



MEMORANDUM

TO: Dr. Mary Gay Maxwell, Chair and Commissioners
Environmental Commission

FROM: Chuck Lesniak, Environmental Officer
Watershed Protection Department

DATE: March 17, 2016

SUBJECT: SOS and Other Code Amendments for Eliza Springs Outlet Daylighting Project
SP-2012-0104D

On the March 23, 2016 Environmental Commission agenda is a proposed amendment to the City's Save Our Springs ordinance and related variances to the Chapter 25-8 of the Land Development Code. The ordinance is being brought forward to enable the Watershed Protection Department (WPD) to proceed with the Eliza Springs Outlet Daylighting Project.

Project Description and Background

Eliza Springs in Zilker Park (Figure 1) is habitat for the endangered Austin Blind and Barton Springs salamanders. Groundwater emerges from Eliza Springs and currently flows out of the historic amphitheater, into an underground pipe on the north side of the grounds of Barton Springs, and thence flows into the Barton Springs Bypass Tunnel. The existing outlet pipe is failing and requires replacement. Historically, Eliza Springs was connected to Barton Creek via a natural surface stream (Figure 2).

The Barton Springs Complex is not only critical habitat for federally-endangered salamander species, but also an important recreational resource for Austin. Operation of Barton Springs as a swimming facility requires a permit from the U.S. Fish and Wildlife Service (USFWS) to allow incidental "take" of protected salamanders under the federal Endangered Species Act Section 10(a)(1)(B). The City of Austin permit from the USFWS, authorized by Austin City Council Resolution 20111103-034, includes a conservation measure to replace the buried outlet pipe of Eliza Spring with a natural "daylighted" surface stream (Figure 3). The new surface stream will increase the area of potential salamander habitat and thus increase the resiliency of the salamander species to changing climatic and hydrologic conditions in the future.

Construction of the daylighted stream must fully comply with all of the conservation measures in the USFWS-approved Habitat Conservation Plan for Barton Springs, including the minimization of entry of anthropogenic pollutants into salamander habitat. WPD salamander biologists will oversee all aspects of the construction. Erosion control will be utilized consistent with code requirements, and suspended sediment in groundwater infiltrating into the excavation during construction will be filtered prior to discharge. Impacts to Eliza Springs itself within the amphitheater will be limited in spatial and temporal

extent, just to allow reconstruction of the keyway exit, and salamanders will be removed from the area prior to any dewatering.

WPD and consulting engineers HDR have developed a design to replace the failing buried pipe with the new surface stream (Figure 4). Some existing storm drains must be relocated to make room for the new surface stream. The project area is located within the grounds of Barton Springs in Zilker Park, in the Critical Water Quality Zone and floodplain of Barton Creek, in the Drinking Water Protection Zone and over the Edwards Aquifer Recharge Zone. The area in question is subject to the the Watershed Protection Ordinance, and the Save Our Springs Ordinance. The project is utilizing the existing, active site plan for Zilker Park and is proceeding as revision 2 of SP-2012-0104D.

Code Amendment and Variances

To construct the new surface stream, a cut of more than 4 feet is necessary to access the buried outlet pipe and to create a new stream channel with stable side slopes. The existing keyway where groundwater exits the Eliza Springs amphitheater must be removed to connect Eliza Springs with the new surface stream and thus construction must occur within the buffer of a Critical Environmental Feature (Eliza Spring itself).

The portion of Zilker Park on SP-2012-0104D within the Barton Creek Watershed already exceeds the maximum allowable 15% impervious cover. The SOS Ordinance would require the full site described on SP-2012-0104D to be brought into compliance for impervious cover in order to conduct the development proposed for the Eliza Springs Outlet Daylighting Project.

For the Eliza Springs Outlet Daylighting Project to complete the site development permit application process, two variances are necessary:

- 25-8-281 (*Critical Environmental Features*) to allow construction within the buffer of a Critical Environmental Feature (Eliza Springs), and
- 25-8-341 (*Cut Requirements*) to allow cut on a tract of land more than 4 feet in depth.

Because 25-8-515 prohibits variances from the SOS Ordinance, a site-specific amendment to the SOS Ordinance approved by the City Council is necessary to allow construction of the Eliza Springs Outlet Daylighting Project. Due to the special nature of the project to restore a historic stream and create additional salamander habitat in compliance with USFWS permit requirements, and in the interest of efficiency, the proposed site-specific ordinance will also authorize the two necessary variances.

Project Review

WPD is the project sponsor, and has developed the design in consultation with staff from the Parks and Recreation Department. Due to the complex nature of the project location in endangered species habitat, affecting a historic structure, in a floodplain, and in a metropolitan park, WPD is pursuing development of the daylighted stream under a full site plan. Staff from Development Services and other City of Austin departments have completed 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 is a condition of the USFWS permit for the continued operation of Barton Springs as a recreation facility.
- The project will increase the area of surface habitat for endangered salamanders.

- The project will replace a failing, buried outlet pipe with a surface stream more consistent with the historic conditions.
- The project will replace existing turf grass with a new riparian vegetation community that improves floodplain health as determined by a floodplain functional assessment to “good” consistent with the Watershed Protection Ordinance.
- The project will not impair the function of Eliza Springs, and impacts to the existing spring pool during construction will be minimized.
- Salamander biologists will be present on site during all aspects of the construction to oversee activity and ensure no unauthorized impacts to endangered salamanders.
- The project will comply with all applicable conservation measures in the USFWS permit for the continued operation of Barton Springs, including limitations on the use of herbicides, pesticides and fertilizers, such that the project will not result in any increase in pollutants.
- Erosion controls will be utilized in compliance with city code to ensure no discharge of sediment.
- Groundwater infiltrating into the excavation area will be filtered prior to discharge.
- Eliza Spring outflow will be re-routed around the excavation area during construction and will continue to discharge into Barton Creek.
- The new stream side slopes have been specifically designed to be stable and withstand flooding from Barton Springs.
- Other than the SOS amendment and variances identified, the project complies with City Code.

Figure 1. Salamander habitat spring locations within Zilker Park



Figure 2. Historic and current photographs of Eliza Spring.



Austin History Center, Austin Public Library



Figure 3. Photosimulation of new Eliza Spring outlet surface stream.



Figure 4. Construction detail for Eliza Daylighting project.

