Springflow Habitat Protection Work Group
Meeting 3 Minutes
May 28, 2020
9:00am-11:00am

1. Confirm attendance

Kristina Tolman indicated that all Work Group members were present.

2. Meeting logistics

Jamie Childers provided an overview of virtual meeting logistics, meeting points of contact, and work group logistics.

3. Public comment

There were no public comments.

Prior to starting the meeting, Charlie Kreitler provided comments on Meeting 2. He suggested performing geophysical studies and adding monitoring wells to the western bank of Spring Run 1 to understand the substrate at different spring runs and to inform our understanding of interflow conditions.

4. Approve meeting minutes

A motion was made by Charlie Kreitler, seconded by Ryan Kelso, to approve the meeting minutes from April 22, 2020. In the absence of objection, the minutes were approved by consensus.

5. San Marcos salamander biomonitoring *presentation and discussion*

Ed Oborny of BIO-WEST presented the results of 20 years of San Marcos salamander sampling from 2002 through Spring 2020. Mr. Oborny summarized his comments by indicating that gardening in Spring Lake is key to San Marcos salamander (and fountain darter) habitat regardless of springflow in particular because of its benefit in reducing sediment buildup. Sediment levels are a key factor adversely affecting salamander habitat. He also indicated that habitat in the Spring Lake dam eastern spillway should be protected from excessive siltation. Although increased stands of Texas wild-rice in areas below the dam currently decrease areas favorable for salamander habitat, that effect will be variable over time, particularly with lower flows, and he does not consider it a significant concern. Finally, he referenced a 2017 study of San Marcos salamander statistics which indicated that more individuals are found at the top of the system than at the bottom of the system. He also provided a general observation that salamanders are resilient.

6. Salamander population dynamics in the context of flow variation and drought *presentation and discussion*

Nathan Bendik from the City of Austin Watershed Protection presented the results of studies on the Jollyville Plateau salamander and Barton Springs salamander. He described seasonal patterns in abundance and reproduction of Jollyville Plateau salamanders based on statistical models and gave examples of how they respond when springs go dry in terms of size, abundance, and reproduction. The results presented on Barton Springs salamander sampling indicate a relationship between discharge, sedimentation and survival; the results illustrate that survival increases with flow and goes negative as the predicted rate of flow decreases. Mr. Bendik also presented information showing a lagged relationship between numbers of juveniles/reproduction and flow, with numbers of juveniles increasing about 9 months after periods of higher flow. There is less of a pattern with numbers of adults. The reason for this is unknown, two hypotheses that have been offered relate to the possibility of perched underground reservoirs and to nutrient introduction into the aquifer during storm events.

Mr. Bendik summarized the relationship between habitat, sediment, drought and population size. He also noted that dissolved oxygen (DO) is strongly correlated with spring discharge and that the two parameters cannot be separated when studying salamander abundance.

Mr. Oborny indicated that the results Nathan presented regarding Jollyville Plateau salamanders were consistent with data collected on the Comal salamander in 2014 following low flows when some individual spring runs lost surface flow. After surface flow returned, salamanders were again found in the spring runs. In response to a question about whether San Marcos salamanders occur in the aquifer, Chad Furl indicated that the San Marcos Aquatic Resources Center regularly finds San Marcos salamanders in the same collection nets where they collect Texas blind salamanders that are ejected from the aquifer.

7. Meeting 2 follow up discussion

Myron Hess asked if there were specific items from Meeting 2 on which the Work Group wanted additional information. Adam Yablonski suggested the group hear a presentation on the most recent information on water withdrawals in the system. Chuck Ahrens indicated that he can provide the Work Group a presentation comparing historic withdrawals with permitted pumping. Melani Howard and Nathan Pence recommended a further discussion on the impacts of recreation.

8. Public comment

There were no public comments during the second comment period.

9. Future meetings

June 4th is the next scheduled meeting; additional meetings will be scheduled soon.