



Comal Springs Dryopid Beetle Monitoring - Interim Report

Comal Springs Dryopid Beetle Monitoring Study

Project Update – December 2025

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Background

This project update summarizes the work conducted in 2025 for the Comal Springs dryopid beetle (CSDB) Monitoring Study. A kickoff meeting was held on September 29, where EAA and BIO-WEST recognized the potential limitations to beginning some of the more intensive field work necessary to achieve some of the objectives of this study. The primary concern was the ongoing (since July) low numbers of beetles found at the Spring Island area, along with potential effects of low flow conditions. Field investigations specific to this study began following completion of Comal Springs riffle beetle (CSRB) biomonitoring in November 2025. However, initiation of the formal one-year study referenced in the contract ranging from October 2025 to October 2026 is pending stabilization of conditions at our most productive sites, as agreed upon during the September kickoff meeting and further described below.

The numbers of CSDB found since the September meeting have remained low. During CSRB biomonitoring activities on October 7 (total system springflow = 73 cfs), a total of 8 CSDB were found on 13 existing discs at the Spring Island area. The following month on November 5 (64 cfs), only 3 CSDB were found on 11 discs. Two CSDB were found on only two discs checked on 19 November, which occurred while setting new discs (see below). Low flow conditions in November left two of the most productive areas at Spring Island dry, but all of these sites were again underwater and/or had noticeable springflow on December 8 (78 cfs) when 2 CSDB were found on 26 discs. Additionally, water levels in Landa Lake were about 10 cm higher in December than November, which may have improved conditions at several of our more productive sites.

Fall 2025 field investigations

Because of the low numbers of CSDB observed on discs during CSRB low-flow and fall biological monitoring activities, in November we began testing methods aimed at reliably retrieving discs from deeper silty areas. On November 19, 12 new discs were set in the Spring Island backwaters and nearby deeper areas, with 6 discs set at previously checked sites and 6 at new sites. The area and width of the discs were measured before they were set to assess degradation over time. A string was tied to the disc (through a hole on the side) and to a piece of steel rebar (~18 in long). The rebar was either hammered vertically or laid down horizontally next to the spring. On December 8, all 12 of these discs were successfully retrieved and reset in the same locations.

Simultaneously (at the same 12 sites, plus four additional non-silty sites), we began preliminary tests of wood disc conditioning using discs that were either dried sycamore wood or wood from a branch that was retrieved from the bottom the lake (unknown species, conditioned for an unknown amount of time). After 19 days (December 8), two CSDB were found on two conditioned wood discs. While two CSDB are not enough to assess the efficacy of wood

conditioning for CSDB, both of these beetles were at spring openings where CSDB had not previously been found (but approximately 2–5m from sites where we have previously found them). Additionally, many of the new wood discs cut from dry sycamore, along with older discs at sites that were dry on November 5, had dozens of other beetles (*Microcylloepus pusillus* and CSRB; both unquantified). Therefore, dry sycamore shows promise for use rather than relying on unknown wood from the lake. We hypothesize that if lake levels and springflows can remain at current levels, we will see a return of CSDB to previously dry sites. If flows and lake levels remain stable and spring activity persists at our higher elevation sites, we intend to use these sites to begin the one-year study referenced in the contract.

During late November, we also surveyed the Comal system for the efficacy of expanding our current survey area. Spring Run 1, Spring Run 2, and the Upper Spring Run area currently do not have enough (or any) meaningful springflow to support expanded survey and monitoring efforts. Existing wood discs (from 2024) are still placed in Spring Run 3 and along the Western Shoreline and have been checked monthly, but no CSDB have been observed at these sites in the second half of 2025.

Preliminary 2026 plan

Following a discussion with EAA on December 10, 2025, the following plan for early 2026 was agreed upon. In January 2026, we will continue to check existing discs every 2–4 weeks as we monitor springflow and evaluate the numbers of CSDB that are found. If CSDB numbers rebound at the Spring Island area, we will immediately begin more intensive testing of sampling methods in that area as outlined in our contract. With the exception of the one site along the Western Shoreline where we have previously found CSDB, we will consider changing the sites that we have discs at there, as well as in Spring Run 3, to help determine if the species occurs anywhere else in those areas. Lastly, we will continue to monitor Spring Run 2 and deploy discs there if conditions become more favorable. Currently, there is very limited springflow in the lower sections of Spring Run 2 (warm water, but too diffuse to locate any single spring openings), which combined with disturbance and sedimentation from summer 2025 flooding has left the sites we previously found beetles at there in poor condition. Survey efforts in other areas (Spring Run 1, Upper Spring Run) will be reevaluated if total system springflows increase and we notice an improvement of conditions in Spring Run 2.