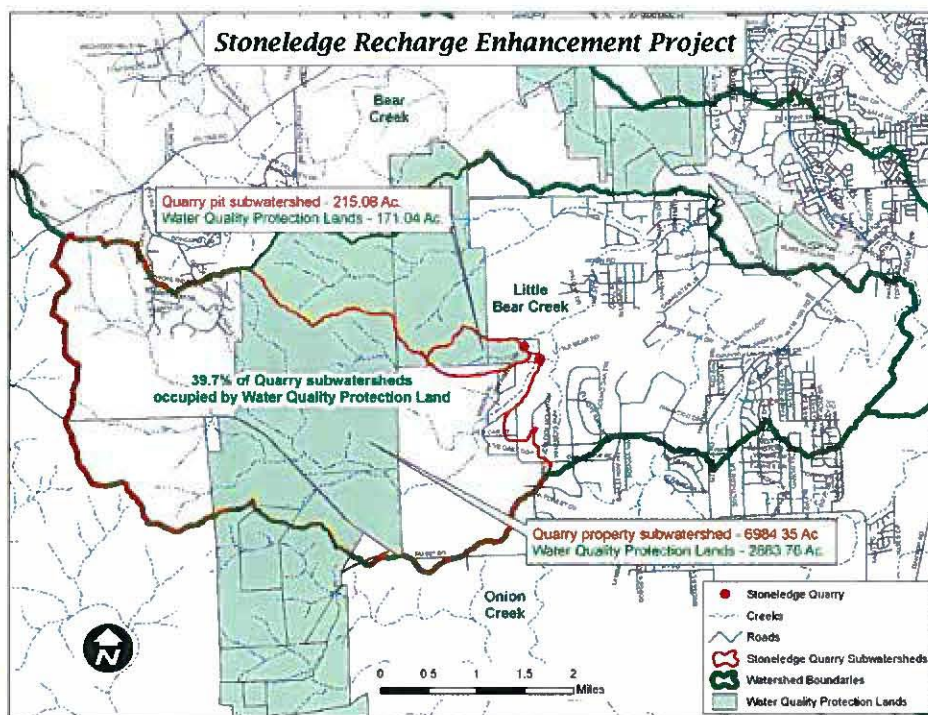
The City of Austin proposes to use the Stoneledge Quarry to enhance the discharge at Barton Springs. The project will also serve as a pilot study to evaluate the benefits of developing recharge enhancement projects. A portion of the storm flows from Little Bear Creek would be diverted into a conveyance channel that connects with the quarry. Once impounded, the water would slowly recharge the Barton Springs Edwards Aquifer (BSEA) through the quarry's karst features. The storage capacity of the quarry is 385 acre-feet (ac-ft).

The TCEQ Water Availability Model (WAM) Run 3 Version 05/31/05 was used to evaluate the impact of the proposed diversion from Little Bear Creek on LCRA's downstream water rights associated with the Garwood, Lakeside, Pierce Ranch and Gulf Coast irrigation operations. The model was also used to estimate the amount of additional releases that would be needed to support downstream environmental flows conditions related to LCRA's Water Management Plan (WMP). Using a priority date senior to LCRA's Garwood water right, WAM results indicate that the proposed diversion on Little Bear Creek could cause a reduction in run-of-river (ROR) availability for the downstream water rights associated with the Gulf Coast and Lakeside irrigation operations. These two water rights are junior to the Garwood water right. The maximum reduction in ROR availability on a ten-year average basis is estimated to be approximately 15 acre-feet per year (ac-ft/yr). This reduction in availability would have to be made up with stored water releases from lakes Buchanan and Travis. WAM results also indicate that additional releases would be needed to support downstream environmental flows related to LCRA's WMP. The maximum amount of additional releases on a ten-year average basis is estimated to be 24 ac-ft/yr. The total combined impact from the reduction in ROR availability and additional releases is estimated to be 39 ac-ft/yr. An amount greater than 39 ac-ft/yr would need to be released to overcome delivery losses between the lakes, environmental flow gage points and the irrigation divisions. Delivery losses are estimated

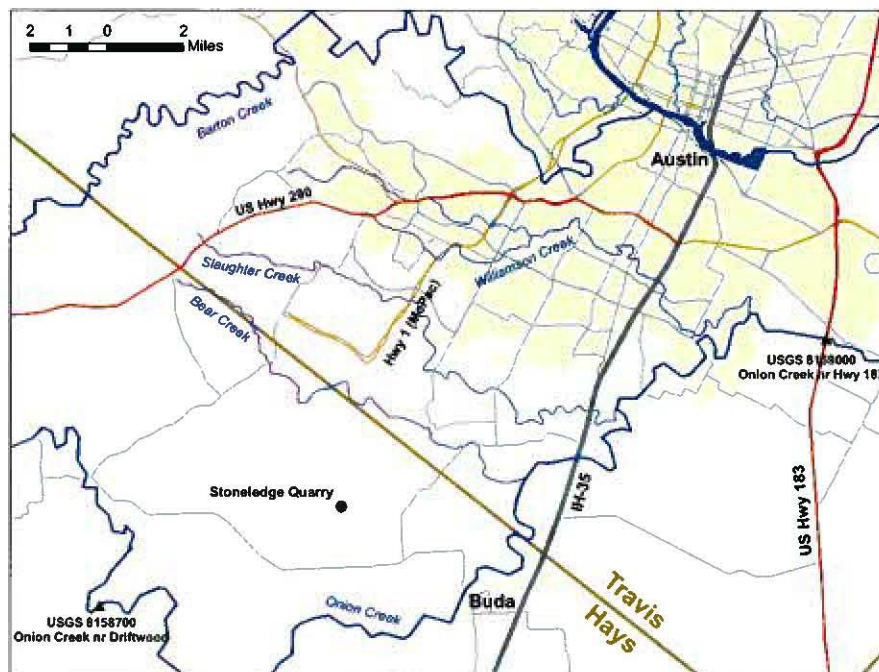




**Figure 1. Location of the Stoneledge Recharge Enhancement Project**



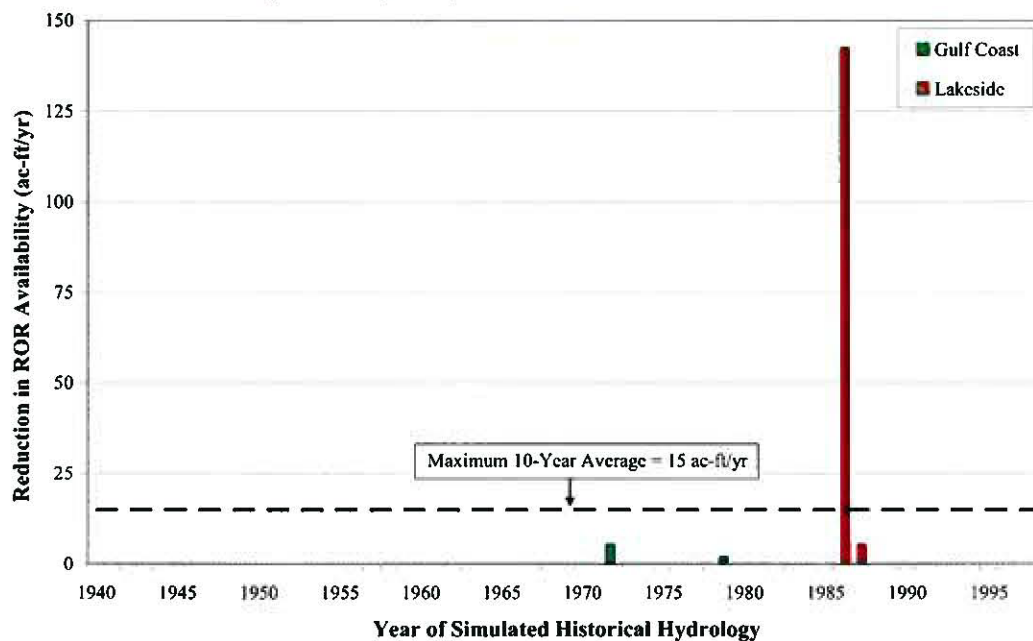
**Figure 2. Location of Stoneledge Quarry in relation to Austin**





Proposed diversions from Little Bear Creek into the Stoneledge Quarry were modeled with a priority date senior to LCRA's irrigation rights, simulating an operation that would allow diversions to occur without reduction from downstream priority calls on inflow. The maximum reduction in ROR availability on a ten-year average basis for LCRA's downstream irrigation water rights is estimated to be 15 ac-ft/yr. Figure 5 illustrates the WAM's estimated reduction of water availability to LCRA's irrigation rights downstream of the Onion Creek watershed as a result of the seniority assumption for Stoneledge Quarry.

**Figure 5. Reduction in Run-of-River Availability for Downstream LCRA Irrigation Rights by Senior Diversions on Little Bear Creek**



Senior diversions into Stoneledge Quarry from Little Bear Creek would also reduce the flow on Onion Creek that contribute to flow in the Colorado River. To make up for the reduction, LCRA would need to release more water to support instream flows on the Colorado River and freshwater inflows to Matagorda Bay. The maximum amount of additional releases on a ten-year average basis is estimated to be 24 ac-ft/yr. Figure 6 shows the estimated amount of additional releases needed to support environmental flows under LCRA's WMP.





WAM representation of the rate of recharge, and therefore help to improve the simulated time series of available storage capacity to be filled by diversions from Little Bear Creek and the quarry's natural drainage area.

The City of Austin Watershed Protection and Development Review Department has and continues to collect stream flow and precipitation data at the proposed diversion channel location on Little Bear Creek. The data covers November 3, 2003 through the present in 1-minute increments. These data were used to calibrate an equation for naturalized flow transfer within the WAM. As more data become available, the equation of gaged to ungaged transfer of naturalized flow within the WAM may be improved.

**From:** [Tepper, Rachel](#)  
**To:** [Hiers, Scott](#)  
**Cc:** [Johns, David](#); [Lilly, Leslie](#); [Books, Paul](#); [Barton-Holmes, Christine](#)  
**Subject:** RE: Status of Affordability Impact Statement Request (AISR) - Little Bear Recharge Enhancement Project.  
**Date:** Monday, June 12, 2023 4:13:16 PM  
**Attachments:** [image001.png](#)

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Hi Scott,

I am filling in for Tymon while he is out.

While we usually aim to have the AIS complete by COJC, our deadline is actually Planning Commission.

I can assure you we will provide it to you well in advance of your Planning Commission date.

If you can send draft code language when it is available, that would be very helpful.

Thanks so much,

Rachel

---

**From:** Khamsi, Tymon <Tymon.Khamsi@austintexas.gov>  
**Sent:** Monday, June 12, 2023 12:42 PM  
**To:** Tepper, Rachel <Rachel.Tepper@austintexas.gov>  
**Subject:** Fwd: Status of Affordability Impact Statement Request (AISR) - Little Bear Recharge Enhancement Project.

Hey, set up my away message and this came through beforehand!

---

**From:** Hiers, Scott <[scott.hiers@austintexas.gov](mailto:scott.hiers@austintexas.gov)>  
**Sent:** Monday, June 12, 2023 12:22:54 PM  
**To:** Khamsi, Tymon <[Tymon.Khamsi@austintexas.gov](mailto:Tymon.Khamsi@austintexas.gov)>  
**Cc:** Johns, David <[David.Johns@austintexas.gov](mailto:David.Johns@austintexas.gov)>; Lilly, Leslie <[Leslie.Lilly@austintexas.gov](mailto:Leslie.Lilly@austintexas.gov)>; Books, Paul <[Paul.Books@austintexas.gov](mailto:Paul.Books@austintexas.gov)>; Barton-Holmes, Christine <[Christine.Barton-Holmes@austintexas.gov](mailto:Christine.Barton-Holmes@austintexas.gov)>  
**Subject:** RE: Status of Affordability Impact Statement Request (AISR) - Little Bear Recharge Enhancement Project.

Tymon,

I'm just checking-in to see on the status of AIS for the Little Bear Recharge Enhancement Project. The backup for COJC is due on Wednesday, June 14<sup>th</sup>. I have presentation, Lesile Lilly and Chirstine are working on Staff Report. The draft Code is not available yet, and I assume you or your staff will

have AIS already for the backup.

Thanks!

**Scott E. Hiers, P.G.**

*Watershed Program Manager – Environmental Monitoring and Compliance*  
City of Austin | Watershed Protection Department

Office: (512) 974-1916

Cell: (737) 263-8266

[www.austintexas.gov/watershed](http://www.austintexas.gov/watershed)



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**From:** Khamsi, Tymon <[Tymon.Khamsi@austintexas.gov](mailto:Tymon.Khamsi@austintexas.gov)>

**Sent:** Tuesday, May 23, 2023 4:31 PM

**To:** Hiers, Scott <[scott.hiers@austintexas.gov](mailto:scott.hiers@austintexas.gov)>

**Cc:** Johns, David <[David.Johns@austintexas.gov](mailto:David.Johns@austintexas.gov)>

**Subject:** RE: Status of Affordability Impact Statement Request (AISR)

Hi Scott,

Absolutely! Thank you for filling out the Airtable form early in the process. We are working through the queue of AIS requests and are working with awareness of the deadlines for this particular amendment. We strive to return them to submitters before Code and Ordinance Joint Subcommittee backup is due, which would be June 14<sup>th</sup> at the latest for this amendment. If you have any more questions, please let me know!

Cheers,

Tymon

---

**From:** Hiers, Scott <[scott.hiers@austintexas.gov](mailto:scott.hiers@austintexas.gov)>

**Sent:** Tuesday, May 23, 2023 10:50 AM  
**To:** Khamsi, Tymon <[Tymon.Khamsi@austintexas.gov](mailto:Tymon.Khamsi@austintexas.gov)>  
**Cc:** Johns, David <[David.Johns@austintexas.gov](mailto:David.Johns@austintexas.gov)>  
**Subject:** Status of Affordability Impact Statement Request (AISR)

Tymon,

Watershed Protection Department submitted Affordability Impact Statement Request via the online site (<https://airtable.com/shr1Tlo3xJlmP9RPs>)

on May 3<sup>rd</sup>, 2023, but we haven't heard back on the status of the review. Is possible to get a quick status update for our request?

The request is for a site-specific amendment to SOS for the constructions of diversion channel on Water Quality Protection Lands – CIP 6661.024, which is the Little Bear Creek Recharge Enhancement Project. We are on schedule for the June 21<sup>st</sup> Code and Ordinance Joint Subcommittee meeting, and we want to make sure all request documentation is on schedule.

Thanks

**Scott E. Hiers, P.G.**

*Watershed Program Manager – Environmental Monitoring and Compliance*  
City of Austin | Watershed Protection Department

Office: (512) 974-1916

Cell: (737) 263-8266

[www.austintexas.gov/watershed](http://www.austintexas.gov/watershed)



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## TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



### WATER USE PERMIT

PERMIT NO. 13237 TYPE: § 11.101  
Permittee: City of Austin Address: 301 West 2<sup>nd</sup> Street  
Austin, Texas 78763-1088  
Filed: October 17, 2016 Granted: August 25, 2022  
Purpose: Recharge County: Hays  
Watercourse: Little Bear Creek, tributary of  
Onion Creek, tributary of the  
Colorado River Watershed: Colorado River Basin

WHEREAS, the City of Austin (City/Permittee) seeks authorization to divert not to exceed 486 acre-feet of water per year from a point on Little Bear Creek, tributary of Onion Creek, tributary of the Colorado River, Colorado River Basin, in Hays County, at a maximum diversion rate of 3,209 cfs (1,440,841 gpm), for storage in an off-channel reservoir (Stoneledge Quarry) for subsequent use for recharge of the Barton Springs segment of the Edwards Aquifer; and

WHEREAS, the off-channel reservoir impounds 385 acre-feet of water and is located at Latitude 30.126233° N, Longitude 97.906766° W in Hays County; and

WHEREAS, the requested diversion point is located at Latitude 30.124706° N, Longitude 97.904243° W in Hays County; and

WHEREAS, the City will divert water from Little Bear Creek via a diversion channel, connected to the off-channel reservoir, that will limit diversion to approximately 50 percent of the streamflow in Little Bear Creek in excess of 50 cfs; and

WHEREAS, the City provided an *Interlocal Agreement Between the City of Austin, Lower Colorado River Authority and Barton Springs/Edwards Aquifer Conservation District Regarding the Stoneledge Quarry Recharge Enhancement Project* in which the Lower Colorado River Authority (LCRA) will reserve 40.2 acre-feet of water per year for a 50-year term for use with the City of Austin's Stoneledge Quarry recharge project to account for any reduction of run-of-river flows to LCRA's downstream senior water rights, downstream environmental flows and to account for conveyance losses associated with any necessary LCRA compensatory releases; and

WHEREAS, the Texas Commission on Environmental Quality finds that jurisdiction over the application is established; and

WHEREAS, the Executive Director recommends special conditions be included in this permit; and



WHEREAS, the Commission has complied with the requirements of the Texas Water Code and Rules of the Texas Commission on Environmental Quality in issuing this permit;

NOW, THEREFORE, this permit, designated Water Use Permit No. 13237, is issued to the City of Austin, subject to the following terms and conditions:

1. USE

Permittee is authorized to divert not to exceed 486 acre-feet of water per year from Little Bear Creek for storage in an off-channel reservoir (Stoneledge Quarry) for subsequent use for recharge of the Barton Springs segment of the Edwards Aquifer.

2. DIVERSION

Permittee is authorized to divert from a point on Little Bear Creek, located at Latitude 30.124706° N, Longitude 97.904243° W in Hays County at a maximum diversion rate of 3,209 cfs (1,440,841 gpm).

3. PRIORTIY DATE

The time priority of Permittee's right is October 17, 2016.

4. SPECIAL CONDITIONS

- A. The authorizations in this permit are contingent on Permittee's compliance with any applicable state or federal permitting requirements.
- B. Permittee shall implement reasonable measures in order to reduce impacts to aquatic resources due to entrainment or impingement resulting from diversion of water from Little Bear Creek.
- C. For purposes of applying the environmental flow requirements in Paragraphs 4.D. - 4.L. of this permit, the measurement point shall be at Permittee's stream gage on Little Bear Creek (reference device), required by Paragraph 4.P. of this permit.
- D. Permittee shall not divert water unless streamflow exceeds the following environmental flow values at Permittee's reference device, subject to the requirements of Paragraphs 4.C. - 4.N. In paragraphs 4.D. - 4.L, (1) "measured streamflow" means a rate of flow determined by a reading at the reference device; and (2) "adjusted streamflow" means the rate of flow that would have occurred at the reference device in the absence of diversions pursuant to this permit, calculated by adding the diversion rate to measured streamflow.

| Season | Month    | Hydrologic Condition | Subsistence | Base    | Seasonal Pulse (2 per season)                |
|--------|----------|----------------------|-------------|---------|--|
| Winter | December | Severe               | 0.1 cfs     | 0.1 cfs | Magnitude:<br>2.5 cfs<br>Duration:<br>4 days |
|        | December | Dry                  | N/A         | 0.1 cfs |  |
|        | December | Average              | N/A         | 0.2 cfs |  |
|        | January  | Severe               | 0.1 cfs     | 0.1 cfs |  |
|        | January  | Dry                  | N/A         | 0.1 cfs |  |
|        | January  | Average              | N/A         | 0.2 cfs |  |
|        | February | Severe               | 0.1 cfs     | 0.1 cfs |  |

|                                   |           |                |         |         |  |
|-----------------------------------|-----------|----------------|---------|---------|--|
|                                   | February  | Dry            | N/A     | 0.1 cfs |  |
|                                   | February  | Average        | N/A     | 0.2 cfs |  |
| Spring                            | March     | Severe         | 0.1 cfs | 0.1 cfs | Magnitude:<br>2.5 cfs<br>Duration:<br>4 days |
|                                   | March     | Dry            | N/A     | 0.1 cfs |  |
|                                   | March     | Average        | N/A     | 0.2 cfs |  |
|                                   | April     | Severe         | 0.1 cfs | 0.1 cfs |  |
|                                   | April     | Dry            | N/A     | 0.1 cfs |  |
|                                   | April     | Average        | N/A     | 0.2 cfs |  |
|                                   | May       | Severe         | 0.1 cfs | 0.2 cfs |  |
|                                   | May       | Dry            | N/A     | 0.2 cfs |  |
|                                   | May       | Average        | N/A     | 0.3 cfs |  |
|                                   | June      | Severe         | 0.1 cfs | 0.2 cfs |  |
|                                   | June      | Dry            | N/A     | 0.2 cfs |  |
|                                   | June      | Average        | N/A     | 0.3 cfs |  |
| Summer                            | July      | Severe         | 0.1 cfs | 0.1 cfs | Magnitude:<br>2.5 cfs<br>Duration:<br>4 days |
|                                   | July      | Dry            | N/A     | 0.1 cfs |  |
|                                   | July      | Average        | N/A     | 0.2 cfs |  |
|                                   | August    | Severe         | 0.1 cfs | 0.1 cfs |  |
|                                   | August    | Dry            | N/A     | 0.1 cfs |  |
|                                   | August    | Average        | N/A     | 0.1 cfs |  |
| Fall                              | September | Severe         | 0.1 cfs | 0.1 cfs | Magnitude:<br>2.5 cfs<br>Duration:<br>4 days |
|                                   | September | Dry            | N/A     | 0.1 cfs |  |
|                                   | September | Average        | N/A     | 0.2 cfs |  |
|                                   | October   | Severe         | 0.1 cfs | 0.1 cfs |  |
|                                   | October   | Dry            | N/A     | 0.1 cfs |  |
|                                   | October   | Average        | N/A     | 0.2 cfs |  |
|                                   | November  | Severe         | 0.1 cfs | 0.1 cfs |  |
|                                   | November  | Dry            | N/A     | 0.1 cfs |  |
|                                   | November  | Average        | N/A     | 0.2 cfs |  |
| Pulse Frequency (1 per 18 months) |           |                |         |         |  |
| Pulse Magnitude                   |           | Pulse Duration |         |         |  |
| 6.8 cfs                           |           | 2 days         |         |         |  |

cfs = cubic feet per second    N/A = not applicable

- E. Seasons are defined as follows: Winter (December through February), Spring (March through June), Summer (July through August), and Fall (September through November).
- F. Permittee shall determine the hydrologic condition once per season. The conditions present on the last day of the month of the preceding season shall determine the hydrologic conditions and flow requirements for the following season. The combined storage in Lakes Travis and Buchanan, as reported by the Lower Colorado River Authority on its website, determines the hydrologic condition based on the storage levels set out below.

| Combined Reservoir Storage in Lakes<br>Travis and Buchanan (acre-feet) |                          |                           |
|--|--------------------------|---------------------------|
| SEVERE   | DRY                      | AVERAGE                   |
| less than<br>1,103,700   | 1,103,700 -<br>1,737,460 | greater than<br>1,737,460 |

**Subsistence Flow Special Conditions**

G. If reference device is located upstream of the diversion:

- a. Permittee shall not divert water if measured streamflow at the Permittee's reference device is equal to or below the applicable subsistence flow value for the season.
- b. If measured streamflow at the Permittee's reference device is above the applicable subsistence flow value for the season but below the applicable dry condition base flow value for the season, Permittee may only divert water during severe hydrologic conditions and only if measured streamflow reduced by the rate of diversion does not fall below the applicable subsistence flow value.

H. If reference device is located downstream of the diversion:

- a. Permittee shall not divert water if measured streamflow at the Permittee's reference device is equal to or below the applicable subsistence flow value for the season.
- b. If adjusted streamflow at the Permittee's reference device is above the applicable subsistence flow value for the season but below the applicable dry condition base flow value for the season, Permittee may only divert water during severe hydrologic conditions and only if measured streamflow does not fall below the applicable subsistence flow value.

**Base Flow Special Conditions**

I. If reference device is located upstream of the diversion,

when measured streamflow at the Permittee's reference device is above the applicable base flow value for the season, except as otherwise provided by Paragraph 4.K., Permittee may only divert water at a rate that does not exceed the amount by which measured streamflow exceeds the applicable base flow value.

J. If reference device is located downstream of the diversion,

when adjusted streamflow at the Permittee's reference device is above the applicable base flow value for a season, except as provided by Paragraph 4.L., Permittee may only divert water if measured streamflow at the Permittee's reference device does not fall below the applicable base flow value.

**High Flow Pulse Special Conditions**

K. If reference device is located upstream of the diversion:

- a. If measured streamflow at the Permittee's reference device is above the applicable subsistence or base flow values and if an applicable pulse magnitude level is met, up to two seasonal pulses per season and one pulse per 18 months, as described in Paragraph 4.D., must be allowed to pass the Permittee's reference device and diversion point. Once an applicable pulse magnitude level flow is met for a protected pulse as measured streamflow at the Permittee's reference device, Permittee shall not divert water until the applicable duration time has

passed since the pulse magnitude level flow occurred as measured streamflow, except during times that measured streamflow at the Permittee's reference device, reduced by the rate of diversion, exceeds the applicable pulse magnitude level.

- b. A pulse is a protected pulse if an applicable pulse magnitude level, as set out in Paragraph 4.D., is met at the Permittee's reference device as measured streamflow, and the applicable pulse requirement for the season or 18-month period has not been met. The applicable pulse requirement for seasonal pulses is met for a season when two pulse events have been recorded during the season with each having a daily average flow, computed as measured streamflow at the Permittee's reference device reduced by the rate of diversion, at or above the pulse magnitude level for a continuous period of not less than the pulse duration. The applicable pulse requirement for the 1-per-18-month pulse is met for any 18-month period when one pulse event has been recorded during the period with a daily average flow, computed as measured streamflow at the Permittee's reference device reduced by the rate of any diversion, at or above the pulse magnitude level for a continuous period of not less than the pulse duration.
- c. If the applicable pulse magnitude level does not occur in a season as measured streamflow, Permittee does not need to stop diverting water, or take other action, to produce a high flow pulse.

L. If reference device is located downstream of the diversion:

- a. If adjusted streamflow at the Permittee's reference device is above the applicable subsistence or base flow values and equals or exceeds an applicable pulse magnitude level, up to two seasonal pulses per season and one pulse per 18 months, as described in Paragraph 4.D., must be allowed to pass the Permittee's reference device. Once an applicable pulse magnitude level flow is met for a protected pulse as adjusted streamflow at the Permittee's reference device, Permittee shall not divert water until the applicable duration time has passed since the pulse magnitude level flow occurred as measured streamflow, except during times that measured streamflow at the Permittee's reference device exceeds the applicable pulse magnitude level.
- b. A pulse is a protected pulse if an applicable pulse magnitude level, as set out in Paragraph 4.D., is met at the Permittee's reference device as adjusted streamflow, and the applicable pulse requirement for the season or 18-month period has not been met. The applicable pulse requirement for seasonal pulses is met for a season when two pulse events have been recorded as measured streamflow at the Permittee's reference device during the season with each having a daily average flow at or above the pulse magnitude level for a continuous period of not less than the pulse duration. The applicable pulse requirement for the 1-per-18-month pulse is met for any 18-month period when one pulse event has been recorded as measured streamflow at the Permittee's reference device during the period with a daily average flow at or above the pulse magnitude level for a continuous period of not less than the pulse duration.



- c. If the applicable pulse magnitude level does not occur in a season as adjusted streamflow, Permittee does not need to stop diverting water, or take other action, to produce a high flow pulse.
- M. Each season is independent of the preceding and subsequent seasons with respect to high flow pulse frequency.
- N. High flow pulses are independent of the hydrologic conditions.
- O. Consistent with and subject to the conditions stated in Texas Water Code § 11.147(e-1), the commission may adjust the environmental flow conditions in this permit to provide for the protection of instream flows or freshwater inflows to the bay and estuary, if the commission determines, through an expedited public review process, that such adjustment is appropriate to achieve compliance with applicable environmental flow standards adopted pursuant to Texas Water Code § 11.1471. Any adjustment shall be made in accordance with the provisions of Texas Water Code § 11.147(e-1).
- P. Permittee shall install and maintain a stream gage on Little Bear Creek, within a reach that is no more than 300 feet upstream or downstream of the diversion point, which accounts for the flow rate in the stream and the quantity of water diverted from the point authorized in Paragraph 2. DIVERSION and record the streamflow level, the time of the gage reading, the amount of water diverted, and the rate at which water is diverted when diversions from Little Bear Creek are initiated. Permittee shall continue to monitor and record streamflow levels and its diversion rate no less frequently than once every four hours while diversion of water from Little Bear Creek occurs.
- Q. The authorizations in this permit are contingent upon the continued maintenance of the May 2011 *Interlocal Agreement between Permittee, the Lower Colorado River Authority, and the Barton Springs/Edward Aquifer Conservation District Regarding the Stoneledge Quarry Recharge Enhancement Project*, as such agreement may be extended or amended from time to time. Should the agreement be amended in such a manner as to no longer be consistent with the terms and conditions of this permit, including the Fourth and Fifth Recitals on Page 1 of this Permit, Permittee shall submit an application to amend this permit to conform to the terms of the amended agreement. Permittee shall immediately notify the Executive Director upon amendment of the agreement and provide the Commission with copies of appropriate documents effectuating such changes. If the agreement expires or is terminated, Permittee shall immediately cease diversions and notify the commission.
- R. Permittee shall allow representatives of the Texas Commission on Environmental Quality reasonable access to the property to inspect the measuring device and records.

This permit is issued subject to all senior and superior water rights in the Colorado River Basin.

Permittee agrees to be bound by the terms, conditions, and provisions contained herein and such agreement is a condition precedent to the granting of this permit.

All other matters requested in the application which are not specifically granted by this permit are denied.

This permit is issued subject to the Rules of the Texas Commission on Environmental



Quality and to the right of continuing supervision of State water resources exercised by the Commission.

  
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For the Commission

Date Issued: **August 25, 2022**



**AFTER RECORDING RETURN TO:**

City of Austin  
Watershed Protection Department, 10<sup>th</sup> Floor, Ste. 1031A  
Attn: Scott Hiers  
P.O. Box 1088  
Austin, Texas 78767-1088

**THE STATE OF TEXAS**

**COUNTY OF HAYS**

I hereby certify that this instrument was FILED on the date and the time stamped hereon by me and was duly RECORDED in the Records of Hays County, Texas.

**22045809 NOTICE**

09/27/2022 11:54:48 AM Total Fees: \$54.00

 Elaine H. Cardenas

Elaine H. Cardenas, MBA, PhD, County Clerk  
Hays County, Texas