

An underwater photograph showing a diver in a blue wetsuit and a red life vest swimming in clear blue water. The diver is positioned on the right side of the frame, and the water is filled with reflections of light and some green aquatic plants.

# EAHCP STEWARD

News from the Edwards Aquifer Habitat Conservation Plan - July 2021



## A Watershed Moment

*Restoration of the Sessom Creek Watershed about to Get Underway*

Pictured above - Melani Howard

Everyone loves those home makeover shows where a visionary decorator and demolition-loving partner take a quaint old home and turn it into a Better Homes and Gardens cover story. Well, if there was such a show for watersheds, the Sessom Creek watershed in San Marcos would definitely be featured. The only downside to this story is that the “big reveal” won’t take place for about two years or more.

“The complete overhaul, so to speak, of the Sessom Creek watershed has been a long time coming. But, we’re just about to get underway with the first phases of construction and we couldn’t be happier about that,” said Melani Howard, who is the Edwards Aquifer Habitat Conservation Plan (EAHCP) manager for the City of San Marcos.

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## Sessom Creek Watershed - Continued

“This is a relatively small watershed, but it empties directly into the headwaters of the San Marcos Springs where endangered species and their critical habitat are located. I think a lot of people now know what types of pollutants urban stormwater runoff can gather and deliver to an ecosystem. And that was something we had to change as it relates to the Sessom Creek watershed.”

Overall, the Sessom Creek watershed covers about 60 acres of land. While that is a relatively small watershed for a major tributary, it encompasses parts of Texas State University, major thoroughfares, apartment complexes and densely populated neighborhoods. Sessom Creek runs through heart of the basin and becomes essentially a concrete ditch just before it empties into the San Marcos River. Over time, the riparian vegetation associated with most parts of the creek was overrun with non-native, invasive plants and trees, and essentially turned the area into an opaque thicket. That was the first issue that needed attention

as part of the watershed’s restoration.



Kristina Tohlman and Jim Boenig review map of the Sessom Creek watershed.

The second hurdle to overcome was the presence of old sewer lines that transected Sessom Creek. The City of San Marcos took on this portion of the project which includes the replacement of approximately 1,800 linear feet of 12-inch sanitary sewer lines. Additionally, the project will provide stabilization of the Sessom creek banks to minimize

sediment from entering the San Marcos River, and will also repair two separate drainage outfalls along Sessom Drive and Sessom Creek.

“Going back to about 2015, the EAHCP was focused on significantly reducing erosion rate that fed significant amounts of sediment from Sessom Creek into the San Marcos River,” Howard noted. “We discovered that the City of San Marcos was gearing up to do a major sewer line capital project there and so the two entities started talking about how to work together to more efficiently achieve our goals. Those discussions turned into what we now call the Sessom Creek Project, Phases 1 and 2.”

There is an exposed 50-year-old sewer line that runs across Sessom Creek in several locations. Originally, that 16-inch pipe was not visible, however, erosion uncovered the aging line over time and created a water quality threat to both Sessom Creek and the San Marcos River. Removing that old line and boring underneath the creek to install the new one is the initial focus. In Phase 2, the City will be rehabbing failing portions of Canyon Drive which runs along the creek as well as accomplishing some major drainage infrastructure improvements there.

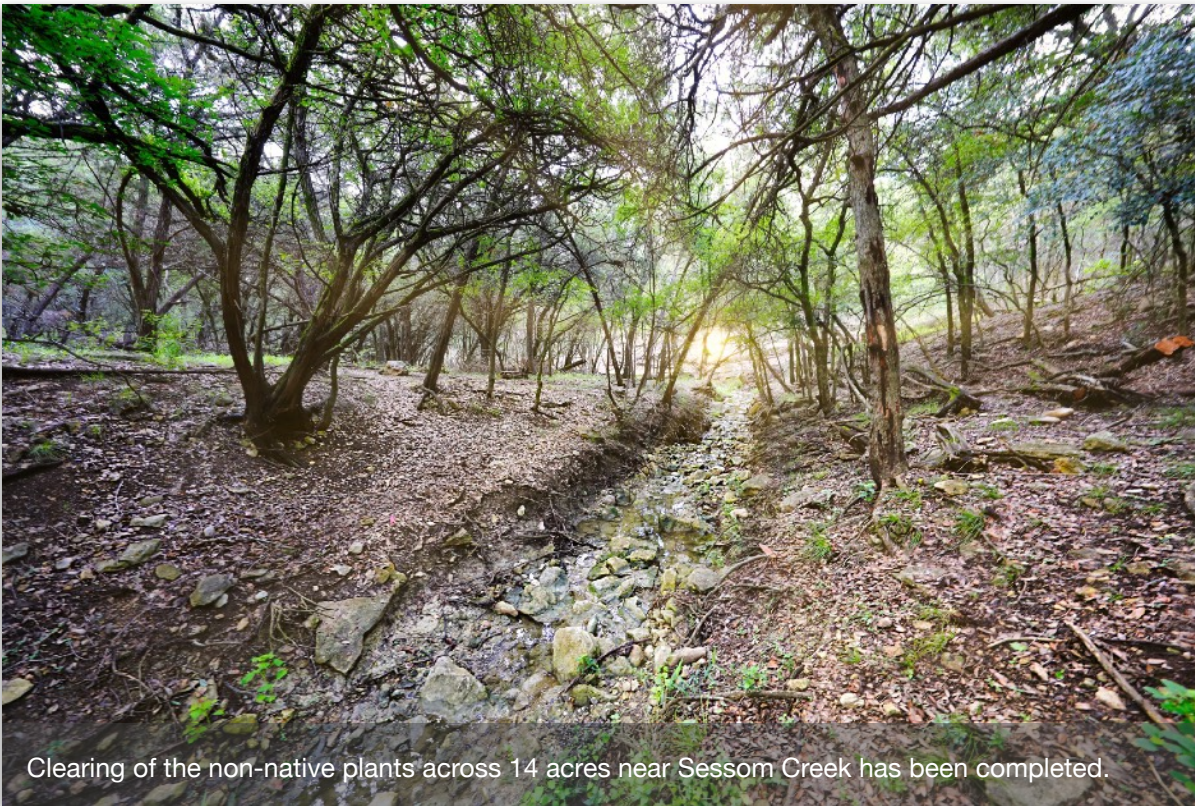
Due to the high percentage of impervious cover (roads, rooftops, driveways) in the watershed, water flows at a high velocity during a rainstorm. That heavy torrent increases the amount of sediment being carried to the home of endangered species in the San Marcos River. The increased sediment load decreases available habitat for the species and makes protecting them all the more difficult.

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## Sessom Creek Watershed - Continued

The invasive trees that grew along Sessom Creek reduced sunlight thus reducing understory plant establishment. Lack of dense native riparian vegetation results in increased soil erosion, bank instability, and vulnerability to impacts of flooding. In turn, the creek channel got deeper and disconnected with the original floodplain. Additionally, the more urbanized development around the creek with growing impervious cover such as streets and parking lots have increased the amount of water flowing into the creek.



Clearing of the non-native plants across 14 acres near Sessom Creek has been completed.

The EAHCP's answer to the fast-moving water was to utilize "natural stream design" to reconstruct major sections of the creek. This process uses grade and gully controls to create riffles and pools in the streambed. Large boulders and rocks will be the main components used to reshape the meanders of the creek and

reduce flowing water velocities. This type of stream restoration is not only less costly than using truckloads of concrete, but slows water down which increases infiltration into the groundwater and is better for the overall ecology of the watershed.

"The primary goal here is to slow down and spread out the water during rain storms and this natural channel design will help us accomplish that goal," Howard explained. "It is not often in urban situations where you have enough space to reconnect a creek with its floodplain, but we will be able to do that in Sessom Creek."

If you had to relate the demolition portion of a home makeover to the Sessom Creek project, you most certainly would point to the vast removal of non-native trees and plants in the watershed.

"We contracted with a private company to handle the major removal and mulching of non-native trees in about 14 acres near the creek. And we're happy to report that enormous job has just concluded," Howard said. "But, we can't forget our volunteers who have gathered once a month for the past three years to take out other non-native plants as well. I clearly remember that group's year-and-a-half effort to take out about an acre and a half of bamboo. You just have to tip your hat to that type of dedication.

"This whole effort is going to take about two years or so to complete. And, then you're looking at many more years for the native plants to grow in. To add to the aesthetic improvements, the City of San Marcos will be adding walking paths, benches and such along the creek. One of our project coordinators, Jim Boenig, who is with the Edwards Aquifer Authority, put it best. The greatest thing about this project is, once it is completed, it won't look like a new project. The restored areas will look very natural. The new Sessom Creek will be pleasing not only to the people who are here, but to the endangered species living in the San Marcos River as well."

# EAHCP STEWARD SHORT TAKES

## **Volunteer Workday Scheduled in San Marcos for July 17**

There will be a volunteer workday at Schulle Canyon N.A. on Saturday, July 17 from 8-10 a.m. Tasks will include removing invasive trees and grasses, building contour terraces, removing litter, and lopping and spreading removed tree branches.

**There is a new meeting location at 207 Joshua Drive (dead end of Joshua Dr).**

You can RSVP at: [www.signupgenius.com/go/30e084ba8ae2ca7fc1-habitat](http://www.signupgenius.com/go/30e084ba8ae2ca7fc1-habitat)

## **EAHCP Meetings on the Near Horizon**

### **Springflow Habitat Protection Work Group**

**Date:** July 21, 2021

**Time:** 2:00 PM

**Location:** Microsoft Teams

### **Implementing Committee Meeting**

**Date:** August 19, 2021

**Time:** 10:00 AM

**Location:** Microsoft Teams

## **New StoryMaps Available to View and Download**

By using the ArcGIS StoryMap application, the story of the EAHCP is organized in an immersive, interactive display accessible to viewers from any organization looking to learn about the EAHCP program and the threatened and endangered species covered. Here are the new StoryMaps:

- [Comal Springs dryopid beetle](#)
- [Comal Springs riffle beetle](#)
- [Texas blind salamander](#)