Wildlife Survey & Photo Service
2443 Fair Oaks Blvd. # 209 • Sacramento, CA 95825 • (916) 747-8537

# REPORT 5045
## General Update

**Rainbow Trout at Pickerel Weir.** This site is highly productive for aquatic invertebrates and fish. Complete with Putah Creek Burgundy Trout. See Stickleback video that shows aeration below weir. 7/21/2015

**Kilkenny Weir:** This site is highly productive for a variety of fish species including trout, Pikeminnow, and Tule Perch. As of 8/10/15, the site supports 8-10 rainbow trout of various sizes. At least two are 15-18 inches in length. 8/10/2015

**Boulder fields used for bank protection:** These areas are highly utilized by a variety of fish species. The ragged boulders give protection from predators not available in open areas. See Tule Perch video.

August 11, 2015

To: Rich Marovich
Chris Lee

**Subject: General Update with Videos**

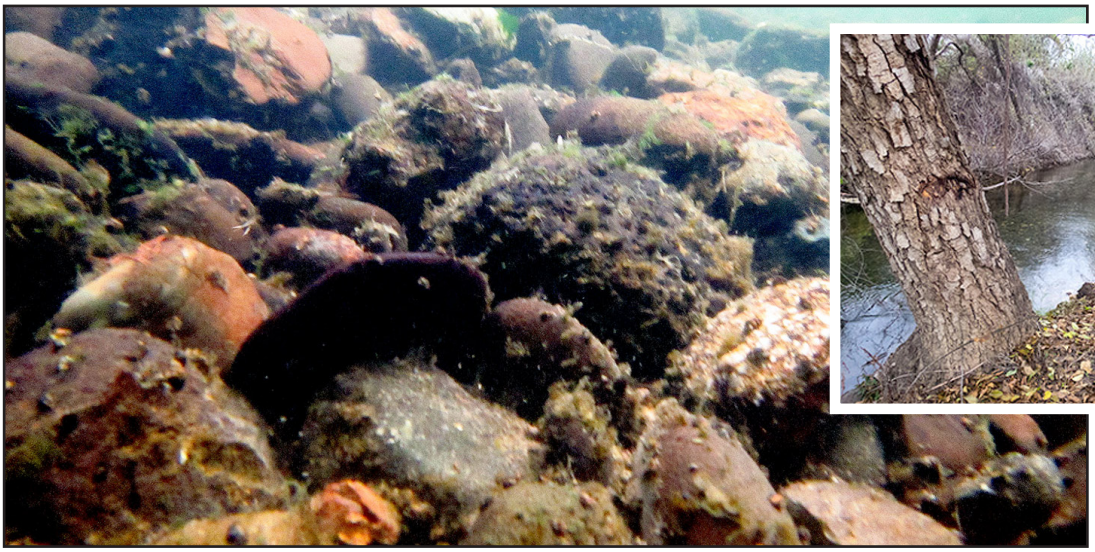
Habitat in Lower Putah Creek:

I'm in the process of attempting to compare all of the aquatic habitats in LPC via subsurface video footage. The process will use protocols that will provide general impressions of the species that use various habitats. That habitat list includes:

- Weirs
- Root Wad / Boulder Complex
- Down Trees
- Weedbeds
- Beaver ponds
- Pools
- Non-scarified runs
- Scarified runs
- Vehicle crossings

Thus far, the rock weirs, at all elevations, are by far the most productive habitats for aquatic invertebrates and fish resources. Aquatic invertebrate populations are counted and identified to species level when possible.

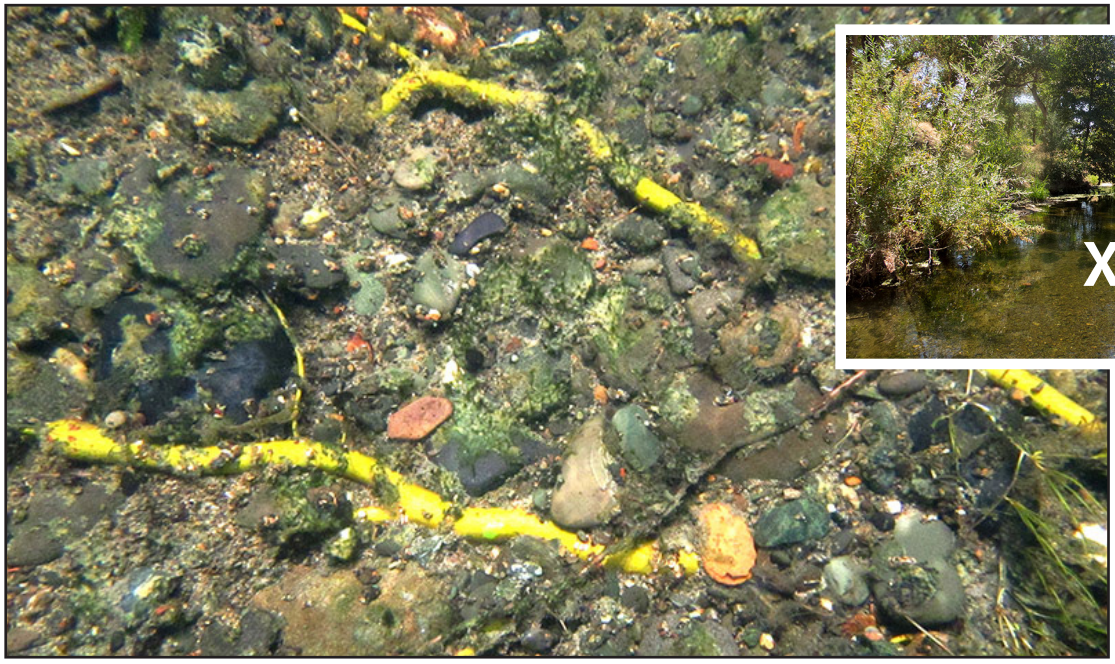
Wherever possible, I suggest that weirs, crossveins, or other water-moving aeration devices be installed in Lower Putah Creek. Video footage documents that fish use the areas below the weirs for protection and foraging.



Scarification Section#3

**Scarification site # 3:** Image shows cobble on the side of a deep salmon redd.

This site was mechanically scoured in early December 2015. Scarified area was used by several pair of spawning salmon. The cobble remains relatively free with no cementation. The interstitial spaces are filling with sediment. The same area has a significantly higher density of aquatic invertebrates and very few New Zealand Mudsnails when compared to non-scarified areas. There is almost zero (0%) embeddedness in this area.




Scarification Control

**Scarification Control Section (#1):** Subsurface image shows surface of creekbed that is being bound by finger-width willow roots. The "X" on image insert is the area the subsurface image was taken.

The scarification control section is just downstream from the Pickerel Property. The site is heavily cemented with most cobble 80-90% embedded. The issue is complicated by several willow roots that have crossed the creekbed. The cobble is almost impossible to remove by hand. The willow roots are further binding the benthic cobble. I believe that it is highly unlikely that a flood condition similar to that seen in 2006 would scarify this section. That opinion is from observations in 2007, embeddedness measurements taken in 2007, and annual observations at numerous sites in the Interdam Reach and in Lower Putah Creek. Cementation measurements and images are available. I am not aware of any other cementation measurements taken by in Putah Creek by UCD, CDFW, or any other entity.

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Steele Park Cove: Stairs to former marina at Steele Park. 7/27/2015

Abandoned dock - Pleasure Cove: 7/27/2015

Spanish Flat: Anchoring blocks along bank at Spanish Flat. Bank, blocks and other materials are ideal for low-water mussel surveys. 7/29/2015

**Mussel Surveys:** The low water situation in Lake Berryessa facilitate mussel surveys in areas where access has been difficult in the past.

Routine plankton surveys continue at all marinas and certain deep water sections.

**Wragg Fire at Fishing Access # 5: 8/3/2015:** I will continue to photograph and monitor the creek when possible.

**Mudsnails grazing on sandbank:** Mudsnail density is high in certain areas. Sub-surface image taken 8/8/2015 at Ken Bertanoia property. The NZMS density is also high in many aquatic weedbeds and open runs.

Sent via e-mail 8/11/2015

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