



## Wildlife Survey & Photo Service

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## REPORT-5394 Pleasants Creek

October 8, 2016

To: Richard Marovich  
Putah Creek Streamkeeper

**Subject: Pleasants Creek - Benthic Invertebrate Species & Surveys**

### **Background**

An unusual composition of Benthic macroinvertebrates (BMIs) collected in Lower Putah Creek (LPC) after the Dry Creek Realignment Project prompted an investigation of the major tributaries to Lower Putah Creek. None of the BMI species were previously documented to occur in Putah Creek prior to the realignment. While they are not rare, all are considered indicators of excellent water quality. The species persisted in the Dry Creek realignment area for approximately 2 years when their demise was likely caused by embedded benthic cobble which eliminated safe harbor from predatory fish and safe grazing areas.

Subsequent surveys determined that the entire list of BMIs (from the Dry Creek Realignment Project), were located in Miller Creek which is an intermittent waterway and significant tributary to Pleasants Creek. Some of the BMIs have been collected in Lower Putah Creek after significant flood events. I have never found any of the sensitive BMIs in Pleasants Creek probably due to inappropriate benthic conditions as most require sediment-free riffle habitat.

Invertebrates that are collected in Pleasants Creek are typical of warmer, slow water conditions found in the Putah Creek watershed. One species of interest that appears to be common in Pleasants Creek is *Caenis sp.*, which I have not seen in LPC since 2006.

### **In Conclusion:**

The vast majority of Pleasants Creek is characterized by high sediment levels and a lack of clear interstitial spaces in benthic cobble required by sensitive BMI species such as mayfly species *Ameletus*, *Drunella*, and *Epeorus*. Because I routinely survey Miller Creek when it is watered, I expect to check areas of Pleasants Creek that are under restoration efforts. Miller Creek and Pleasants Creek are significant pathways to ultimately improve BMI recruitment into the main stem of Putah Creek. Cementation and BMI species are also monitored in LPC.

Submitted via e-mail on 10/8/2016

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Isolation pond on Ethel Hoskins Ranch segment - Pleasants Creek