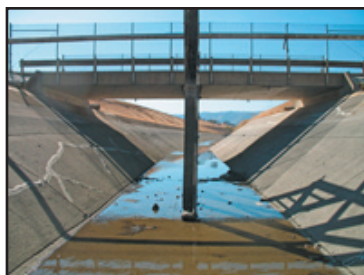


Putah Creek below Monticello Dam.
(trap survey site)



Lake Solano Docks (trap survey site)



Putah South Canal - Holmes Rd Bridge
(direct survey site - visual inspection)



Wyand Canal - First section surveyed
for NZMS and ZM when drained



"Putah Trap" after removal from canal

February 12, 2007

To: Mr. Thomas Pate
Solano County Water Agency

Subject: Zebra Mussel - Detection Surveys in Solano Project

Purpose: To outline the existing survey program for zebra mussels

Background

The recent discovery of zebra mussels (*Dreissena polymorpha*) in Lake Mead (Nevada) has increased the concern over introductions of the invasive freshwater mollusk into California waters. Zebra mussels are moved to new locations via trailered boats and larvae (a.k.a. veligers). The microscopic larvae are easily carried in water, such as in the "live tanks" used by bass anglers. In 1998 the area below Monticello was rated as "high risk" for a zebra mussel infestation. Because Lake Berryessa has become a popular site for bass tournaments and other boating, I initiated a "minimal" zebra mussel monitoring program below Monticello Dam beginning in July 2005.

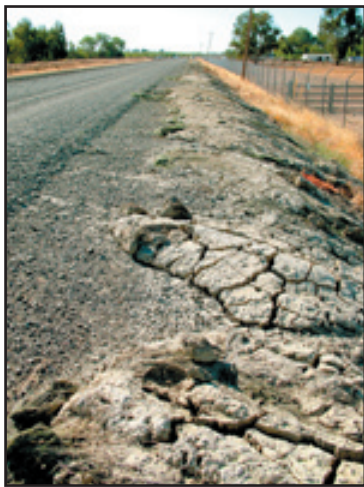
Zebra Mussel Surveys in Solano Project

Surveys in Putah Creek below Monticello Dam and in the Putah South Canal have been conducted using a variety of "traps," visual surveys, and microscopic examinations of seined water samples.

1. **Traps:** Same used for NZMS (with chunks of concrete inside the trap).
2. **Visual:** Examination of high-risk areas and materials in the Solano Project completed during mudsnail surveys:
 - a. Banks below Monticello Dam
 - b. Concrete supports for Highway 128
 - c. Lake Solano Docks
 - d. Base of Putah Diversion Dam / screens
 - e. High risk structures in Putah South Canal
 - f. Materials taken from the canal during sediment removal.
 - g. Intake, rip rap and screens in Terminal Reservoir
3. **Microscopic examination:**
 - a. Water samples taken from Putah Creek just below Monticello Dam with 100 micron plankton net.



Sediment pile removed from canal. Always surveyed for mudsnails and any unusual organisms.



Sediment pile removed from canal near Sweeny Check. Always surveyed for unusual organisms



All substrate removed from canal surveyed. *Nectopsyche* (caddisfly) pupal cases on plastic bottle.



Sediment pile close-up showing common snails and *Nectopsyche* cases

- b. Samples examined using a tri-ocular compound microscope equipped with phase contrast, polarized, and cross-polarized light. All unusual organisms are photographed and/or videotaped for additional identification and documentation.

Recommendations

1. Continue detection surveys, especially spring and summer 2007, during larval migration periods for zebra mussels.
 - a. Existing traps below Monticello Dam
 - b. Plankton (seine) samples below Monticello Dam
2. Continue multispecies surveys within the current budget (Explanation: Due to development of a species inventory for Putah Creek and Putah South Canal, I have a firm fix on the invertebrate species that are living in the system.) Surveys include the following:
 - a. Interdam Reach
 - b. Lake Solano Boat Dock
 - c. Putah Diversion Dam
 - d. Putah South Canal
 - e. Terminal Reservoir

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